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LIVE FROM CYBERSPACE

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The entry for the word “live” in the Oxford English Dictionary (Second Edition) reads: “Of a performance, heard or watched at the time of its occurrence, as distinguished from one recorded on film, tape, etc.” This is a definition that reflects the necessity of defining the concept in terms of its opposite. The earliest examples of the use of the word “live” in reference to performance cited in the OED come from the mid-1930s (1934, to be exact). The need to define the term “live” in relation to an opposing concept partly explains the surprisingly late date of this initial usage: performances could be perceived as “live” only when there was a way of recording them. But, since methods of recording sound had existed since the 1890s, 1934 is substantially after the advent of recording technologies. If this word history is complete (and I assume that if the word “live” had been applied to performances in, say, the Middle Ages, the editors of the OED would have found the references!), it would seem that the advent of recording technologies was not enough in itself to bring about the formulation of the concept of liveness. Here, I will address the question of why that took so long to happen, then go on to examine the implications for liveness of the much more recent emergence of a particular digital technology.

The answer to the question of why the appearance of recording technologies was not enough to bring the concept of liveness into being has to do, I think, with the fact that with the first recording technology, sound recording, the distinction between live performances and recordings remained experientially unproblematic. If you put a record on your gramophone and listened to it, you knew exactly what you were doing and there was no possibility of mistaking the activity of listening to a record for that of attending a live performance. As Jacques Attali points out in *Noise: The Political Economy of Music*, the earliest forms of sound recording, such as Edison’s cylinder, were intended to serve as secondary adjuncts to live performance by preserving it.¹ As recording technology brought the live into being, it also respected and reinforced the primacy of existing modes of performance. Live and recorded performances thus coexisted clearly as discrete, complementary experiences, necessitating no particular effort to distinguish them.

It is significant that the earliest use of the word “live” in relation to performance listed in the OED has to do with the distinction between live and recorded sound, but not with the gramophone. The technology necessitating this usage was radio. This first citation of the word “live” comes from the BBC Yearbook for 1934 and iterates the complaint “that recorded material was too liberally used” on the radio. Here, we can glimpse the beginnings of the historical process by which recorded performances came to replace live ones, a process I discuss extensively in my book *Liveness: Performance in a Mediatized Culture*.² But radio represented a challenge to the complementary relationship of live and recorded performances that went beyond its role in enabling recordings to replace live performances. Unlike the gramophone, radio does not allow you to see the sources of the sounds you’re hearing; therefore, you can never be sure if they’re live or recorded. Radio’s characteristic form of sensory deprivation crucially undermined the clear-cut distinction between recorded and live sound. It would seem, then, that the concept of the live was brought into being not just when it became possible to think in those terms—that is, when recording technologies such as the gramophone were in place to serve as a ground against which the figure of the live could be perceived—but only when it became urgent to do so. The possibility of identifying certain performances as live came into being with the advent of recording technologies; the need to make that identification arose as an affective response specifically to radio, a communications technology that put the clear opposition of the live and the recorded into a state of crisis. The response to this crisis was a terminological distinction that attempted to preserve the formerly clear dichotomy between two modes of performance, the live and the recorded, a dichotomy that had been so self-evident up to that point that it did not even need to be named.

I am suggesting that the concept of the live was articulated in relation to technological change. Recording technology brought the live into being, but under conditions that permitted a clear distinction between the existing mode of performance and the new one. The development of broadcast technology, however, obscured that distinction, and thus subverted the formerly complementary relationship between live and recorded modes of performance. The word “live” was pressed into service as part of a vocabulary designed to contain this crisis by describing it and reinstating the former distinction discursively even if it could no longer be sustained experientially. As a consequence of the circumstances under which this vocabulary was instated, the distinction between the live and the recorded was reconceived as one of binary opposition rather than complementarity.

These ways of conceptualizing the live and the distinction between the live and recorded or mediatized originated in the era of analog technologies and persist to the present day; they form the basis of our current assumptions about liveness. But I will argue here that digital technologies have reopened these fundamental questions. A new technology has created a new crisis that may lead to a different understanding of liveness. To bring the digital dispensation into focus, I will concentrate on the phenomenon of Internet “chatterbots.”

In digital culture, the word “bot” is a shortened form of the word “robot” and refers to computer software that can respond to input and autonomously execute commands. The most familiar type of bot is probably the search engine—you tell it what to look for, and it goes forth into cyberspace, seeks, and finds (you hope) what you wanted. It can do this not because it has access to existing lists of websites that have already been indexed by key word but because it is programmed to conduct searches itself. In other words, if you tell a search engine to find websites about “liveness,” say, it does not simply spit out an existing list of sites that have been indexed by that term. Rather, the bot itself actually searches the web electronically, locates sites containing that key word, and reports back to you. To translate this function into the terms of an older technology, imagine a jukebox that contains no records itself but that can actually go out and scour the world’s record stores to bring back ones you may wish to hear in response to a specific request.

There are many types of bots besides the search engine: warbots, channelbots, spambots, cancelbots, clonebots, collidebots, floodbots, gamebots, barbots, eggdrop bots, and modbots, to name but a few. The type I’d like to discuss here is the chatterbot, sometimes called a chatbot, a software program designed to engage in conversation. The first and still best-known chatterbot is Eliza, the program that interrogates the user in the manner of a Rogerian psychotherapist, developed at MIT in 1966.

Chatterbots typically operate in text-based digital environments, in which the user types messages to the bot and the bot responds in “typed” words that appear on the computer screen. Chatterbots are based on research in natural language processing and are generally programmed to recognize words and word patterns and to respond with statements that make sense in the context of what is said to them, though some are also capable of initiating conversations. The more sophisticated the programming, the more similar to human discourse the bot’s conversation will be. Since Eliza, many other chatterbots have been created, including the well-known Julia, developed around 1990. Andrew Leonard’s description of Julia in *Bots: The Origin of New Species* gives a sense of the capabilities of chatterbots:

Dubbed “a hockey-loving ex-librarian with an attitude” by *Wired* magazine, Julia has bedazzled would-be suitors. . . . Her sense of humor is well developed. She can keep track . . . of both her own statements and the responses of the human she might be talking to. Her database of conversational statements is grouped into nodes that concentrate on specific topics, such as pets. A clever system of weighting insures that her tendency to speak about pets automatically increases or decreases depending on the answers she gets to certain questions. If the response to her question “Do you have pets?” is no, the weights on all of the sentence patterns having to do with pets are automatically lowered. She can purposefully send conversations off in new directions by randomly injecting statements such as “people don’t own cats.” . . . She even simulates human typing by including delays between the characters she types and by spelling words incorrectly.³

The chatterbot phenomenon can be inserted into an historical narrative very similar to that of recorded sound and radio. Like the first stage of sound recording, the first stage of the chatterbot was unproblematic because the new technology's status was unambiguous. Accessing Eliza on MIT's mainframe computer was much like putting a record on a gramophone, at least in the sense that there was no ambiguity about where the words came from: you had chosen to contact Eliza and knew you were talking to a machine (though there are also important ways in which chatterbots are different from recordings, which I shall discuss shortly). But just as the source of sound on the radio is ambiguous, so the source of computer conversation became ambiguous when chatterbots moved from mainframe computers onto the Internet. Although you can still choose to converse with a chatterbot, it is now possible to be engaged in conversation with one without knowing it. Chatterbots can and do participate in online chatrooms and e-mail lists without necessarily being identified as bots.

Again, this situation is analogous to the shifting status of recorded sound in the historical transition from gramophone to radio. Listening to a gramophone record was an act of volition on the part of the listener, who was fully aware of the source of the sound. As long as chatterbots were confined to mainframe computers and had to be accessed by users, they were analogous to gramophone records. But online, the source of chatterbot conversation becomes ambiguous in a way that parallels the ambiguity of sound on the radio. Radio sounds are not selected directly by the listener and it is not possible to know whether the sound you hear emanates live from the broadcast studio or is recorded. Likewise, in an Internet chatroom or on an e-mail list, you do not necessarily choose to talk with bots and it can be impossible to know whether you are conversing with a human being or a piece of software. As in the case of radio, this ambiguity results in part from the sensory limitations of the medium. Since we can neither see nor hear the sources of online chat, chatterbots can be and are mistaken for human chatters, and vice-versa. One of the questions addressed in an online document entitled "I Chat, Therefore I Am?? An Introduction to Bots on IRC [Internet Relay Chat]" is "How come people [in chatrooms] ask me if I'm a bot?" The author advises that if you type too fast, lurk in the chatroom without participating actively in the conversation, or use too many automated functions in your chat responses, you may be mistaken for a bot.⁴

Chatterbots and other types of bot raise many issues, including questions concerning the potential of Artificial Intelligence research and questions of online etiquette and ethics. Here, I want only to consider the implications of the chatterbot for our understanding of live performance. The chatterbot may well be the locus at which a new crisis around the issue of liveness will crystalize, this time in relation to digital technologies. As I've already suggested, the development of the chatterbot parallels the development of sound recording and radio that precipitated the initial crisis leading to the creation of the category of the live itself. The existence of chatterbots reopens and reframes the question of liveness at a fundamental level. The ambiguity created by chatterbots differs from that created by radio in one crucial respect. While it is true that you can't know whether sounds you hear on the radio are produced live

or not, you generally can have confidence in the ultimate source of the performance you hear. That is, even if you're listening to a recording, there is usually little doubt that it is a recording of a performance by a human being. The ambiguity created by radio has to do with the ontology of the performance (live or recorded), not with the ontological status of the performer (human or non-human). The chatterbot forces the discussion of liveness to be reframed as a discussion of the ontology of the performer rather than that of the performance.

So far, I have emphasized some parallels between early chatterbots and sound recordings, but the differences between chatterbots and recordings are centrally important to the renewed consideration of liveness prompted by the chatterbot phenomenon. If we return for a moment to the OED's definition of "live," it becomes evident that chatterbots are live performers. "Of a performance, heard or watched at the time of its occurrence, as distinguished from one recorded on film, tape, etc." Chatterbot performances are certainly live according to this definition. It is important in this context to stress that chatterbots are not playback devices. Whereas audio and video players allow us to access performances carried out by other entities (i.e., the human beings on the recordings) at an earlier time, chatterbots are themselves performing entities that construct their performances at the same time as we witness them.

The magnitude of the challenge chatterbots pose to current conceptions of liveness becomes evident when we consider how both the ontology and the value of live performance have been construed in performance theory, which often invokes the performer's materiality and mortality to describe liveness in existential terms. In *Blooded Thought*, Herbert Blau declares dramatically that "In a very strict sense, it is the actor's mortality which is the actual subject [of any performance], for he is right there dying in front of your eyes."⁵ Peggy Phelan echoes some of the same themes in *Mourning Sex*: "Live performance and theatre ('art with real bodies') persist despite an economy of reproduction that makes them seem illogical and certainly a poor investment . . . it may well be that theatre and performance respond to a psychic need to rehearse for loss, and especially for death."⁶

Clearly, performances by bots cannot address these ideas in the same way as those by human performers. Since bots are virtual entities, they have no physical presence, no corporeality; they are not dying in front of our eyes—they are, in fact, immortal. Bots can be destroyed or taken out of service, but they do not age or die in any biological sense. They perform live, but they are not a-live, at least not in the same way that organic entities are alive. Performances by bots therefore do not engage existential issues simply by virtue of the performers' presence, in the way Blau and Phelan describe human performances. It is crucial to remember, however, that Blau's and Phelan's respective formulations are directed toward identifying the specificity of live performance by opposing it to performances conveyed through technologies of cultural reproduction such as film and video. The quotation from Blau comes from an essay contrasting theatre and film; as the one from Phelan indicates, she is positioning live performance against an economy she sees as driven by reproduction.

Both emphasize the failing organicism of live human bodies to counterpoint the way those same bodies are represented through technologies of cultural reproduction and to emphasize that basic aspect of live performance stated in the OED definition: live performance is not recorded. Bots are technological entities, but they constitute a technology of production, not reproduction. Although chatterbots are programmed and draw their conversational material from data bases, their individual performances are responsive to the actions of other performers, autonomous, unpredictable, and improvisational. That is, they perform in the moment.

If, as I've already indicated, the chatterbot does not demand a new definition of live performance, it does remind us of what is basic to existing definitions. Returning to the OED one last time, we can see that liveness is first and foremost a temporal relationship, a relationship of simultaneity: "Of a performance, heard or watched at the time of its occurrence." The ability to present performances that can be watched as they occur, or, to switch to a technological vocabulary, to perform in real time—the heart of the concept of liveness—is an ability shared by human beings and chatterbots. The appearance of the Internet chatterbot therefore does not occasion a redefinition of liveness or a realignment of the conceptual relationship between live and recorded performances, as did the earlier development of radio. But what the chatterbot does occasion is considerably more profound: it undermines the idea that live performance is a specifically human activity; it subverts the centrality of the live, organic presence of human beings to the experience of live performance; and it casts into doubt the existential significance attributed to live performance.

NOTES

1. Jacques Attali, *Noise: The Political Economy of Music*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1985), 90–96.

2. Philip Auslander, *Liveness: Performance in a Mediatized Culture* (London, New York: Routledge, 1999), esp. 23. The present account of the historical emergence of the live as a conceptual category modifies the discussion in *Liveness*. See also Attali, *Noise*, 85.

3. Andrew Leonard, *Bots: The Origin of New Species* (San Francisco: HardWired, 1997) 41–42.

4. Heather Peel, "I Chat, Therefore I Am?? An Introduction to Bots on IRC," available at <http://www.chatcircuit.com/tech/10/10bots.htm>.

5. Herbert Blau, *Blooded Thought: Occasions of Theatre* (New York: Performing Arts Journal Publications, 1982), 134.

6. Peggy Phelan, *Mourning Sex: Performing Public Memories* (London, New York: Routledge, 1997), 3.

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