

OSWALD'S HUBBLE

By Nils Röller

“It is, of course, well-known that creation and destruction are complementary processes. But there are further similarities between Wiener’s oeuvre and the Hubble telescope.”

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appendix A

der bio-adapter
(für w. pichler)

(prospekt 1965/66)
(nicht überarbeitet)

a. philosophische ansätze nebst vorgriffen auf die systembeschreibung.

der bio-adapter bietet in seinen grundzügen die m. e. erste diskutabile skizze einer vollständigen lösung aller welt-probleme. er ist die chance unseres jahrhunderts: befreiung von philosophie durch technik¹⁾. sein zweck ist es nämlich, die welt zu ersetzen, d. h. die bislang völlig ungenügende funktion der «vorgefundnen umwelt» als sender und empfänger lebenswichtiger nachrichten (nahrung und unterhaltung, stoff- und geistwechsel) in eigene regie zu übernehmen – und seiner individualisierten aufgabe besser zu entsprechen, als dies die «allen» gemeinsame, nunmehr veraltete sog. natürliche umwelt vermag.

in seiner wirkung kann der bio-adapter mit der eines äusserst hochgezüchteten, durch laufende anpassung auch den differenziertesten bedürfnissen höchstorganisierter lebewesen gewachsenen uterus' verglichen werden («glücks-anzug»). er kann als die sich ins zunächst noch «ausserleibliche» erstreckende hypertrophie der organmoduln sowie der nervösen baukomplexe seines inhabers interpretiert werden, und ist in dieser betrachtungsweise ein konverter der vom menschen in dessen umgebung projizierten lustimpulse (servo-narziss).

es ist die auffassung des designers des bio-adapter's, dass erst die einheit mensch-adapter den anforderungen einer verantwortungsbewussten anthropologischen kritik standhalten kann – aber daneben auch dem gesund-heroischen ideal eines den kosmos regierenden homo sapiens erstmalig genügt, und zwar durch trockenlegung des kosmos einerseits, und zum andern durch liquidation des homo sapiens. der mensch, ausserhalb seines adapters ein preisgebener, nervös aktivierter und miserabel ausgerüsteter (sprache, logik, denkkraft, sinnesorgane, werkzeug) schleimklumpen, geschüttelt von lebensangst und von todesfurcht versteinert, wird nach anlegen seines bio-komplements zu einer souveränen einheit, die des kosmos und dessen bewältigung nicht mehr bedarf, weil sie auf eklatante weise in der hierarchie denkbarer wertigkeiten über ihm rangiert.

der mensch bedarf des adapters, weil er im zuge seiner geschichte (welche eben im adapter abhanden kommt) durch hervorbildung seines bewusstseins in einen gegensatz zu seiner immer verbaler apperzipierten (d. h. im verlauf der progressiven verbalisierung überhaupt erst «wahrgenommenen») umwelt gerät, diese geradezu erst herausfordert, vorhersagt, materialisiert, erzeugt. er vereinzelt sich . . . sein bewusstsein, dem er sich immer verzweifelter überlässt, drängt ihm unter bildung und zuhilfenahme kränklicher begriffe individualität, polarität gegenüber einer vexierbildhaften umgebung, welcher er in überanstrengung seiner sinne bestandteile anzuerkennen bemüht ist, gegenüber einer erfundenen, gleichwohl erlittenen, ihn blindwütig mit nachrichten befetzenden objektwelt, und neurotisch-anankistische organisierung derselben zu kategorien und methodisch angehauchten hierarchien auf. der mensch wurde schutzlos durch das bewusstsein seiner symbolischen singularität, dieser seiner lyrischen hoffnung, und seiner ergo fiktiven gegenschaft zum alsbald bedrohlich empfundenen all. hier setzt nun der bio-adapter an, und reduziert das all auf den status einer unterhaltsamen . . . fabel.

¹⁾ [dazu auch: sprache als argument gegen den solipsismus]

In 1969 the Austrian poet and theoretician Oswald Wiener published his experimental novel *Die Verbesserung von Mitteleuropa* (“The Improvement of Middle-Europe”). As author in context of the vibrant Vienna Group and vivid thinker of the spreading cybernetic apparatuses, Wiener’s book was widely recognized. And especially one part of the book, following the main text as “appendix A”, hasn’t lost its speculative power and analytic sharpness: “der bio-adapter” (“the bio-adapter”) describes a bio-technological interface, designed for the inhabitant of a contemporary world of rising complexity. Its aim: making the world bearable by changing the wearer, by adapting her or him to its oddities. Over time, this interrelationship between wearer and bio-adapter grows stronger and becomes existential, until the threshold between the two biological systems vanishes and the adapter takes over control. An interface, constituting a cybernetic closed circuit unit. It can be discussed as “an absolute interface”. Please follow this invitation.

Or as Wiener later put it in a 1990 lecture on problems of artificial intelligence: “I am realizing a machine because it is doing something that I have once done as well.”¹

50 years after its first publication, the official English translation of “the bio-adapter” is now finally available. Edited by Beate Geissler and Oliver Sann and published by Kulturverlag Kadmos in Berlin, the translation comes with an introduction by Siegfried Zielinski and an afterword by Nils Rölller. Both texts contextualize the rele-

vance of the text for Wiener’s *œuvre* and its implications for contemporary and current discourses on technologically controlled environments.

Since this issue of Interface Critique coincides with the publication of the book, we use the opportunity to publish Nils Rölller’s afterword, offering our readers a glimpse into Wiener’s unusual and exciting speculation on interface paradigms in a time where cybernetization began to take command, to paraphrase Sigfried Giedion.² For further insights we strongly recommend Siegfried Zielinski’s introduction to this seminal text, and of course the English translation of “the bio-adapter” itself, in:

Oswald Wiener, *the bio-adapter*, eds. Beate Geissler and Oliver Sann (Berlin: Kulturverlag Kadmos, 2019).
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1 Oswald Wiener, *Probleme künstlicher Intelligenz*, ed. Peter Weibel (Berlin 1990), transl. DI.

2 Sigfried Giedion, *Mechanization Takes Command: A Contribution to Anonymous History* (New York 1948).

In 2009 two NASA astronauts performed repairs on the Hubble space telescope.³ One of the results of this complex and costly "brain surgery" in space became visible in 2015 with the publication of new, high-resolution images of the Eagle Nebula in star cluster M 16.⁴ Prior to the repairs, the nebula's tube-like structures had been named "Pillars of Creation". Comparing images taken in 1995 to those taken post-repair in 2009 prompted a discussion whether these pillars should now also be referred to as "Pillars of Destruction".

In the 1960s Oswald Wiener was considered a destroyer of culture and Austria's Public Enemy No. 1. In the late 1980s he was awarded the Grand Austrian State Prize for Literature. The destroyer of Austrian values had turned into the nation's poster boy. It is, of course, well-known that creation and destruction are complementary processes. But there are further similarities between Wiener's *œuvre* and the Hubble telescope. They are laid out in a resolution recorded in 1910 by Franz Kafka in his diary: "But every day at least one line should be trained on me, as they now train telescopes on comets."⁵

Wiener trains an apparatus on his own interior which he has been developing for decades.⁶ The development of this *instrumentarium* led to the 2015 publication of *Selbstbeobachtung* ("Self-observation").⁷ The book collects texts by a group of researchers who, informed by Wiener's *Schriften zur Erkenntnistheorie* ("Epistemological Writings"),⁸ pursue the question how mental images function. The point of departure is the premise that mental images should not be conceived as static reflections but as programmed sequences guiding the movement of signs. Wiener himself contributed two foundational texts to the collection. They document the engagement of his writing, thinking and feeling with the principal question whether our psychic interior can be automatized. In preparation of this project Wiener had in the 1990s examined how the psychological concept of "scheme" can be translated using the notion of the "Turing Machine". In other words, rather than pursuing a Luddite agenda Wiener makes use of automaton theory as a productive intellectual tool. "Productive" in this particular context means that the performance of a machine instructed to react to signs according

3 Markus Becker, "Hubble"-Reparatur: Erfolg nach acht Stunden Dauerschrauben. *Spiegel* (May 18, 2009); www.spiegel.de/wissenschaft/weltall/hubble-reparatur-erfolg-nach-acht-stunden-dauerschrauben-a-625415.html, access: June, 9, 2019.

4 Felicia Chou and Ray Villard, Hubble Goes High-Definition to Revisit Iconic "Pillars of Creation" (January 5, 2015); www.nasa.gov/content/goddard/hubble-goes-high-definition-to-revisit-iconic-pillars-of-creation, access: June, 9, 2019.

5 Franz Kafka, *Diaries 1910–1923*, ed. Max Brod (New York 1976), p. 12.

6 I elucidate Wieners work in my book *Ahabs Steuer – Navigationen zwischen Kunst und Naturwissenschaft* (Berlin 2005). Differences to contemporary poetologies for example of Charles Olson are discussed in: Nils Röller, Revolution of the ear? The Typewriter as a Listening Aid, in: *Variantology – On Deep Time Relations of Arts, Sciences and Technologies*, eds. Siegfried Zielinski and Silvia Wagnermaier (Cologne 2005), pp. 195–206.

7 Thomas Eder and Thomas Raab (eds.), *Selbstbeobachtung. Oswald Wieners Denkpsychologie* (Berlin 2015).

8 Oswald Wiener, *Schriften zur Erkenntnistheorie* (Vienna 1996).

to a *tabella* offers the heuristic possibility of a greater attentiveness to dreams, to inspirations that come while shaving, or to memories, and to ask what takes place when the act of falling asleep gives rise to ideas of books or cutting fat (something “*lardo*”-like), or what happens when one’s morning toilet is accompanied by the sign sequence: “If it’s worth being done, it is worth being done well.” To quote Wiener:

Awake at night, sleepy musings: Leave our books behind here. What will become of them [...]? Will they once more in one head [...]? Books, how old-fashioned [...] Under the movement of thoughts, next to the changes of meaning, a rarely noticed glossolalia typical for my falling asleep.

Gradually I realize, as if it were taking place outside of me for some time now, a movement, heteronymous, like the entry of a new object into the field of vision.

As if focusing my eyes more intently, I realize that something is being cut, by me, and now I also recognize a kind of movement of my hand, not certain which. My cutting implies a support, I am applying some pressure to pull the instrument down towards me.

[Emphasis by the author, in the original the italics are set apart in a smaller font – NR.] The book theme got lost in the dissolve of attention.⁹

Oswald Wiener records and distinguishes aspects of ideas by training his mind to focus on the origins, mutations and disappearances of mental operations, with a view toward future theoriza-

tion. He shares his communications with a group of friends and researchers who themselves perform similar self-observations. The group is of the opinion that at present neither psychology nor artificial theory offer any feasible theories. They rely on concepts and theses that do not correspond to the psychic operations of self-observation. The core example for Wiener’s group is the concept of the “mental image”.

Wiener’s texts contained in the volume *Selbstbeobachtung* describe – in sober, straightforward fashion, and yet with surprising twists – the intervals between insight and irritation related to those aspects of the psyche that can be formalized in machinic terms. Readers, in turn, can apply these intervals to themselves; they can modify them and develop a specific practice between freedom and structural determination. This will impact future artistic practices; at the same time, the emerging intervals can also be interpreted as a force arising from the motions of the theoretician, poet and musician Wiener. He was born in Vienna, the city of *The Third Man*, in 1935 and grew up among the occupation forces. The following chronological order indicates that Wiener acted in discrete states.

1953: Study in Vienna following graduation; 1954–1959: Part of the “Vienna Group”; 1958–1966: Data processing; 1969: Relocation to Berlin; 1969–1975: Gastronomy; 1979–1983: Study of mathematics and information science at the Technical University in Berlin; 1986: Move to Canada; 1992–2004: Professor of Poetics and

⁹ Oswald Wiener, in: Eder and Raab, *Selbstbeobachtung*, p. 67f.

Aesthetics at the Düsseldorf Art Academy.¹⁰ He presently resides in Kapfenstein (Austria) and is contemplating a move to either Russia or Mecklenburg-Vorpommern.¹¹

From the point of view of the question "How do I function?", these chronologically sliced biographic stages appear like containers in which different turbines generate power for the construction of a complex perception apparatus. It has turned into a structure of rigorously programmed and sensually improvised instances of recording, processing and storing. Within this perception ensemble the instruments are calibrated by means of the more precise question: What's up with me when I am gripped by something? In the musical domain, in which Wiener has been active for decades, the question can be phrased with greater exactitude: Why, for instance, does music have such an effect one that I change my life?

It is worth retrieving a bygone detail to grasp the import of this question. In his essay "Wozu überhaupt Kunst?" (Why art at all?) Wiener mentions that the music of the US-American troops – swing, jazz and in particular bebop – marked an incisive experience in the 1950s.¹² It prompted him to become a jazz trumpeter, a goal he doggedly pursued despite

lacking means and support. For example, to purchase a record Wiener rode his bike from Vienna to Bern and back: that is, he covered 1600 km to make certain that he could repeatedly experience and study the thrill of a certain piece of music in order to imitate the technique, break free from imitated patterns and find his own style. Despite successful performances in the 1950s Wiener abandons his career as a trumpeter, a decision related to his autodidactic approach that was not conducive for longer performances. However, the engagement with physical palpable intoxication, the sensual thrill hearing, playing and reflecting on music, becomes a constant of Wiener's work, as in the concerts and recordings of "Selten gehörte Music" (Rarely Heard Music), the novels *Die Verbesserung von Mitteleuropa* (The Improvement of Central Europe)¹³ and *Nicht schon wieder...!* (Not again...!)¹⁴ as well as in theoretical writings comprising the *Literarische Aufsätze* (Literary Essays)¹⁵ and the *Schriften zur Erkenntnistheorie* (Epistemological Writings)¹⁶.

Remarkably, Wiener the thinking writer is biting the hand that feeds Wiener the artist. He fuels the doubt that humans will "eternally" create something special like art which can also be done by machines. There are practical and theo-

10 Thomas Eder, Oswald Wiener, in: *Killy Literaturlexikon. Autoren und Werke des deutschsprachigen Kulturraumes* (Berlin and Boston 2011).

11 Personal communication with Oswald Wiener.

12 Oswald Wiener, *Wozu überhaupt Kunst?* [1980], in: Oswald Wiener, *Literarische Aufsätze* (Vienna 1998), pp. 21–41.

13 Oswald Wiener, *Die Verbesserung von Mitteleuropa. Roman* (Reinbek/Hamburg 1969).

14 Oswald Wiener, *Nicht schon wieder ...! Eine auf einer Floppy gefundene Datei*, ed. Evo Präkogler (Munich 1990).

15 Oswald Wiener, *Literarische Aufsätze* (Vienna 1998).

16 Wiener, *Schriften zur Erkenntnistheorie*.

retical reasons underlying this insight. Theoretically, it emerges from the study of Wittgenstein's philosophy, a reflection that was actively performed by the Vienna Group and that also led to an engagement with cybernetics and the *Automata Studies*¹⁷ by McCarthy and Shannon. It also prompted Wiener to study mathematics and information science. The *Schriften zur Erkenntnistheorie* contain essays documenting the decades-long appropriation and examination of the concept of computability. They demonstrate that we have in the shape of the Turing Machine a formalism capable of deciding whether or not an idea can be translated into a finite computing operation. Wiener had already in the 1950s developed such expertise in these matters that he was able to work in the private sector and, from 1959 to 1966, build up the data processing division of Olivetti's Austrian branch.

Recording self-observations as well as making music are constants in Wiener's *œuvre*. Another constant is indicated by the abbreviation "I" in his texts. It stands for Wiener's wife Ingrid, an artist who in collaboration with VALIE EXPORT and Dieter Roth creates tapestries, and who for several years has devised a series called "Traumzeichnungen" (Dream Drawings). She often appears in concert with Wiener. The concerts entitled "Rarely Heard Music" indicate Wiener's unflagging willingness to court and engage with randomness. This desire and its

concomitant thrill manifest themselves paradigmatically in his joint ventures with the artist Dieter Roth. One result of this collaboration is the insight into the value of provisional models, which Wiener describes in *Haufen Teilverdautes* ("Partly Digested Heap").¹⁸ The latter, a book which features Roth's early writings and drawings, is a testimony to an ambitious labour of mediation. Wiener strove to highlight the degree to which Roth cannot be mediated by any fashionable currents. In the course of the analysis Roth, initially labelled a "fool", turns into a recalcitrant structure that shatters all mirrors.

And this may serve as a bridge back to the Hubble telescope. As in the case of the two astronauts who repaired the telescope's spectrograph in 2009 and patiently handled 111 screws in zero gravity, there is something weightless to the collaboration of Wiener and Roth. It is the groundlessness of a competing friendship, in which both parties deprive each other of the trust and ground that usually underlie mutual recognition. Distrust smolders or flares up depending on the models the frenemies have of each other. Roth consistently evades the ideas that Wiener has of his, Roth's, artistic practice. This can be heard in "Tote Rennen – Lieder (Selten gehörte Musik)" [Dead Run – Songs (Rarely Heard Music)], a concert the two came up with after boozing all

17 Claude E. Shannon and John McCarthy (eds.), *Automata Studies* (Princeton, NJ 1956).

18 Dieter Roth, *Frühe Schriften und typische Scheisse ausgewählt und mit einem Haufen Teilverdautes von Oswald Wiener* (Darmstadt 1975).

night.¹⁹ You hear the tinker of a piano and Roth and Wiener in conversation. Roth's strategy consists in taking literally and thus proving futile Wiener's theoretical distinctions. For his part, Wiener pursues details of Roth's practice until they distort the image he has of him. We thus arrive at the thesis that models of artistic practice or, more generally, of localized domains that lead to the production of signs, must be of provisional. They demand detailed observation in combination with ongoing clarification. The emerging details decompose the model into submodels. Which is why the Hubble mode has to be decomposed as well, maybe like this:

The telescope supplies data that are configured into images. Image configuration is based on landscape depictions.²⁰ In its present state Wiener's *œuvre* may be organized hierarchically. Within this hierarchy artistic practice has a subservient function. To a certain extent it helps to prepare future insights, but on the whole it is pretty undiscerning. Here, the analysis follows in the footsteps of Plato's critique of artists. Wiener's texts – including those most recently published – question this exemplary narrative by leaving empty the position at the top of the hierarchy. Neither institutionalized psychology nor science nor philosophy offer any insights that could justify this subordinate position of art. As a result,

the very legitimization of art, science and philosophy is at stake. These formations are not capable of explaining how ideas arise. For instance, within the interior of the human psyche. But who, then, is able to furnish an explanation? All those willing to scrupulously focus their attention on their own ideas and imaginations and to record and share them. We are talking about individuals who do not shy away from applying machine metaphors to their own thoughts and emotions, and who do so as member of "research groups". The distinguishing feature of Wiener's group is its dedication to heterarchy, the courage to make do with fragments, and the skepticism towards simplifying narratives and theoretical systems that cannot be tested by means of self-observations. The data provided by Oswald's Hubble resist any formatting by a *unifying-uniforming narrative*.

19 In detail: Nils Röller, Tote Rennen – Zweikampf in Island zwischen Dieter Roth und Oswald Wiener, in: *Dieter Roth – Die Bibliothek*, ed. Johannes Gachnang et al. (Bern 2003).

20 Elizabeth A. Kessler, *Picturing the Cosmos. Hubble Space Telescope Images and the Astronomical Sublime* (Minneapolis 2012).

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