Welcome to the machine! The representation of technology in Zeitopern

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Introduction

Condemned as degenerate art during the Third Reich, German Zeitopern and their artistic treatment of technological infiltration during the Weimar Republic have sparked a variety of new research projects, world-wide musical performances and CD releases from Decca/London in a continuing series entitled ‘Entartete Kunst.’ Manifestos were written in response to the penetration of technology into nearly every aspect of human life, envisaging a future where human beings would interact organically with their new urban environments. Expressionism, Americanism and the concept of Neue Sachlichkeit (New Objectivity) symbolized fresh driving forces that emerged most visibly in opera. In contrast to pre-war Romanticism and Wagnerian mythology, the ‘New Objectivity’ demonstrated a radical commitment to the modern environment, focusing on visible, objective reality rather than on the emotions of the artist. Particularly in Zeitopern, composers like Max Brand, Paul Hindemith, and Ernst Krenek embraced contemporary ideas of progress, new technological inventions, modern electronic communication systems and means of transportation as props, story topics and artistic vehicles to introduce new sound-effects. In several instances modern technology appeared as simply another stage-prop in the long history of opera stage design. In the context of European conceptions of Americanism, technology was partly understood as a threat to the establishment’s reverence for Romantic high culture. And yet in many instances it was also a welcome tool in the project of redirecting all the arts from their stagnant, inflexible pasts to modern, progressive forms of contemporary entertainment. Such diverse attitudes to the potent symbolism of the machine indicate a conflict inherent in aesthetic practice at the time and raise fundamental questions. Do composers successfully represent human beings as creative and autonomous individuals while simultaneously introducing technological images of dominance and depersonalization? If there are contradictory aspects in the representation of technology, how do they relate to the various aesthetic views of the 1920s? Max Brand’s central work and acclaimed prototype of Zeitopern, Maschinist Hopkins (1928), brings the world of technology and its sophisticated artifacts to the musical stage. A close analysis reveals basic contradictions, symptomatic of the era, in the composer’s embrace of modern technology.

1 ‘New Objectivity’ has become the standard translation of the German expression. Other suggestions like ‘new sobriety’ have been introduced by John Willett to emphasize the sober detachment of artists. Art and Politics in the Weimar Period: The New Sobriety, 1917–1933 (New York, 1978).
Brand’s Maschinist Hopkins

In the mid-1920s, Max Brand (1896–1980) was convinced that theater, especially opera, had lost its connection with the audience. Due to a perpetuation of art that was antiquated and out of touch with the present, the classics were performed in empty opera houses. He believed that many music lovers could be won over by music that responded to topical issues without necessarily making concessions to ‘cheap taste.’  

One of the most eagerly discussed subjects was the belief in progress fueled by the growing importance of machines and the increasing mechanization of work processes. By the time Brand decided to write a ‘Maschinen Oper,’ Neue Sachlichkeit was already in full swing and the prerogative of authorial subjectivity was being broadly questioned. The term Neue Sachlichkeit was coined in 1923 by Gustav Friedrich Hartlaub to describe an art exhibition intended for that year, but opened two years later under the title ‘Neue Sachlichkeit: German Painting since Expressionism.’

Brand’s most successful work, the opera Maschinist Hopkins, performed more than 200 times between 1929 and 1933, followed the new trend of adopting the everyday environment for artistic purposes. Brand’s libretto features a mixture of crime and passion, high-tech fantasies, and social issues like the conflict of capital and labor. Undoubtedly the intention was to capture the spirit of the late twenties and rework it for the opera stage. With Fordism and Taylorism as catchwords for refined systems and applications of technological mass production in the 1920s, Brand found it necessary to set his opera inside a factory. The hero of his Zeitoper, Hopkins, is a machinist, which literally connects him to the new mechanical age. The work leads the audience out of a bourgeois environment into the world of machines and workers. As in Metropolis (1926), Fritz Lang’s landmark film about a society dominated by machines, we are taken behind the veil – in this case the factory walls – in order to peep into the mechanical world of production. At the same time, Brand blends in aspects of contemporary entertainment, such as images from movies and elements from revues, as well as American dance music, to address large audiences.

The prelude takes place in a bar of an American proletarian district where the workers of the Lixton Works meet with their foreman Jim to discuss their problems. In order to steal important information from the factory headquarters, Bill, another

3 Brand coined that term in an interview with the Berliner Illustrierte Nachtausgabe (21 March 1930).
4 See Susan C. Cook, Opera for a New Republic; The Zeitopem of Krenek, Weill, and Hindemith (Ann Arbor, 1988), 27–33.
6 In his book Fordism (1926), Friedrich von Gottl-Ottlilienfeld presents an idealized perspective on the merits of automobile mass production in America from a European point of view. ‘He [Henry Ford] is dynamism personified. It is truly as if this most American of all industrial organizations were the intellectual embodiment of activism, of, strictly speaking, the melliorism of William James.’ Friedrich von Gottl-Ottlilienfeld, ‘Fordism,’ in Fordismus. Über Industrie und technische Vernunft (Jena, 1926). Partly reprinted in The Weimar Republic Sourcebook, ed. Anton Kaes, Martin Jay and Edward Dimendberg (Berkeley, 1994), 401.
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machinist, manages to get the keys from Jim's wife, Nell. When Bill and Nell enter
the factory floor, they are caught by Jim, who has become suspicious. During a fight
between Bill and Jim, the latter gets killed by the huge wheel of a machine. The first
act shows us Bill and Nell five years later as a wealthy married couple. The stolen
files have helped them attain success as, respectively, a business magnate and an
actress. In order to maintain their elevated status Bill plans to wipe out all traces of
his crime. He arranges to close the Lixton Works. When Hopkins, the boss of the
information department, speaks up against this plan on behalf of the workers' future, he gets fired. The second act starts with a rumor among the workers that Bill
was the murderer of their foreman Jim. Hopkins intends to kill Bill so that the jobs
of the factory workers can be saved. By forcing Nell to confess and betray her
husband, Hopkins is able to unmask Bill's evil past. The last act shows Bill in the
anonymity of everyday work life. After denouncing Bill, Hopkins loses all interest
in Nell. Unable to make a living on her own, she finally becomes a prostitute. One
night at a bar, Bill recognizes his former wife. When he sees Nell in an apartment
with one of her lovers, he kills her. In the last scene, the action returns to the factory
floor where Bill, now completely deranged, tries to blow up the machinery.
Suddenly, Hopkins appears and pushes him under a huge wheel. After Bill's death
a new work day begins.

Liberation through technology

Brand takes a new look at the everyday environment of factory workers and
remodels it for the opera stage. The scenes take place on the factory floor, in a
factory office, in the workers' neighborhood, in a theater dressing room, backstage,
and in a bar. With his uncommon subject matter and musical borrowings from
popular music in the bar sequence, Brand both broke radically with opera
conventions and combined the techniques of *Neue Sachlichkeit* and Expressionism.
He shows aspects of big city life with the expressionistic technique of externalizing
inner experiences through exaggeration or distortion. However, unlike Alban Berg's
protagonist in *Wozzeck* (1925), whose emotions and moods are directly reflected in
the noises he hears under the ground or the sinking sun he perceives as engulfing
the world in flames, Brand's stage directions and his use of machinery on a realistic
as well as symbolic level provide a new access to the way we perceive technology.
The images and stage sets resemble not only Fritz Lang's cinematic vision of a
pulsating industrial metropolis, but also experimental films like *Berlin, die Sinfonie einer
großenstadt* (1927) which displayed the accelerated tempo of big city life and the
multiplicity of environments and images simultaneously available to city dwellers.
The movie-like qualities of *Maschinist Hopkins* were heightened further by film
projections which suggested the machines coming to life with an off-stage choir
simulating their voices. Critics recognized the inherent power of a cinematic

8 *Berlin: Symphony of a Metropolis*. Unless otherwise noted, all translations are mine.
(3 August 1929), 6-7.
experience and heralded Brand as the first composer to transfer the new medium to the stage.\textsuperscript{10} By including jazz and dance music he also paid tribute to a new interest in utilitarian music. In 1925, the opera director Herbert Graf interpreted modern dances and genres like the foxtrot, the shimmy, the blues, and jazz as a longing for ‘new, healthy, uncomplicated primitiveness.’\textsuperscript{11} Paul Stefan, editor of the influential magazine Musikblätter des Anbruch, emphasized the liberating quality that jazz symbolized for Europe. As a representative picture of the time it gave positive expression to chaos, machinery, noise and the triumph of the mind.\textsuperscript{12} The refreshing stimulus of jazz music for European art music had already been celebrated by Ernst Krenek in his so called ‘jazz opera’ Jonny spielt auf (1927). Krenek focused on a black American jazz player called Jonny, whose music inspires audiences everywhere, while Max, the traditional German composer, remains isolated in the loneliness of the Alps. Krenek’s message to the Old World was clear: a new age is dawning and it is represented in technology and modern dance music. ‘Thus, Jonny plays for us to dance./The New World comes across the ocean with splendor/and inherits the Old World with the dance.’\textsuperscript{13} Thus the themes of technology, jazz music and ‘employment for all’ that Brand incorporates in Maschinist Hopkins were significant signs of renewal, progress, liberation, and wealth.

In contrast to Krenek’s statements regarding the meaning of technology on the opera stage, Brand uses machines not only as ordinary objects from everyday life but also allows them to acquire a value in their own right as symbols. At the beginning of the opera, he alludes to the symbolic meaning of the props by describing the machines as magical, gigantic and fantastical. ‘Factory floor at night. Against the bright background (glass) gigantic machines appear like fantastic creatures from fairy tales.’\textsuperscript{14} He even has the props take on human features. In an article published in the Neue Schweizer Rundschau (April 1931) on ‘New Humanity and Old Objectivity,’ Krenek complained that merely showing a railway station and someone using a telephone on the stage in his opera Jonny spielt auf caused amazement and agitation during its first runs in 1927. He thought there was no more reason why a contemporary opera should do without naturalistic objects than a drama taking place in the past should do without the modern props of that age. He also insisted that little is gained from reading programmatic meaning into mere props, especially

\textsuperscript{10} Waldemar Weber, Musikblätter des Anbruch, 11 (1929), 223–25. Partly reprinted in Brezinka, Max Brand, 1896-1980: Leben und Werk, Musikwissenschaftliche Schriften (Munich, 1995), 78. ‘It is good that finally somebody had a close look at film, discovered its inherent forces and adapted it for theater. His libretto is an extract from a film script in the best sense of the word; the entire opera is bound to be adapted for the screen.’

\textsuperscript{11} See Herbert Graf, ‘Händel als Wegbereiter für die Opernregie der Zukunft,’ Blätter des Theaters der Stadt Münster (1925/26), 168.


\textsuperscript{13} ‘So spielt uns Jonny auf zum Tanz./Es kommt die neue Welt übers Meer gefahren mit Glanz/ Und erbt das alte Europa mit dem Tanz.’ Ernst Krenek, Jonny spielt auf (Vienna, 1927), Part 2, scene 11, 328–41.

\textsuperscript{14} Max Brand, Maschinist Hopkins, Oper in einem Vorspiel und drei Akten (12 Bildern) (Vienna, 1928), Prelude, scene 2, 25.
those involving technological innovations like clocks, bells, loudspeakers, cars or railways. As scene-specific decorations their function is simply to help press on with the story.

Brand takes the representation of technology to its next step. Of particular interest for this analysis is the last act of *Maschinist Hopkins*. The plot reaches its climax when Bill gets punished for murdering Jim, and the unstable job situation of the factory workers is resolved by Hopkins as he reactivates the machines. This highly dramatic act features two key elements that have puzzled both audiences and critics. First, Brand suggests the merging of economic and religious themes so that the machinist and his technological surroundings attain the status of sacral leadership. Second, he introduces a machine-choir and has anthropomorphic technological artifacts hold judgment over Bill’s morals. The last scene of the third act opens on the factory floor that Brand had already introduced in the second scene of the prelude, as Bill enters the empty hall. The composer explicitly sets the new scene apart from the ideals of New Objectivity:

Factory floor at night, similar to scene 2 . . . Despite its sober atmosphere, the setup of the main switchboard and its construction should appear symbolic, resembling an altar. It is completely dark in the hall. A single moon ray, which breaks through the horizontal bars of the glass dome, sheds its magical light on the main switch, which glitters like a tentacle. The entire picture is completely unrealistic. The glass background is gleaming softly and the fantastic outline of the machines – increased through the shiny effect of the main switch – suggest the merging of a factory floor and a temple.

Despite its inherently realistic elements, the setting of the last act is explicitly meant to avoid realism. In contrast to the first stage set in the prelude, the factory floor now resembles a church of technology, where the modern Parsifal of the machine age worships the altar of the main switchboard. Brand tries seamlessly to merge technological and religious symbols. Through the glass dome the moon illuminates


16 *Maschinist Hopkins*, Act III scene 12, 230. It is revealing to compare these stage directions with the film manuscript of *Metropolis* based on Thea von Harbou’s novel *Metropolis*. The description for picture 263 (introducing the ‘heart machine’) resembles the aesthetic conceptions of the setting for Brand’s opera. ‘For a description of this machine see the reprint edition (Berlin, Frankfurt and Vienna, 1984), 14. See also ‘Tod den Maschinen! Wie Thea von Harbou den Aufstand der Arbeiter in ihrem Roman und in ihrem Filmanuskript schildert, [no author mentioned].’ Reprinted in Rudolf Schweigert, ‘Der Film in der Weimarer Republik’, in *Weimarer Republik* (Berlin, 1977), 472. ‘Filling almost the entire picture, the gigantic steel construction of the heart machine. The giant machine stands against a huge steel wheel whose spokes look like a steel plate. A maze of switchboards, lever systems, scales, security valves. The machine runs regularly, moving all of its gigantic limbs.’

17 It is interesting to note that Karen Lucic’s description of Scheeler’s photograph *Ladle Hooks, Open Hearth Building – Ford Plant* (1927) conveys the same powerful religious spirit as Brand’s vision of his machine hall interiors: ‘Interior shots, such as *Ladle Hooks, Open Hearth Building*, present the massive enclosed spaces as soaring and cathedral-like, lit by a mysterious, glowing light . . .’ *Charles Sheeler and the Cult of the Machine* (Cambridge, MA, 1991), 92.
the main switch and turns it into a powerful sacral relic. In order to render the scene surreal Brand presents the machines in a ‘magical light’ which gives them a fantastic outline. Thus, he selects seemingly unaesthetic subjects such as a factory and technological artifacts and transforms them into images of great power and celestial beauty. Within this magical atmosphere, machines acquire a life of their own.

The action on stage shows Bill interacting with the machines, which have become commanding anthropomorphic figures. He resembles a crazed person who stumbles between the machines, touching one after another. These actions clearly suggest that the former foreman wants to become an integral part of the worker’s milieu again. However, the personified machines reject him. They whisper ‘faß uns nicht an!’ (‘don’t touch us!’). In the following conversation between Bill begging for mercy and the individual mechanical parts of the machines, the protagonist is denounced for his human shortcomings: the wheel (‘Rad’) tells him he is too weak, the shaft (‘Welle’) explains that he has failed in his accomplishments, the piston (‘Kolben’) pushes him away, and the source (‘Quelle’) cannot help him. Angered, the machines launch an attack in a combined effort to dominate their human counterpart: ‘wir greifen nach dir!’ (‘we grasp at you’).

(See Ex. 1.) The protagonist interacts with the stage and its props rather than other human beings. Brand describes the concept behind this scene in an article entitled ‘Mechanische Musik und das Problem der Oper’ (1926) in which he tries to overcome the traditional bond between music, stage and actor. The central purpose of the article is to challenge operatic conventions by suggesting ideas for dramatic changes. Otherwise, he claims, the medium will not survive in the new entertainment environment. According to Brand, the rise and success of modern technology needs to be considered in the process of composing and should finally be introduced to the opera stage. He envisages a mechanical stage that directly corresponds to the musical accompaniment. With light, color, and mechanical stage props he intends to create an environment into which the actor is organically placed. Verbal expression might ultimately become superfluous. Music vitalizes the stage both kinetically and visually. Actors respond to the movements of the stage and thus to the music.

18 *Maschinist Hopkins*, Act III scene 12, 231.
19 On a symbolic level, the ‘source’ represents the main switch.
22 Max Brand, ‘Mechanische Musik und das Problem der Oper,’ *Musikblätter des Anbruch*, 8 (1926), 359.
23 In the same year, at the 6th Chamber Music Festival in Donaueschingen, Oskar Schlemmer designed mechanical puppets (‘Marionetten’) for the *Triadisches Ballet* composed by Paul Hindemith. In the program notes, Schlemmer envisions a futuristic chess-like stage featuring animated puppets as dancers, who act without human control. Optimistically he concludes: ‘Yes! – it is only a matter of time and money before the experiment can be completed that way.’ The program is reprinted in Fred K. Prieberg, *Musica Ex Machina* (Berlin, 1960), 18.
24 ‘If human beings were attached organically to this moving stage (because that is what I mean), indeed as much guided by fate as it has been the case on traditional stages, the difference would be that he would need to act organically due to the new circumstances.’ Brand (see n. 22), 357.
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These movements feature all three ways in which technology might be represented: as a mere prop, as a liberator, or as a threat. 'That means that the actor would need to react to the projected movements of the stage which are partly symbolizing a threat, partly a
refuge, and partly indifference. The movements originate in the music.\textsuperscript{25} What Brand calls a ‘flashlight of exaggeration’ could well be achieved in the traumatic battle between Bill and the machines.\textsuperscript{26} While being transported into a mechanical universe, the action spills into the realm of psychology, but ultimately returns to humanity: ‘These actions would be totally unrealistic. Apart from realistic depictions they would find their justification only in the area of psychology and, thus, reenter the human environment – however, in a metaphoric and deeper sense . . .’\textsuperscript{27} Although Brand could not realize his mechanical stage at the time, the animated machines to which Bill’s actions respond clearly show similarities to his original ideas in ‘‘Mechanische’ Musik und das Problem der Oper’. The action is also elevated to a surreal level where a struggle over power and justice is carried out. Before the everyday environment with its work routine can be reinstated, Brand suggests, a new, more spiritual relation between men and machines must be established.

During the hallucinatory fighting sequences, Bill completely loses control over his senses. He is, as the stage directions explain, in wild lunatic ecstasy.\textsuperscript{28} At this climactic moment, the machine choir screams \textit{forte fortissimo} and the orchestral music glissandos up two octaves. At this point, the scene conveys strong symbolic and mythical qualities. The enormous main control board comes to life and gives birth to the saviour of the machines and the work environment: Machinist Hopkins.

At this moment, a small door on the right side of the main switch in the main switchboard is opened and Hopkins stands behind Bill – erect and tall. He reaches for Bill’s outstretched arm and with a powerful movement forces him to his knees.\textsuperscript{29}

Brand’s contrasting images of the gigantic main switchboard and the small door from which Hopkins emerges show that he has become an integral part of the technological complex. Within the machine he functions as a mechanical device like the wheels, shafts, pistons and switches. Outside, Hopkins is a mediator between the mechanical system and the human world, bringing justice and order. With his mighty power he resembles the son of God. Symbolically, the new messiah of the machine drives Bill out of paradise; pushes him down the staircase where he is swallowed up by a machine. Bill fails in his effort to control and revolt against the machines and thus is finally destroyed by the combined efforts of man and machine. Following this catharsis, a new day begins and routine work remains. When Machinist Hopkins begins to reactivate the machines with a flip of the main switch, another allusion to the merging of religious and technological aspects is apparent. The switch is treated like a holy object. ‘Conscious of his responsibility to reactivate the machines, he puts his hand firmly on the main switch as if it were a sacred relic.’\textsuperscript{30} The machines grant Hopkins the power Bill was denied. His alliance with the machines enables him to be the creator of a new day. Hopkins, now himself the

\textsuperscript{25} Brand, ‘‘Mechanische’ Musik’, 357–8.
\textsuperscript{26} Brand, ‘‘Mechanische’ Musik’, 358.
\textsuperscript{27} Brand, ‘‘Mechanische’ Musik’, 358.
\textsuperscript{28} ‘Plötzlich springt er mit wahnsinnsvverzerrtem Gesicht auf’ (‘Suddenly, he jumps to his feet, his face tormented with frenzy’). \textit{Maschinist Hopkins}, Act III scene 12, 237.
\textsuperscript{29} \textit{Maschinist Hopkins}, Act III scene 12, 249.
\textsuperscript{30} \textit{Maschinist Hopkins}, Act III scene 12, 50.
product of a machine, heralds the new machine age: ‘ein Arbeitstag.’ The dynamics rise to a triple forte. The wind-machine and thunder-generator ‘scream’ as loudly as possible as the workers walk in a heavy rhythm towards the gate facing the audience. At the same time, the lighting permeates the stage, projecting the break of dawn. This scene attains the symbolic quality of the beginning of paradise on earth. ‘The light must get continuously brighter, until at the end, everything is suffused with radiance.’ Brand adds a metaphorical level of purity and innocence; the gleaming white light turns all things into heavenly beauty. With this godly inspiration, the machines awaken. Brand presents the new workday like a miracle, for he wants the background to be suddenly pushed away to reveal an open gate that spans the entire breadth of the stage. In this religious context, the gigantic gate seems to be the entrance to a new Garden of Eden. When Hopkins turns the switch, the choir of workers starts to shout mechanically ‘Arbeit, Arbeit, Arbeit!’ (‘Work, work, work!’) (See Ex. 2.) The mass of workers repeat the slogan until the end of the opera: work, work, work, work! The new religion Brand advocates in his opera is found in the representation of technology as a generator of work. As a means of making a living, the machines ultimately serve the human cause.

In an interview published in the Berliner Illustrierten Nachtausgabe (21 March 1930), Brand explains that work is the overall meaning of life. The goal was to represent the contemporary belief in progress and technology as a sort of new religion that would establish a bright future. While Brand emphasized that the love triangle between Bill, Nell and Hopkins is the subject of the opera, machines determine the development of human relationships. Although critics strongly disagreed about the quality of Brand’s music and libretto, his representation of machines received mostly friendly reviews. The presence of technology Maschinist Hopkins was considered an ‘encouraging message’ that there would be work for all. Others described the machine choir as the strongest part of the opera. This call for work was of particular importance at the end of the Weimar Republic when inflation and unemployment had reached an all-time high. George Antheil’s opera Transatlantic (1930), written in Paris and premiered in Frankfurt a year later, ends with a scene similar to Maschinist Hopkins. The rising sun behind the backdrop of New York’s

31 Maschinist Hopkins, Act III scene 12, 251. The symbolism of light, enlightenment and the initiation of a group of people to a ‘new life’ is reminiscent of Mozart’s Zauberflöte (1791). At the end of this opera, the sunbeams penetrate a rocky country with a temple in the foreground. After the final transfiguration the demons are exorcised and the two main characters are elevated to the status of chosen people: ‘Heil sei euch Geweihten’ (‘Hail chosen ones!’). This final scene features sublime and religious aspects that might have served as a model for Brand’s depiction of a factory as a modern temple of technology.

32 Maschinist Hopkins, Act III scene 12, 251: ‘The background is suddenly pushed away towards both sides of the stage so that a gate is revealed. It opens up to the entire breadth of the stage.’


34 Walter Schrenk, ‘Maschinist Hopkins,’ Deutsche Allgemeine Zeitung (April 1929). For further reviews see the excerpts Brezinka gives in the appendix of Maschinist Hopkins (see n. 10), 73–91.
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(Der Hintergrund wird auf einmal nach beiden Seiten automatisch auseinandergeschoben, so daß ein riesiges fast die ganze Breite der Bühne öffnendes Tor entsteht)

(Hopkins drückt mit mächtiger Bewegung den Haupthebel nieder, wodurch sich alle Maschinen in Gang setzen)

(Er bleibt hochaufgerichtet und in die Weite schauend stehen)

Die Arbeiter (schreiten in gleichem schwerem Schritt durch das Tor gerade auf die Rampe zu)

(Sop. (rufend)

Ar-beit! Ar-beit! Ar-beit! Ar-beit!

(Alt (rufend)

Ar-beit! Ar-beit! Ar-beit! Ar-beit!

(Ten. (rufend)

Ar-beit! Ar-beit! Ar-beit! Ar-beit!

(Bass (rufend)

Ar-beit! Ar-beit! Ar-beit! Ar-beit!

(Windmachine und Donnermaschine auf der Bühne (aufsteigend)}

metropolitan skyline announces a workday full of promise. According to Ludwig Mayer, the Berlin performance of *Maschinist Hopkins* focused on the great promise of work with the help of the machines. He describes the workers reaching out with folded hands, as though in prayer, for the light, in passionate devotion to the pure idea of work. Brand's great enthusiasm for technological progress, which he cherished throughout his life, seems to support a positive interpretation of the final scene. The merging of technology and religion, or the substitution of technology for religion guarantees work and gives the workers something to believe in. In the same year that Brand's opera premiered, Henry Ford wrote an essay whose very title underlines the importance of technology in the spirit of *Maschinist Hopkins*: 'Machinery – The New Messiah'. Ford believed that ultimately machinery would accomplish what literature and religion had failed to create: a United States of the World. In Brand's opera, the struggle for job security and the beginning of a new workday in the final scene unite the workers as they give collective praise to their new religion.

**Enslavement through technology**

Despite the many optimistic symbols for liberation, progress, and employment, the presentation of technology is more complex than it first appears. Brand's subtle stage directions and musical arrangements leave space for an ambiguous interpretation of technology's significance at the end of the Weimar Republic. When the composer introduces the opera audience to the milieu of factory workers in the second scene of the prelude, the setting provides a careful balance of positive and negative associations. Brand asks for a fantastic giant box to represent the factory: 'der phantastische Riesenkasten einer Fabrik.' The stage setting is a man-made world of iron in which technological artifacts are transformed into enormous dimensions. The depiction of a technological world is cold, dark and smooth like metal:

Factory floor at night. Against the bright background gigantic machines appear like fantastic creatures from fairy tales. On the left side is a platform from which an iron spiral staircase

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35 '(Dawn at the backdrop of New York; one can see the skyscrapers in their majesty gleam, reflecting the sun rays) Helena: Sunrise! Hektor. It is a new day! Let's go to work! Choir and solo voices: A new morning! Let's go to work! Work shows us the way to happily, happily solve all riddles of the world. Because work creates the world for us! Work creates a new day for us! (End. Curtain).’ George Antheil, 'Zurück zur romantischen Oper', *Blätter der Städtischen Bühnen Frankfurt* (May 1930), 227.

36 Mayer (see n. 33), 11.

37 In 1962, 31 years after Lindbergh's crossing of the Atlantic Ocean, which had been celebrated musically in Brecht's and Weill's *Der Lindberghflug*, Brand set out to compose an electronic hymn on John Glenn's flight into space called *Die Astronauten*. See Brezinka (see n. 5), 832.


40 *Maschinist Hopkins*, Prelude, scene 1, 5.
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goes down to the stage. On the right side is another platform. At its top the main switch board is installed. An iron staircase leads to this platform. Here and there a smooth metal piece flashes coldly – like an evil eye. 41

The machines seem to have a life of their own as they observe the actors and the audience. The repeated use of the word ‘fantastic’ to describe the factory building as well as the machines epitomizes the ambiguity of technology: it can be either a wondrous world of dreams or the bizarre product of a nightmare. The fact that the imaginary eyes of the machines convey an aura of evil spirits introduces the stage setting as an uncanny place. The machines spy on human beings with their ‘evil metal eyes.’ The idea of a heavily monitored work environment has become more widespread in the world of computer networks and video technology at the end of the twentieth century. Nevertheless, the potential of technology as a new controlling force for assuring work efficiency is already noticeable in Brand’s stage direction for his factory floor.

Like dragons, the machines threaten the human imagination by controlling the workers. In two crucial moments of the opera, when Jim and then Bill get pushed under a huge wheel and die, technology appears to devour its victims. This image had been introduced in a scene of Lang’s film Metropolis when Freder, son of the Master of Metropolis, hallucinates a gigantic machine that swallows workers like a beast. In Maschinist Hopkins, traditionally supernatural figures like fairies or monsters have been replaced by fantastic machines, as the metaphor ‘phantastische Fabelwesen’ (fantastic fairytale creatures) at the beginning of the opera indicates. Brand’s goal of liberating opera from Romantic conventions and of overcoming the stifling influence of Wagner’s mythological, monumental works thus runs the risk of exchanging one myth for another. Instead of mysterious caves, dragons, and romanticized heroes, fantastic factory floors, gigantic machines, and larger than life machinists confront the audience. Krenek’s Jonny spielt auf suffered from the same inherent contradiction that he tried to neglect in his essays. Despite his repeated claims that technological devices in Jonny spielt auf were merely props on the stage to display what he called ‘naive realism,’ 42 there are many instances in which machines acquire symbolic meaning. For example, Krenek uses the word ‘uncanny’ to describe a large loudspeaker on a hotel terrace in the Alps (scene 7), 43 and the appearance of a train towards the climactic end of the opera (scene 9) is described as follows: ‘The uncanny shadow of a gigantic locomotive appears. It is accompanied by a cloud of smoke . . . everywhere great screaming.’ 44 As in Brand’s

41 Maschinist Hopkins, Prelude, scene 2, 25.
42 The term ‘naiver Realismus’ is coined in Krenek’s essay ‘Jonny spielt auf’ (1927/28) where he states that symbolic meaning should not be read into Jonny. See Ernst Krenek, Im Zweifelsfalle. Aufsätze über Musik (Vienna, 1984), 27–8. In 1930 Krenek explained that the rise of technology needed to find its counterpart in a heightened display of humanity in opera: ‘Der schaffende Musiker und ... in Im Zweifelsfalle. Aufsätze über Musik, 238. See also ‘Von ’Jonny’ zu ‘Orest’ ’ (1930) reprinted in the same volume, 33–5.
43 Jonny spielt auf, scene 7, 232.
44 Jonny spielt auf, scene 9, 297.
opera, one of the main characters gets killed by a machine, and the emotional tension is pushed to the extreme by a big orchestral scream. This is comparable to the appearance of evil spirits in Romantic operas, such as the invocation of the devil in the Wolf’s Glen scene of Weber’s Der Freischütz (1821). The giant machine threatens the people in the same way that Weber’s devil Samiel in Der Freischütz approaches with shrieking dissonant sounds. The association of technology with the devil clearly expresses the feeling of threat that comes along with the arrival of a technological world.

In the examples given above, Krenek applies aspects of both Expressionism and New Objectivity to transcend the props’ neutrality as part of the stage setting by emphasizing their potential as a threat to the human imagination. There is a clear ambivalence in the use of technical devices. The fact that technology created by man has become an end in itself, relegating him from master to slave of the machine, is one of the central aspects of Brand’s Maschinist Hopkins. After Bill has lost his status as an industrial magnate, he reenters the factory floor and attempts once again to integrate himself into the factory world. The modern god of technology is neither merciful nor forgiving, however. Bill seeks help by calling to the spirit of the machine, just as in Goethe’s Faust the hero screams to an invisible ghost, ‘Reveal yourself! ... You must! You must, even if it costs me my life.’ Here Bill exclaims, ‘And yet! I want it! Want! You must!’ while hammering his fists on the machines. In his anger, Bill decides to destroy the machines in order to reaffirm his position as master of a creature that, like Frankenstein’s monster, had turned against him. The machines have stopped working for the benefit of man and instead get in his way and take over his former command. While Bill desperately tries to reaffirm his superior position, the main switchboard suddenly reveals a new force in the world of technology that will suppress human opposition: maschinist Hopkins. The messiah of the new religion is a product of technology himself and therefore resembles a machine. This is also made clear in a preceding scene. Nell realizes that Hopkins has turned into a machine unable to respond to her erotic approaches.

45 The appearance of Samiel in the Wolf’s Glen is accompanied with all sorts of orchestral noises. The score asks for rustling, whips cracking, and the trampling of horses’ hooves. Additionally, there is the sound of barking and neighing in the air. Carl Maria von Weber, Der Freischütz (1821) Act III scene 5, 171-73. In Jonny this effect is achieved musically with dynamic indications of triple forte, as well as special-effects instruments like ‘thunder plate with iron balls,’ electric buzzers, a thunder-machine, tam-tams, large drums, cymbals, and timpani. All these instruments create a great deal of noise while the winds, horns, and strings play a repetitive rhythm which is melodically simplistic.

46 Johann Wolfgang von Goethe, Faust, Goethe Werke III (Frankfurt am Main, 1966), 20.

47 In his article on the difference between ‘New Humanity and Old Objectivity’ (see n. 15), 117, Krenek describes this potentially dangerous development of technological domination: ‘[Machines] get in our way and themselves become the monuments they have destroyed, for which we have such an ineradicable taste. The divine in man has been replaced by the fact that he can travel faster than a bird flies; and in the advertisements, the inventor of a new kind of engine rivals the creator of the world.’ In English in Shenfield and Shelton, ed., Exploring Music (see n. 15), 57.
Nell: You are iron, as cold and hard as iron. Yes! You are iron! Hopkins: Maybe you are right. I only love iron. I only serve the machine. In it resides the creative spirit which I have to follow. Don't you understand that I have to go my way alone and without sorrows?  

Hopkins's only goal is to serve the machines who have taken over the role of autonomous and creative beings. 'In it [the machine] resides the creative spirit which I have to follow.' Not surprisingly, he cannot understand what love is, nor does he have any scruples about killing Bill. In Maschinist Hopkins, Brand shows a world in which machines become more and more human while human beings are gradually dehumanized. In 1922, the American artist Paul Strand analyzed the impact of modern technology and foresaw the potential danger of a reversed master–slave relationship. Thus the deeper significance of a machine . . . has emerged here in America, the supreme altar of the new God. If this be ironical it may also be meaningful. For despite our seeming wellbeing we are, perhaps more than any other people, being ground under the heel of the new God, destroyed by it . . . We have it with us and upon us with a vengeance, and we will have to do something about it eventually. Not only the new God but the whole Trinity [God the Machine, Materialistic Empiricism the Son, and Science the Holy Ghost] must be humanized lest it turn dehumanize us.

The notion of dehumanization is also incorporated in the music of Brand's opera. The choir of the machines and the choir of the workers resemble each other structurally and aesthetically. In general, both choirs sing in unison. A striking difference is the notation for the machine choir which draws heavily on Schoenberg's ideas regarding Sprechstimme. In the very last moment of Brand's opera, the workers' choir establishes itself as machine-like both by its sound (Sprechstimme) and by its rhythm. (See Ex. 2.) The workers also start their call to work at exactly the same time as Hopkins activates the machines. While the workers are screaming rather than singing their words, they march to a steady beat. Repetitiveness and uniformity deprive human beings of those features that render them superior to machines: uniqueness, creativity, and autonomy.

The workers' endless call for 'Arbeit' (work) reveals them as mindless automatons who demand only one thing from the machines: to give them an opportunity to work. As their movements and verbal expressions are all identical, the workers lose their individuality and resemble items of mass production. Albert Einstein referred to marching as a mechanical repetition of the most basic movements human beings are capable of. Both aspects — the shouting of slogans and marching — were effectively used under the tyranny of Hitler in his effort to degrade an entire people to the status of unscrupulous killing machines. While machines were originally intended to work for the benefit of human beings, the opera provides a scenario where machines are praised because human beings are able to work for

48 Maschinist Hopkins, Act III scene 9, 197–8.
49 Maschinist Hopkins, Act III scene 9, 198.
50 Paul Strand, 'Photography and the New God,' Broom, 3 (November 1922), 257.
51 See Brand's introductory remarks on the various singing techniques on the first page of Maschinist Hopkins.
52 Maschinist Hopkins, Act III scene 12, 252.
them. Questions concerning the reasons and purposes of the technological environment are beside the point. Although the topical focus on work in Brand’s opera might easily evoke a Marxist interpretation, it does not fit the representation of the main character. Thomas Brezinka is correct in saying that it is not so much the social interests of the workers that Hopkins tries to represent and emphasize, but rather the interest in work itself. Of particular importance is Hopkins’ characterization of machines: ‘Kolben, Räder, Arme dienen / Alle, alle den Maschinen (Pistons, wheels, arms, all serve the machines).’

Everything and everybody is reconciled to the general theme of productivity through submission to the machines.

In Maschinist Hopkins, human life is reduced to serving the machines’ never-ending drive to function. Thus, the masses of workers are reduced to slaves. In those scenes where Bill interacts with the machine choir, technology appears to have more personality than the rhythmic and monotonous choir of workers. Krenek also added a mechanical-sounding choir at the end of Jonny spielt auf. Shortly before Jonny’s departure, the climax features a variety of technical equipment on stage. A large clock looming over the stage signifies the new time restrictions that people have to obey. On a musical level, there is a strong emphasis on rhythm in connection with the artificial sound of an apparently never-ending electrical bell which torments the listeners. ‘The large clock indicates it is 11:58; only seconds away [from departure] ... A penetrating, electrical bell is being constantly heard with a tormenting sound followed by other bells.’ These sounds are introduced canonically. The second and third bells enter after three measures, followed by the fourth and fifth bells in the next measure. This sequence is accompanied exclusively by percussion instruments. Krenek emphasizes that the ringers are intended to be dissonant in order to achieve a penetrating and piercing effect. At this climactic point, we experience the noise and rhythm or the ‘music’ of the mechanical world. After twelve measures, human voices enter the sound stage, supported only by two horns and two trumpets.

Even language becomes an integral part of this rhythmical world of machinery. The voices adopt the rhythm given by the percussion section, and sentences are rendered mechanical by being broken into short pieces.

Both Krenek and Brand incorporate the new rhythm of the mechanical world in their operas. Human beings subject their rhythm of life, their words, and even the color of their voices to the models provided by machines. The use of jazz music in Zeitoper evokes other connotations of human beings adapting to a new kind of spirit closely related to the machine age. Stefan Zweig outlined a pessimistic scenario based on this felt relationship in ‘Die Monotonisierung der Welt’ (1925) where he concluded that the consequences of modern dance, fashion, and technology would lead to a ‘complete end of individuality.’ He wrote, ‘Faces become increasingly similar through the influence of the same passions, bodies more similar to each other through the practice of the same sports, minds more similar for sharing.

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53 Maschinist Hopkins Act II scene 6, 128.
54 Jonny spielt auf, Part 2, scene 11, 316.
55 Jonny spielt auf, Part 2, scene 11, 321.
the same interest. An equivalence of souls unconsciously arises, a mass soul created by the growing drive toward uniformity, an atrophy of nerves in favor of muscles, the extinction of the individual in favor of the type. Conversation, the art of speaking, is danced and sported away . . . ."\textsuperscript{56} In his analysis ‘Das Ornament der Masse’, Siegfried Kracauer compared the musical culture of jazz dancing in the Weimar Republic to factory work: legs in a dance resemble the hands in a production plant.\textsuperscript{57} With reference to Tin-Pan-Alley, the New York song smithy, Adolf Weissmann saw in jazz a celebration of mechanical industries that would dehumanize social life.\textsuperscript{58} Jazz appeared as mechanical – machine music.\textsuperscript{59}

The fact that the Nationalsozialistische Partei did not utilize Brand’s Maschinist Hopkins with its reverent devotion to work for their propaganda is to a large degree related to Brand’s embrace of jazz music for entertainment purposes.\textsuperscript{60} In scene 3, which takes place in an outdoor nightclub, the ‘Black-Bottom-Jazzband’ can be heard. The next scene opens with a mixture of foxtrot and Charleston rhythms in the song ‘Ma-Bram-Hob-Han.’ Brand asks for six black musicians to perform the song. The use of English lyrics, which were provided by George Antheil, did not fit into the regime’s ideal of an Aryan culture, either. In the same scene, a tango is being performed. In scene 10, the orchestral interlude features a shimmy to introduce the workers at Bondy’s Bar. Brand was accused of celebrating questionable ‘aspects

\textsuperscript{56} Stefan Zweig, ‘The Monotonization of the World,’ in The Weimar Republic Sourcebook (see n. 6), 398. First published as ‘Die Monotonisierung der Welt,’ in Berliner Borsen-Courier (1 February, 1925).

\textsuperscript{57} Siegfried Kracauer, Das Ornament der Masse (Frankfurt am Main, 1977), 54.

\textsuperscript{58} Adolf Weissmann, ‘Zwischen Chaos und Maschine,’ in his Die Entgotterung der Musik (Berlin, 1928), 90. Weissmann’s essay collection presents the idea that technology transforms the living conditions of human beings in an extremely negative way. In ‘Mensch und Maschine’ (9–15) he argues that the machine controls the mind; in ‘Sport bekämpft die Welt’ (16–23); he claims that man has to compete with machines with respect to accuracy and reliability; and in ‘Der Sieg des Alltäglichen: Radio und Film’ (34–43) he blames technology for the secularization of music.

\textsuperscript{59} As machine music, jazz threatened the Romantic image of the revered German art-music composer and rendered the homage to love in Wagner’s Tristan und Isolde an archeological artifact. See Adolf Weissmann, ‘Der Verfall der Tristanerotik,’ Die Entgotterung der Musik, 29–33. The opposition to Romanticism is expressed as ‘Americanism’ – the European catchword of the 1920s describing the awareness of change. While ‘Americanism’ was promulgated by the majority of opera and theater lovers, many intellectuals left and right like Kayser, Kracauer, or Weissmann perceived it as a threat. Besides technology, the most significant manifestation of the imported spirit from overseas was jazz music.

\textsuperscript{60} When Walter Panofsky states that the mere word ‘jazz’ caused an emotional uproar in the opera audience due to the negative connotations of what then was called ‘Neger-Musik’ ['negro music'], it is important to add that only an intellectual minority of extremely conservative music lovers condemned this kind of music. The rejection was artificially imposed on the artistic atmosphere in Germany during the tyranny of Adolf Hitler who proclaimed that jazz music ‘poisons High German culture.’ Michael Zwerin, La tristesse de Saint Louis: Swing under the Nazis (London and New York, 1985), 24ff. Panofsky’s conclusion after evaluating Jonny spielt auf that the glorification of America increased the protest against and strong disapproval of jazz does not necessarily relate to the atmosphere in the twenties but rather to the artistically regressive years of the Third Reich. See Walter Panofsky, Protest in der Oper: Das provokative Musiktheater der zwanziger Jahre (Munich, 1966), 116–18.
of inferior races\textsuperscript{61} which gave his opera the status of a ‘poisonous plant.’\textsuperscript{62} Additionally, the operatic utopia of salvation through work is staged not in Germany, but rather in America. The liberating forces, as in \textit{Jonny spielt auf}, Antheil’s \textit{Transatlantic} or Brecht’s and Weill’s \textit{Der Lindberghflug} (1929), which all incorporate jazz music, are being introduced to Europe from overseas. Visually this aspect was emphasized at the première of \textit{Maschinist Hopkins} in Duisburg (13 April, 1930) by the decoration of the bar, whose background resembled the pattern and colours of the American flag.\textsuperscript{63} Thus, the Nazis condemned \textit{Maschinist Hopkins} as degenerate art.

In a more recent performance of Brand’s opera in Bielefeld (1984), stage director John Dew stressed those elements that suggested the historical developments of the late 1920s. He turned the leader of the workers, machinist Hopkins, into the \textit{Führer}, Adolf Hitler. With his promise of work for all, Hopkins is represented as a master of the machine who uses his power to control the workforce under his command. The declaration of a new workday in front of the workers at the gigantic gate evokes similarities to the mass meetings at Nürnberg after 1933 where the crowd awaited Hitler’s commands like machines. Although Dew sensed the double features in Hopkins’ personality that would allow for both communist and fascist interpretations,\textsuperscript{64} the representation of technology is stripped of its ambiguity. As one critic noted, in such a performance the blindfold belief in progress through technology in the wake of New Objectivity has to be in the foreground.\textsuperscript{65} Dew’s reinterpretation of \textit{Maschinist Hopkins} as ideological criticism suggests that technology and the aesthetics of mechanization lead straight to the marching of Hitler’s troops, and thus tend to blur the aesthetic and political differences between the Weimar Republic and the Third Reich. However, the great mystery and the fascination of Brand’s work lies in its openness and ambiguity, which leaves space for a more complex representation of technology.\textsuperscript{66}

\section*{Conclusion}

Like many German composers, Brand looked to the machine as the premier symbol of his era. Although it seems at first that \textit{Zeitoper}n accepted and even celebrated technology without reservation, a closer look indicates that it was also feared as a threat to the autonomy of human beings. Like a seismograph, Brand picked up the various vibrations of his times and incorporated them in his opera. It is essential to understand the ambiguity within \textit{Maschinist Hopkins} as reflecting the conflicting

\textsuperscript{61} Richard Eichenauer, ‘Der Untermensch auf der Opernbühne,’ \textit{Die Sonne}, 7 (1930), 503–11.
\textsuperscript{63} Max Brand, \textit{Ma-Bram-Hob-Han: Fox trot aus der Oper Maschinist Hopkins} (Vienna, 1929).
\textsuperscript{64} ‘Unemployment as an opera topic! And machinist Hopkins himself: communist, agitator who despises workers and becomes a dictator of work by turning the anarchic crowd of workers into a machines — really a prophetic work . . .’ John Dew, ‘Theater für unsere Zeit’, in \textit{Entartet. Verdrängt. Vergessen} (see n. 12), 11.
\textsuperscript{65} See Rainhard Ermen’s review reprinted in Brezinka, \textit{Maschinist Hopkins} (see n. 10), 82.
\textsuperscript{66} The performance of \textit{Maschinist Hopkins} in Amsterdam (27 June 1994) was criticized for its naïvété regarding the cult of the machine (Peter Vissier) which was said to grant the work only the status of an interesting document of its time (Reinbert de Leeuw). For reviews see again Brezinka, \textit{Maschinist Hopkins}, 89–91.
Welcome to the machine!

attitudes to technology – as both liberation and enslavement – between the end of World War I and the seizure of power by the Nazis. Hopkins appears both as machine and human being, as oppressor and liberator, as heretic and high priest. Therefore the question I asked at the opening of this essay – namely, whether Brand represents his protagonist as a creative and autonomous individual within the new world of modern technology – must remain unanswered. Hopkins embodies a hero in the Romantic tradition who has outstanding willpower and almost superhuman strength. His actions are determined by the interests of his work colleagues as he tries to ensure their professional future by utilizing technological inventions. However, a close analysis of the representation of technology in the Zeitoper Maschinist Hopkins also reveals that Hopkins’ autonomy is subtly questioned, and suggests his dependence on machine power. Despite Brand’s fascination with technology, the ambiguities in the ways he uses it evade a clear answer regarding the autonomy of individuals. Although human beings have less autonomy in a world of machines and mechanized work processes, Brand leaves it open as to whether this change needs to be interpreted as a loss of control or an opportunity for people to create new and possibly better environments. These opposing views were an integral part of Weimar culture, which shifted from an Expressionistic emphasis on technology’s oppressive and destructive potential to the New Objectivity’s unbridled confidence in technical progress. The contradictory aspects of the representation of technology in Maschinist Hopkins show that although Brand’s opera, with its sober approach to modern environments, is generally considered a master model for the concept of Neue Sachlichkeit, Expressionist aesthetics in the guise of the machines-gone-mad theme were still current. The composer also utilized Expressionist techniques of distortion and surreal visualizations of inner experiences, especially in the scenes where technology appears as a threat to the human imagination. To interpret Brand’s opera exclusively in one way or another means to destroy the careful balance between the use and misuse, the religious transfiguration and the capitalist exploitation of, technology. Its ambivalent factors possess an undeniable power that continue to fascinate us. Today, as technology has infiltrated basically all areas of our daily life and in many areas has substituted for human interaction, the question of how machines change our environment and our very being presses upon us even more urgently. The challenge for future performances of Maschinist Hopkins will be to preserve and to unmask the conflicting approaches Brand wrote into his work.