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A commentary to the work of Wojciech Bruszewski

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Wojciech Bruszewski: Aberrations in Transmission

In 1948 the American mathematician and MIT professor, Claude E. Shannon, published "A Mathematical Theory of Communication," laying the groundwork for the nascent field of information theory. With Warren Weaver, Shannon posited a generic and mathematically defined model of communication comprising distinct components: the information source, destination, transmitter, noise source, message, and feedback. Among the elements of this theory was the notion of information entropy, that is to say, the amount of information contained in a message. Shannon's goal was to "get maximum line capacity with minimum noise."¹ The faithful reproduction of the transmitted message was his ultimate aim. Further down on the list of priorities were reducing uncertainty and resisting chaos. Shannon and Weaver's theory of communication influenced many fields, particularly the burgeoning technologies of telecommunications, computers, and data transmission.

The 1940s and '50s were also crucial decades in the history of television technology. Though the first TV transmissions had been made as early as the 1920s, regular television programming only began in the middle of the twentieth century. The media art pioneer and forerunner of computer art, Wojciech Bruszewski, was born one year before the publication of "A Mathematical Theory of Communication," and was six years old by the time the first color broadcast aired in the United States. He grew up in a period when television was undergoing rapid development—both technologically and socially. Unsurprisingly, the medium of TV became, to him and his peers, the definitive medium of their generation. Television provoked widely divergent responses from the art world and society at large: its technological capabilities and political and social potential could not be overlooked by a young artist with a technical education

and a fondness for technology. The same topics that interested Shannon also inspired Bruszewski, an alumnus of the Łódź Film School, who was familiar with the technological aspects of television production.

In 1977 Wojciech Bruszewski produced an audiovisual piece that was, in a sense, a commentary on the study of communication. *Transmission* featured five performers and the event begins with “performer B [describing] in words the behavior of performer A.” Next, “based on his own word description, performer B recreates the behavior of performer A. Performer C describes in words the behavior of performer B.” Then “based on his own word description, performer C recreates the behavior of performer B. Performer D describes in words the behavior of performer C,” and so on.² In this manner, Bruszewski reveals his fascination with the encoding, processing, and transmission of signals, as discussed in Shannon’s theory of information. The production combines Shannon’s system of aspirations—resisting chaos and reducing uncertainty—with artistic commentary. Uncertainty, chaos, and noise, Bruszewski argues, are inherent components of human communication. What engineers saw as noise that needed to be minimized was, to Bruszewski, a constant feature of our communication. Noise, therefore, does not necessarily impede communication; as the artist’s later work demonstrates, it can even be a creative element.

In 1974 the artist gave a reading of *Translations* using a system of his own design comprising a microphone, acoustic amplifier, “translator”, speaker, and light bulb. The “translator” was a device that transformed an acoustic signal into a signal that controlled a light bulb. As Bruszewski read the text, his voice would boost the light emanating from the bulb, thus allowing him to continue. The absence of an acoustic signal would prevent him from reading. In this installation we see Bruszewski’s interest in studying the phenomenon of communication as it occurs in

various systems: through words, sounds, and light, and the possibility of translating audio messages into visual ones and vice versa. He augmented the communication model with interpermeating components - the spoken word, light, and the body - none of which operate in isolation from the others. The artist also appeared to pose questions about humanity's role and significance in modern technological systems. Trapped in the circuitry of his audiovisual system, Bruszewski struggles against it, at times powerlessly; each pause dims the light, forcing the performer to illuminate the bulb with the help of unnatural sounds in order to continue reading.

Bruszewski's stance on technological developments is also revealed in a related 1973 production. In a film called *YYAA*, the artist emits a sustained groan that is modulated by varying combinations of light settings. According to the artist's note, the configurations were generated randomly by an electronic device. As he did in *Translations*, Bruszewski attempts to explore the possibilities of transforming image into sound. *YYAA* is among the artist's most emotional artworks, one that depicts a person who has been integrated into a system—a transmitter of visual and audio signals, surrounded by technology over which he has no control. The man's wail and his grimaces become media of emotion, unintentional components of the communication model. The artwork is seemingly a highly personal and original vision of technological menace. Media and their attendant technologies wield total influence over our lives, and our emotions are, and will remain, a constant part of those relationships. As is apparent in critical analyses of Bruszewski's work and in statements made by the artist himself, it would certainly be a mistake to interpret his fascination and familiarity with technology as an affirmation of technological progress. Bruszewski was clearly an astute critic of technological development, and was able to explain complex aspects of technology in a highly suggestive manner.

Bruszewski spent years pondering the issues that troubled him,

including ones inspired by the exact sciences. In 1979 he once again referenced the theme of broadcasting in a pair of works that were a kind of variation on a single concept. In *TV Music* and *Television Chicken*, Bruszewski returns to his earlier experiments, exploring the possibility of translating between images and sounds. In these installations, the artist wired a TV set to sensors that would generate abstract sounds based on the brightness of the image. The source audio emitted by the television was replaced with a completely modified signal that was a function of the original video signal programmed by Bruszewski. These experiments in generating sound with the help of images were undoubtedly critical in their approach to the medium. The archival documentation of *Television Music* contains photographs depicting the TV set tuned to the daily news program *Dziennik Telewizyjny*. Deconstructing the soundtrack of a broadcast of this type constituted an act of resistance against the threat posed by the medium, while also serving as a kind of warning, an attempt to overcome a perceptual pattern. Bruszewski openly explained that his goal was to cause “some disruption,” to create “an event of interplay between our habits, our patterns of thought, and a phenomenon that undermines those patterns...”³ It should be noted that *Television Music* is one of Bruszewski’s rare works that overtly reference the contemporary political situation. Most of the artist’s pieces are universal explorations and autotelic meditations on media.

It is worth mentioning in this context that Bruszewski was also responsible for acts of sabotage in private spaces: the artist constructed a TV signal jammer which he would deploy when visiting the homes of friends. As an artist with a technical background, Bruszewski subversively highlighted the threats posed by technology—propaganda, mediation, the risk of arrested development—while at the same time experimenting with technology and its associated concepts. Similarly, the use of electromagnets to interfere with television signals was a typical

feature of early video art. Wolf Vostell and Nam June Paik, the founders of the art form, staged actions of this type in a gallery setting in the early 1960s.

The vision of the world depicted in, and explained by, the new media of television and video is the main theme explored in the *Practice of Traps* (1974–1978). In his theoretical commentary that accompanied the series, the artist describes it as a “series of ongoing experiments conducted in an attempt to unlearn acquired knowledge; as a form of rehabilitation from the existing culture.”⁴ One example from this series is Bruszewski’s 1976 installation for the Labirynt Gallery in Lublin. In the work, the artist modified the image captured by a video camera with the help of a mirror, the position of which was periodically adjusted by an electronic circuit. Viewers were presented with an imagination-defying transformation of a simple image, thereby forcing them to attempt to solve the puzzle of how it could have been created. The work drew audiences into a game that revealed the pitfalls of perception that awaited them in the medium of television, which relied on the use of increasingly advanced technology. Bruszewski’s goal in the *Practice of Traps* was “to verify, in practice, the state of one’s mind vis-à-vis the world of things.”⁵

The media codes introduced by the medium of television inspired artists to pursue actions that deconstructed TV messaging, as well as to attempt to create a new idiom of visual communication. 1973 saw the creation of an experimental work by members of the Workshop of the Film Form (WFF), the crux of which was the construction of a new language. The twenty-five-minute, four-camera television production *Visual Language* was a collaborative effort by Wojciech Bruszewski, Piotr Bernacki, and Paweł Kwiek, in cooperation with producers from the WFF. The conceit of the piece was to visually encode abstract information regarding the transportation of luggage aboard LOT Polish Airlines. In its original text-based form, the message was

encoded into a system of visual signs using standard film techniques such as panning and editing. In this system, the artists associated letters of the alphabet with particular images captured during an open-air film shoot. The first part was designed to teach viewers the new system of signs, while in the next they were invited to attempt to decode a message. As an attempt to develop an original media idiom, *Visual Language* is an example of the constructive and exploratory attitude exhibited by students of the Łódź Film School. Similar attempts to experiment with the visual language used on TV were later made independently by Wojciech Bruszewski, Paweł Kwiek, and Ryszard Waśko.

While the medium of television was, for Bruszewski, a natural area for artistic exploration—due to the visual character of the medium as well as the emphasis on TV production in the Łódź Film School’s curriculum—his interest in the world of radio transmissions is extraordinary and peculiar. In 1988, together with Wolf Kahlen, the artist powered up an installation called *Radio Ruins of Art*, which released into the ether of West Berlin an endless conversation between two robots. Using a speech generator, the installation broadcast randomly selected snippets of text to produce a dialogue about philosophy. The robots, Gary and Paul, recited excerpts from Plato, Schopenhauer, Gödel, and others, haphazardly combining passages selected by the artists. The generative character of this installation, which remained on the air for five years, testifies to Bruszewski’s faith in intuition, chance, and undirected action. As an artist-engineer, he opposed the algorithmic reproduction of creative processes that had been initiated by the Stuttgart school around the time when Bruszewski was starting his education at the Łódź Film School. In the mid-1960s, a circle of Stuttgart-based artists-cum-scientists associated with Max Bense “believed the computer would enable them to break with the speculative and subjective approach to making and evaluating art,”⁶ and as a result make mechanically

produced art possible. Bruszewski believed that the random juxtaposition of content could produce new qualities and inspire people to explore the world further. The random processes he employed in his art significantly transformed the signals. The message broadcast in Berlin was, to a certain extent, beyond the artists' control. The independence they granted their own work was a meaningful gesture towards the media of radio and television, which were heavily tarnished by propaganda in the period when the artworks in question were created.

In his later years, Wojciech Bruszewski took an interest in the Internet. In 2005 he delivered a presentation titled *Netart* at the Warsaw Media Art Biennale. Internet art could have provided him with new opportunities for the artistic exploration of broadcast-related topics. As a new medium, the rapidly growing Internet was a source of inspiration in itself. Furthermore, there are numerous parallels between television in the 1970s and what became of the Internet in the first decades of the twenty-first century. One may assume that the Internet naturally became a new area of artistic activity for Bruszewski. Unfortunately, the artist succumbed to illness after completing only a handful of Internet-oriented pieces. Evidence of Bruszewski's interest in Internet art can be found in the novel *Big Dick*, which features interactive online resources, designed by the artist, that can be reached using special codes scattered throughout the book.

Broadcasting systems—and television in particular—were a significant source of inspiration for video artists in Poland in the 1970s. Many works by members of the Workshop of the Film Form, active from 1970 to 1977, directly referenced television. TV was also a formative medium for many artists of the 1960s and '70s in other countries. Bruszewski's work undoubtedly followed in the same vein, making him a pioneer of video art in Poland. Still, the artistic strategies, forms, and techniques he used, as well as his points of reference, clearly set him apart from the WFF and the international art scene. Bruszewski was interested

in a broad spectrum of transmission systems and their mutual permeation: television, radio, light, human speech, and the Internet. His experiments with these systems are particularly notable for their depiction of human entanglement in technology in its broadest possible sense. This is directly visible in the pieces in which the artist connects a person to the circuitry of electronic communication systems. The human trapped within them is forced to undertake impossible or oppressive tasks. Of particular note is the very theme of transmission itself, which is undoubtedly tied to Bruszewski's technical background. The artist's technological skills and knowledge enabled him to transfer technical concepts into the realm of art.

Bruszewski used a range of forms: film, installation, performative actions, and television productions. His creative stance anticipated multimedia art created with computer technology and electronic circuits. Besides offering a critique of technological progress, Bruszewski's art showcases chance as a culturally productive and inherent part of our lives. This theme is recurrent in the artist's generative works, making Bruszewski, alongside the painter Ryszard Winiarski, a pioneer of generative art in Poland.

The emergence of new media inevitably prompts artists to pursue exploratory efforts to analyze them through artworks that deconstruct a medium, interfere with its internal processes, or create a new language of communication. The path traveled by Wojciech Bruszewski—from the thoroughly exploited medium of television to his preliminary forays into the genre of Internet art—illustrates the repeated artistic gestures, similar exploratory goals, and related creative interests of artists-cum-engineers. When analyzing contemporary actions carried out in the fields of Internet art, transmission art, and hacktivism, one should keep in mind the parabola connecting them to artists who worked in the medium of television in the 1970s.

- 1 Em Griffin, *A First Look at Communication Theory* (New York: McGraw-Hill, 2003), 23.
- 2 Janusz Zagrodzki, *Bruszewski. Fenomeny percepcji* (Łódź: Miejska Galeria Sztuki, 2010), 125.
- 3 Zagrodzki, 143.
- 4 *Ibid.*, 109.
- 5 *Ibid.*, 109.
- 6 Christoph Klütsch, "Information Aesthetics and the Stuttgart School," in *Mainframe Experimentalism: Early Computing and the Foundations of the Digital Arts*, eds. H. Higgins, D. Kahn (Berkeley–Los Angeles–London: University of California Press, 2012), 65.

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