The Raw Data Diet,
All-Consuming Bodies and
the Shape of Things to Come

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For the past three decades my work has been concerned with the construction of identity. In the 1970s, this concern was expressed through the symbiotic relationship between the real and virtual worlds. More recently, I have created synthetic female agents: *The Dollie Clones* (1995–1998), *Synthia* (2000–2004), *Agent Ruby* (1991–2004) and *DiNA* (2004). These works expand the possibilities of singular identity into a networked trajectory composed of flowing data that eats itself, cannibalizing in the process information that mutates and is re-expressed in unpredictable ways. Individual interaction results in both immediate response as well as in re-patterned cultural demographics that reveal cultural patterns.

A few months after the birth of the first cloned sheep, Dolly, was announced to the public, I created two telerobotic dolls. I chose the punning title *The Dollie Clones* to refer to these two identically programmed robotic sisters.

Tillie is the older sibling. Her birth was slow and painful. However, her brain itself was eventually cloned to produce a sister, CybeRoberta (Article Frontispiece). Although there were other robotic network pieces developed around this time, the Dollie Clones were the first robotic networks with a humanoid presence.

It was important that the dolls be able to pirate identity. I wanted to explore the ideas of masking and identity theft, and the hidden dangers inherent in surveillance technology.

The two telerobotic dolls have camera "eyes" and heads that can rotate 180° when activated by Internet users and can track and incorporate viewers into their own environment. When shown together, the two sisters are programmed to pirate each other's information.

Reliance on tracking and surveillance techniques has resulted in a culture with peripheral vision. Sight extends beyond the borders of physical location. The dolls are constructed so that their eyes are replaced by cameras: a video camera in the left eye and a web cam in the right eye (Fig. 1). The "eye con" on the right, connected to the net, can telerobotically turn the doll's head 180°, allowing users to survey the room she is in. The doll "sees" in a 320-by-200 grayscale, refreshed every 30 seconds (to accommodate visitors with slow connections).

Viewers in the physical space can see themselves captured on the small monitor in their environment via a mirror placed in front of her and have the capability to send those images back through the Internet to the page.

The left eye camera sees in color and records exactly what is in front of the doll. By looking at the world through the eyes of the telerobotic dolls, viewers become not only voyeurs but also virtual cyborgs because they use the dolls' eyes as vehicles for their own remote and extended vision. Tillie's recorded mirror images and face become a mask for multiple expressions of identity made possible through global connectivity.

Agent Ruby 1 exists on the Internet. An advanced version, *Agent Ruby 2* (Fig. 2), which was conceived to be part of the experience of my film *Teknolust* (Fig. 3), is a self-breeding, artificially intelligent web agent. Her brain feed is from AIML (Artificial Identity Markup Language). Her memory system is shaped by encounters with users (Fig. 4). Existing on a multitude of platforms with the capacity for accumulating memory and intelligence, Ruby 2 is a reactive communicator. She

ABSTRACT

The author discusses the construction of synthetic female cyborgian agents that expand singular identity into a networked trajectory composed of flowing data that cannibalizes processed information, which mutates into re-expressed, unpredictable patterns.

Fig. 1. Diagram for Tillie's webcam eyes, iris print, 1997. (© Lynn Hershman)
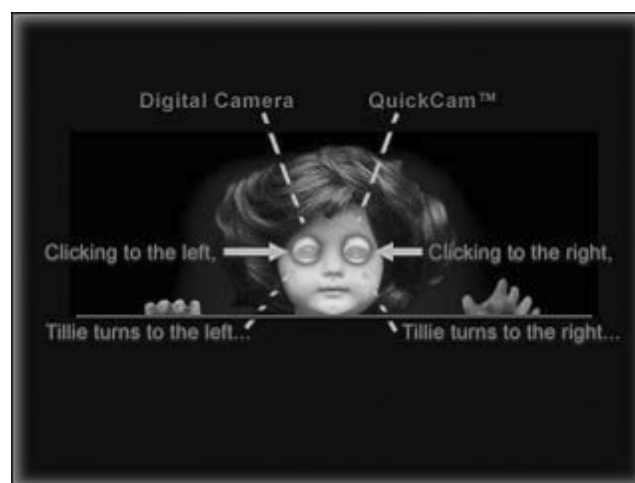
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Article Frontispiece. *CybeRoberta*, 1995–1998. (© Lynn Hershman)

Fig. 2. Agent Ruby close-up, artificial intelligent bot, AIML and Java script, 2003. (© Lynn Hershman)

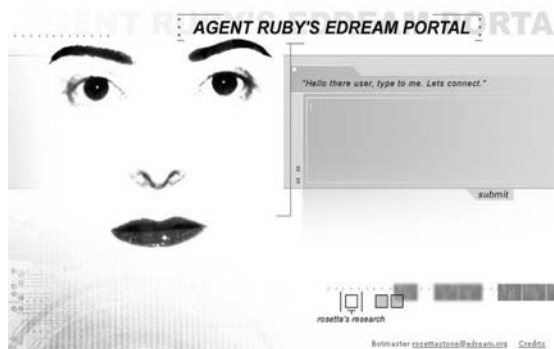**Fig. 3. Still from *Teknolust*, with Tilda Swinton, 35mm film and HD, 2002. (© Lynn Hershman)**

Fig. 4. Opening page from *Ruby 1* web site, 2001. (© Lynn Hershman)

Fig. 5. *Synthia* Stock Ticker, mediated stock detector, 2002. (© Lynn Hershman)

is a networked conduit between individuals and net society. Agent Ruby's brain continually grows and expands, thus fleshing her out through cumulative use, but her body is absent. Ruby converses with users, remembers their questions and names and has moods corresponding to whether or not she likes them (Color Plate B No. 2). Users can interact with Ruby through both voice and text. They can also download Agent Ruby onto Palm Pilots and laptops, thereby extending her life cycle into one of continual replication and breeding onto these platforms.

Cultural obsessions with the economy, the accumulation of wealth and how that in turn affects human behavior inspired the creation of *Synthia* (Fig. 5). She is a personification of the stock market expressed through a series of video images that show her shifting behaviors. Her hard drive accesses live on-line stock data and is transferred into the real space of a miniaturized stock ticker, modeled after Edison's original version. Synthia toggles between the Dow Jones, NASDAQ, S&P and Russell Small Cap indexes, exhibiting behaviors elicited by 2% changes in the market. The market numbers are also on view in the piece and become part of Synthia's identity.

Examples of how Synthia interacts with her own received data include:

- *If the market is flat, she goes to bed.*
- *If the market is up, she dances.*
- *Or visits the zoo, or goes to the stock exchange, or checks her e-mail.*
- *If the market is really hot, she turns to fire and does backflips.*

Fig. 6. *DiNA*, artificial intelligent telepresent oracle bot, 2004. (© Lynn Hershman)

- *If the market goes down, she chain-smokes.*
- *If the market is very low, she turns to water and becomes depressed.*
- *If the market goes up, she shops at Hermès or Dior.*

- *If the market goes down, she goes to Goodwill.*
- *Or takes a gun to her head, or has nightmares.*

There are 16 base behaviors for the character that are organized in modules that correspond in real time to Synthia's compiled, processed and compressed data, just as humans are programmed to act on information received through our own processing filters.

DiNA (Fig. 6) is an artificially intelligent bot running for the office of telepresident. Waging an ongoing campaign for virtual election, she converses with voters and collects and collates votes on issues pertinent to global survival via her campaign web site. DiNA is unique, as a bot and as a candidate, because she is able to process Internet content in real time, allowing her to respond to current events as they are unfolding throughout the world. She links individuals to current events and creates a demographic of responses through her site.

In public, DiNA appears either in a voting booth, which offers a protected space for user intimacy, or as an 8-foot projection of her wisdom. Her web site <www.vote4dina.com> hosts on-line discussions and offers users an opportunity to vote on issues in her platform such as health care, nanotechnology, the environment, stem-cell research and funding for the arts (Fig. 7).

DiNA is designed to have the following capabilities:

1. Phase I voice synthesis with real-time animated facial features
2. Phase II voice recognition capabilities (Fig. 8)
3. Real-time content processing of Internet news items
4. Web site featuring a voting ballot that is instantly tabulated and demographically segmented into community voting results

A world fractured by war inspired the creation of a telepresent prophet capable of guiding voters with intrinsic wisdom, solace and leadership. DiNA's campaign slogan, "Artificial intelligence is better than no intelligence," allows users to interact directly with a candidate about issues pertinent to global survival and get direct feedback.

A generation younger than Agent Ruby, she is also a generation smarter. The more voters interact with DiNA, the more her intelligence develops. Her conversations and interactions are a mosaic of world concerns. Her ballot is intended

Fig. 7. Opening page from *DiNA* web site, 2004. (© Lynn Hershman)

Fig. 8. Installation drawing for *DiNA*, 2004. (© Lynn Hershman)
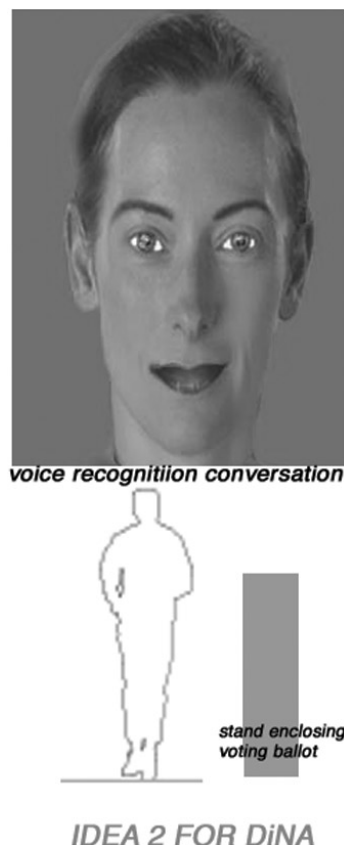
to be a breeding ground for real-world re/action.

I always have been attracted to digital tools and cinematic metaphors that reflect our times, such as privacy in an era of surveillance, personal identity in a time of pervasive manipulation and the essential quest of all living things for communication, connection and interaction.

Artificial life, genetics, nanotechnology, robotics, age retardation and the growing obsolescence of death have enormous social and moral implications. My sense is that newly formed digital identities will be autonomous and unpredictable, with minds of their own, just like the best of us corporeal beings. Our task is to make friends with them. The political as well as psychic stakes of what they represent and how they relate to who we are are urgent, compelling and inescapable.