

The Human Automaton in Art History
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The idea of creation as an act of man – of a creation that would rival and even excel the divine order of nature – is as old as the myths of ancient Chinese, Egyptian, Greek or Arab culture. From the cradle of human thought, it seems, the idea of artificial life has been handed down – the ambition to build, between the realms of life and death, a bridge whose crowning glory would be an artificial human being.

Towards the end of the 15th century the engineer-artist Leonardo da Vinci expressed what he took to be the secret principle of life (*forza*) in the mechanical metaphor of the movement of bodies or apparatus. In a later version Leonardo's *forza* became the energy of a coiled spring that "endows bodies with an active life, a wondrous power"¹. And the coiled spring did, in fact, become the driving principle of the earliest automata which were devised about that time, as Agrippa von Nettesheim (1486 – 1535) reports, though we have no direct evidence of them. The earliest preserved examples of such mechanical androids are a lute player from the mid 16th century (now in the Kunsthistorisches Museum in Vienna),

¹ Horst Bredekamp: Überlegungen zur Unausweichlichkeit der Automaten. In: *Puppen • Körper • Automaten. Phantasmen der Moderne*. Ed. Pia Müller-Tamm & Katharina Sykora. Düsseldorf 1999, pp. 94 – 105.

whose feet trip forward in dainty steps while she plays, and the figure of a monk (built in 1560 and now in the Deutsches Museum, Munich) who walks round a square moving his arms up and down, bowing his head, rolling his eyes and moving his lips. For Agrippa such abilities imply a disturbing, demiurge-like vitality.

These 15th and 16th century beginnings were perfected in the 18th century. Vaucanson's androids (1738) could play the flute or drums, their complex mechanical systems being concealed in the figure's base. In 1774 the engineer Jaquet-Droz created puppets with limbs so artfully jointed that they could write, draw and play the piano. But they still lacked some essential human qualities. They looked and moved like human beings, but they could not speak – they did not possess the faculties of intelligence and thought. So in 1791 another engineer, von Kempelen, developed machines that imitated human speech. But the sounds they produced were said to resemble the indistinct croakings of a small child.

Beneath these attempts to construct a human machine lay a philosophical concept according to which the natural man functions in the same way as a machine. This medico-anthropological concept derives from La Mettrie's *L'Homme machine* of 1748. Theoretically rather than practically, La Mettrie undertook to explain every function of the human being – movement, digestion, feeling, thought and speech – in purely mechanical terms. He was able to call on Descartes' thesis that man in his physical essence does not differ from the animals, and conversely that the animals are quasi-men. All that is needed to enliven dead corporeal matter is a motor, a vital driving force. Over the years various suggestions were made, ranging from magnetism and electricity to clockwork, steam and a great deal more. Since the invention of the artificial computer-brain which, properly programmed, can manage and control the most complex systems and processes, it is this that has become the indispensable central module of technomorphic life. And indeed the virtual reality of computer simulations and animations, of holograms, avatars and 'puppets' (virtual puppets), may seem to have solved the

problem of artificial life – if for a moment you forget the requirements of the emotions and the flesh.

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Whilst our new generation automata and androids, however high-tech and computerized, are nevertheless confined within the limits of their preordained programs, artists and writers have long since left these confines behind. Their human machines have entered a transcendental domain where they are endowed with Utopian potential. Automata as works of art, as artistic productions is imbued with fantasy and feeling; the life principle of artistic creation becomes quasi-human – a truly psychic force. What is impossible to technology is possible to the creative media, man and machine blending and fusing into each other to form a single physical entity that lives and thinks and feels.

Film functions here as a sort of transitional stage, giving life and movement to lifeless forms by means of a simple optical trick. For it presents the human eye with a series of static images in such rapid succession that the eye can no longer distinguish individual frames. As a result, the brain interprets them as a moving continuum. The paradox is complete when one reflects that the static images are of living actors and actresses frozen onto celluloid in order to be seemingly revitalized via the secondary, mechanical process of the projector. The automata and androids of the cinema do not need to be constructed as sophisticated moving creatures because the medium simulates their movement. Examples are *The Golem*, *Metropolis*, and Villiers de l'Isle Adam's *L'Ève future*. A frequent motif in painting and sculpture is the doll or dummy. Max Ernst's 'die anatomie' (1921) depicts a human-looking creature constructed out of the head and arm of a shop dummy, curtain rods, a steel helmet, metal tubes, rubber hoses etc., the whole ensconced within a sardine can • Hans Bellmer's 'La poupée' (1934-37) shows a female doll or dummy with plaster face, a wig, plaster buttocks with undergarments in disarray ... photographed in provocative poses. Later versions show individual members singled out, arbitrarily

juxtaposed and reduced to fetishes with, for example, balls representing breasts and belly combined with self-multiplying thighs and genitals. Obscene constructions of paired genitals, legs and feet clad in white ankle-socks and strap-shoes and joined to a single balloon-like abdomen or rump pose in a forest or flaunt themselves in a haystack • Ernst's and Bellmer's work was taken up by Cindy Sherman in 'Untitled MP #261 / #263' (1992), which brutally unites male and female sexual organs, enhancing the flagrant effect of shaven – or hirsute – nudity with a frilly garter or silk stocking. Sherman's photos display her dismembered dolls, reduced to a crude sex function, in all their mutilated perversity.

Alongside the dolls and dummies, another major theme of 20th century art is what today we call 'cyborgs', hybrid machine-people whose prototype we find in the aeroplane-man Gazurmah of Filippo Tommaso Marinetti's novel *Mafarka* (1910). Marinetti's futuristic glorification of the human machine, which he saw as foreshadowing "the creation of a mechanical human being with replaceable parts" (*Technical Manifesto of Futurist Literature*, 1912)² was intimately connected with the experience of warfare. The same can be said of Otto Dix's pictures of war-cripples (1920), whose grotesquely appalling features are held together – and indeed kept alive – only by the surgeon's prosthetic art. H.R. Giger's bio-mechanoids take the synthesis of man and machine to its ultimate perfection in systems of tubes, vertebrae and wheels that are organic skeleton and technical model at one and the same time.

The ironical attempt to construct a 'human' body out of nothing but cubes, wires and mechanical parts has its origins in the early 17th century (Giovanni Battista Braccelli, *Bizzarrie di varie figure*, 1624). The tradition of man-as-apparatus continues into the 20th century with Kasimir Malewitsch

² „Dopo il regno animale, ecco iniziarsi il regno meccanico [...] noi prepariamo la creazione dell'uomo meccanico dalle parti cambiabili“ (*Filippo Tommaso Marinetti: Manifesto tecnico della letteratura futurista*, 11 maggio 1912. In: *F.T.M.: Teoria & invenzione futurista*. A cura di Luciano De Maria. Milano 1983, S. 48 – 54. Hier: S. 54.).

(1913) • Oskar Schlemmer (*Triadisches Ballett*, 1920-24) and other more recent exponents. Braccelli's cybernetic figures already are reduced to a single function: the body of the bell-ringer is a resonance vessel for the bell hung within it, that of the soldier is a heavy metal bar, invulnerable and insensitive to pain. If we pause here a moment, it becomes evident what all these human automata, these dolls, cyborgs and androids have in common. Braccelli's soldiers are perfect because they are technically optimized for their function and that alone. Their bodies are virtually indestructible – defective parts can be replaced with functionally identical new ones – and they have no feelings. The same is true of Bellmer's doll. Its members can be exchanged and combined at will; its artificial body can be remodelled; its perversely provocative functions can be optimized ever and again. Art has dissolved the frontiers of biological evolution with a man-machine, technically and technologically perfected and endlessly perfectible.

Human machines, then, have undergone considerable development since the ur-androids of the 16th century. Initially contrived to imitate human life as closely as possible, or to serve their human masters in some useful way, they increasingly promise – or threaten – to displace human biology altogether with the vision of an ultimate, purely technical transformation.

Author:

PD Dr. Sabine Rossbach (Co-Organizer of Workshop No. 118: The Artificial Human. Fear, Fiction and Fact. EuroScience Open Forum 2004, Stockholm)

Address:

**University of the Saarland
Institute for Comparative Literature
Im Stadtwald
D-66123 Saarbruecken
Germany**

email: sabinerossbach@yahoo.de