# All The World's A Video Wall: Technology, Humanity, and the Things in Between. Reviewing Chris Salter's *Entangled*.

By Judith Kohlenberger and Samuel Zwaan

> It is not clear who makes and who is made in the relation between human and machine. It is not clear what is mind and what body in machines that resolve into coding practices. In so far as we know ourselves in both formal discourse (for example, biology) and in daily practice (for example, the homework economy in the integrated circuit), we find ourselves to be cyborgs, hybrids, mosaics, chimeras. […] There is no fundamental, ontological separation in our formal knowledge of machine and organism, of technical and organic.
>
> Donna Haraway, *A Cyborg Manifesto* (1985)

Preceded by a foreword by the eminent stage director Peter Sellars, Chris Salter's *Entangled: Technology and the Transformation of Performance* (2010) takes its readers on a *tour-de-force* through more than a century of performing arts in the Western world, including theater, ballet, video and image making, music and sound composition, body-based and robotic arts.[1]
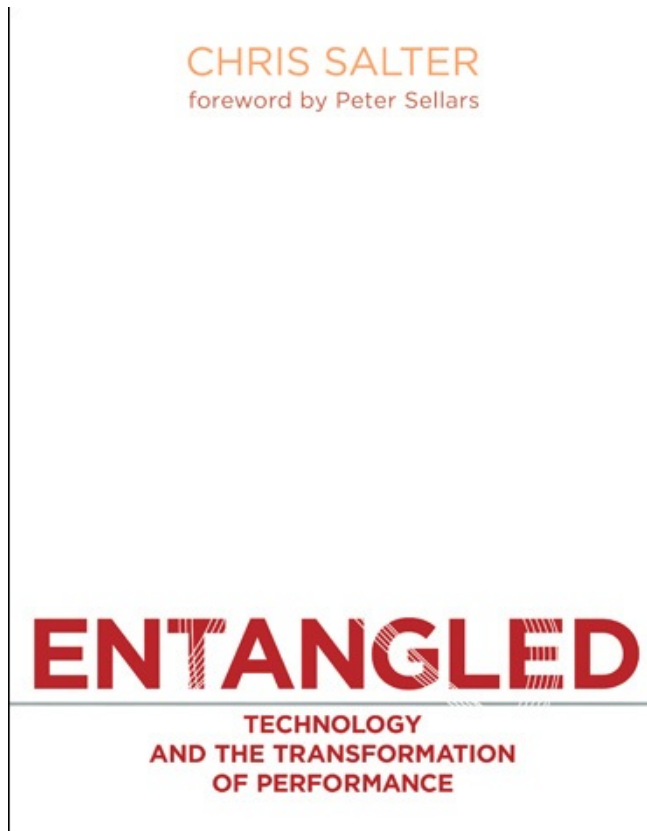
By examining a range of works, from classic masterpieces to minor performances, from innovative new paths to artistic dead ends, Salter competently demonstrates how technology has affected the practice and perception of performance art. His exhaustive historical account explores the reasons why directors, actors, choreographers, composers, and other artists in the field have chosen to engage with technologies in a myriad of ways, dating back to well before the advent of new media and the nowadays almost obligatory video wall installation. Salter thereby engages with a range of crucial questions for contemporary performance art and performance studies: In which ways does technology affect traditional performance strategies? What is the performative element in works of art that are entirely preprogrammed, digitalized, and forever reproducible? How does technological progress determine, shape, and transform the specificities of a given medium and of performance in general? While Salter introduces a basic distinction into 'old' (mechanical) and 'new' (computational) media when discussing these pertinent issues, the manifold examples he analyzes in great detail reflect how contemporary works of art are always already rooted in earlier machine-based performances. *Entangled* hence proposes a continuity of performative artworks and of the technology they employ since the early twentieth century, suggesting that the diverse practices scrutinized in the study share a common history beyond their disciplinary boundaries. Consequently, the volume presents a highly ambitious survey that covers a broad range of examples across disciplinary and genre borders through more than a century of performance art.[2]

Owing to the vast ground covered, the actual examples discussed in great detail are eclectic and arranged in an associative mix, ranging from Wagner's vision of the *Gesamtkunstwerk* to Jean Tinguely's radical machine performances. Luckily for the less tech-savvy audience, the comprehensive oeuvre, spanning from the most basic artistic interaction with high-tech machinery to sophisticated multi-media settings in festival contexts, is equipped with a reader's manual. A detailed glossary explains much of the work's technical jargon. Additionally, the volume functions by way of what we might call the material equivalent of a digital hypertext, as it cross-references names, genres, and works of art that have already been referred to earlier in the text by means of brackets or 'links' within the running text. These built-in navigation devices, complementing the standard name and subject indexes at the end of the book, serve as much needed cicerones to approach the scrutinized examples. Despite these laudable efforts at readability, the extensive analytical sections and the enormous range of examples scrutinized turn the volume into quite an overwhelming piece of academic critique. Interestingly, however, *Entangled* is neither primarily nor exclusively intended as a theoretical exercise, but as a comprehensive handbook for future praxis, also aimed at students and 'general readers.' The evident focus on practice rather than theory necessarily stems from Salter's own professional work, above all within the transdisciplinary art research collective Sponge, for which he acts as co-founder and lead artist. Not surprisingly, *Entangled* is as much a historical reference book as it is a guidebook for future practitioners in the field. This field, as the study well enough demonstrates, is evidently capacious: Not without reason does Salter advise students of the performance arts to master dramaturgy, scenography, lighting, and sound just as intuitively as electronic devices, coding, and hypertext.

Despite evident efforts at reproducing and emulating the very interactivity and reciprocity he advocates, the constraints of printed matter necessarily impede Salter from granting the instant experience of the phenomena skillfully dissected in the analytical section of his book. Therefore, the following discussion of one of the particular artistic encounters with technology analyzed in *Entangled* – the use of screens, films, and video walls within the performing arts – shall not serve as a review in the traditional sense, but rather as a supplement to the book. By interspersing our review with an assemblage of links to videos, sound files, and other recordings of some of the scrutinized performances, we hope to fully exploit the advantages of online publishing. We thereby wish to create an experience that substantially deepens our understanding of Salter's ambitious study, as well as reveals potential gaps and desiderata for further analyses. Firstly, a brief overview of the book's main sections will help to detangle some of its key concepts and methodological underpinnings.

Unraveling *Entangled*

In addition to the reader's manual and glossary of technical terms, *Entangled* is divided into eight main chapters, each of which is devoted to a particular area of performance: theater scenography, architecture, video/image making, music and sound composition, body-based arts including dance and theater, machine and robotic art, and participatory environments. This enumeration already reflects how Salter's extensive study includes unconventional territories of performative expression, such as architecture or interactive urban spaces that dissolve the boundary between actor and spectator. Similar to the artists, performances, and techniques it explores, *Entangled* jumps between different disciplines, genres, and materials, defying clear ontological definitions of performance arts. Salter quite fittingly refers to his survey as a *bricolage*, constructed "from the historical accounts gleaned from archival textual, image and sound research, technical diagrams, descriptions and models, the close reading of primary sources and accounts of projects by artists, critics and audiences, personal interviews and discussions with living artists, as well as my own experience as both practitioner and spectator."[3] This glimpse into its genesis and composition elucidates how *Entangled* embraces a necessarily eclectic, sweeping approach to confidently cover a vast range of material, which clearly cannot be managed under a single theoretical, methodological, or conceptual framework. On the other hand, while this approach is highly effective in achieving the overall aim of the comprehensive survey, it at times also adopts a rather noncommittal and relativistic stance towards the diverse theoretical traditions.

One of the few constraints that Salter does lay out for his survey is the overall time frame from 1900 to the early twenty-first century. Although *Entangled* correctly stresses that technology has always been integral to art and performance from their very beginnings, the book's scope is consciously limited to performances that are intentionally and inextricably entwined (or, as the evocative title already suggests, *entangled*) with their operational technology. While the purpose of this restriction is, as Salter openly acknowledges, primarily a pragmatic one – to narrow the focus of the vast analytical survey – this limitation also allows him to zoom in on innovative forms of artistic experience that represent, to varying degrees, a hybridization between the human and the technological elements of performance. Accordingly, the point of departure is set at the beginning of the twentieth century and the rising machine age, which is loosely dated up until the beginning of World War I. More specifically, Salter strategically starts his enquiry at the high time of Modernism around 1900. This epoch is understood as marking a "unique moment"[4] in history in which the political, social, and economic fabric of Europe, Russia, and North America underwent rapid and fundamental transformations, which gave rise to novel forms of artistic expression.[5] The growing mechanization of society, exemplified by innovations like mass-market photography and motion pictures, also inspired unprecedented forms of experiencing time and space artistically. This development was not only readily thematized in the works of painters and writers, but also by performance artists. Subsequent to the mechanical age, Salter conceptualizes the post-war era as marking the emergence of the computational (rather than the digital) age, which we currently still find ourselves in. The focus on computation rather than digitalization counters what Salter contends are contemporary overemphases – in academia and social media – on the digital at the expense of other perceptual techniques, such as the acoustic, optical, and electro-mechanical. It is for the same reason that Salter eschews an exploration of purely Internet-based performances, computer gaming, or virtual scenarios such as Second Life. Indeed, performative works of art which are only accessible online would contradict his analytical focus on performance as a physically situated rather than virtual event, a central point of his survey which shall be more closely explored below.

While the division of the historical span from the twentieth to the early twenty-first century into two broad historical periods, the mechanical and the computational, may appear to create a binary opposition, Salter regards the divide as existing across a historical continuum in terms of an overarching epistemic paradigm. At the same time, however, Salter does not fail to acknowledge that the transition from the one to the other marked a significant socio-political rupture across all domains of life.[6] The intriguing question of how this rupture is manifested in artistic realms, however, is not pursued any further. Rather, the distinction into two technological time frames serves, first and foremost, as an organizational and structural element for Salter's study, as it allows him to focus on the key technological innovations since the turn of the last century: motion pictures, television, and the personal computer. Each of these innovations alone would undoubtedly be worth its very own survey in relation to performance arts, which makes the selection of case studies, ranging from classic 'high-brow' formations to lesser-known, alternative works, highly eclectic and somewhat arbitrary.

Calling his endeavor "ambitious – almost impossibly so",[7] Salter is well aware of the pitfalls of his study's vast scope. Furthermore, the

underlying rationale for his choice of material and time frame is hardly thematized beyond the practical reason of 'restricting the focus.' The credo of inclusivity that the monograph is committed to can thus prove quite overwhelming for a reader who is not versed in the fundamentals of performative art and performance studies. In this respect, *Entangled* falls short of its initial promise to be accessible for academics, practitioners, students, and general readers alike. While Salter strove to provide a readable, hands-on volume, it is the mere scope of the study that may appear daunting from the very start. Furthermore, the extensive material and the manifold artistic epochs appear to be surveyed at the expense of Salter's main argument. Indeed, whereas the volume argues for a continuity of artistic exploration from the early twentieth century to the present and does perceptively trace the historical roots of contemporary practices, the dazzling mix of media may, time and again, distract from the larger idea.

The vast ground covered by the individual chapters adds to the sprawl. The analytical chapters are organized chronologically (chapters 1 and 2) and thematically, while any neat distinction between the interrelated areas appears to be neither intended nor feasible for the purposes of Salter's unconventional study. While the first two chapters on theatrical space and scenography explore the influence of the machine and the computational age on theatrical work, chapter 3 discusses "Performative Architectures". It offers interesting insights into how architecture acts as both screen and scene when the surfaces of buildings are turned into huge displays for projection. As one of the most paradigmatic chapters in *Entangled*, chapter 4, entitled "The Projected Image," analyzes the use of motion picture material in theater, opera, and other live performance venues. While a small monitor may be easily integrated into the set and is frequently dismissed as a prop, large-scale video walls and projections have challenged the role of the human actor's traditionally center-stage position as the hub of the theatrical world. Salter perceptively connects these practices of vast screening within the clearly demarcated stage world of the theater or the opera to other spaces that equally employ extensive screen surfaces, such as night clubs or festivals. In these contexts, the human actor is not only inextricably entangled with the video wall, but also frequently replaced by it.

Chapter 5 extends these considerations to the realms of music and sound, focusing on the transition from passive reception to interactive improvisation via new technological devices. Much like the impact made by the televised image on the physical stage, computer-generated music utterly transforms the traditional concert situation. This also involves bodily-based digital sound production, which chapter 6 on "Bodies" explores in greater depth. Here, the focus is placed on the influence of technology on dance and other body-based performance arts; the very concept of dance and the individual bodies on display are challenged, altered, and transformed by the on-stage and off-stage utilization of cameras, screens, sensors, and computers. Chapter 7 scrutinizes performances primarily or exclusively executed by machines, robotic, or cybernetic constructions, such as [Matt Heckert's *Mechanical Sound Opera*](#) (1998). Finally, chapter 8 investigates the environments created for interaction and reciprocity, thus dissolving the boundary between creator and spectator. Salter here extends Myron Krueger's notion of the *responsive environment* to explore how cities become sites of comprehensive public live performances via different participatory strategies such as game-structured interactions and flash mobs. As Salter shows, such strategies can, in most cases, only be organized and realized via new mobile technologies, which have become increasingly sophisticated and pervasive.

Unlike the individual chapters, which can be too resourceful and dense for a less performance-savvy audience, Salter's introduction is highly accessible and well structured. It surveys a range of theories and methodological approaches within performance studies and lays out the overall trajectory and conceptual basis of the monograph. In unison with Barbara Kirschenblatt-Gimblett's succinct formulation that "technology is integral to the history of performance"[8] and vice versa, Salter commits himself to the study of the centrality of machines, in the broadest sense, for artistic performance practices. Indeed, the very word 'theater,' from the Greek *theatron*, already presupposes a technological component, as it denotes an architectural zone filled with performance through the craft and skill – the original meaning of the Greek *techne* – of its actors. Salter agrees with Hans Diebner that the terms 'performance' and 'performative' lack "conceptual clarity,"[9] since they derive from diverse artistic fields and academic discourses. Nonetheless, he argues for certain distinctive qualities that differentiate performance from other signifying practices. This claim is subsequently buttressed by a brief literature review of how 'performance' is utilized across the disciplines, including the performative turn of the 1970s in anthropology and sociology (as advanced in the influential writings of Clifford Geertz, Victor Turner, and Erving Goffman, to name just a few), John L. Austin's and John R. Searle's speech act theories in the field of linguistics, and Judith Butler's notion of performativity in the context of gender and queer theory. All of these theorizations juxtapose, whether explicitly or tacitly, performance with representation (the Greek *mimesis*), which corresponds to or literally 'mirrors' a stable, fixed, and objective reality beyond human subjects. In contrast, the performative is concerned with practice and an active 'doing': Subjects are in a constant state of flux, unstable, and always only materialize in the moment. Among other qualities, Salter stresses immanence, materiality, particularity, and temporality as key moments in the conceptualization of performance as a distinct form of artistic expression, which are meant to emphasize the fleeting, local, and concrete nature of a given performance. Salter illustrates his analytical focus on the "physical, real-time situatedness"[10] of performative practices by establishing a distinction between the *anyplace* and *anytime* of simulation versus the particular time and place of performance. One of the hallmarks of performance as defined in *Entangled* is thus its radical break with representational forms of knowledge and knowledge making. While this clear delineation results in restrictions in his choice of material, Salter's efforts to provide a working definition of the term 'performance' counters contemporary criticism of the alleged lexical drainage due to excessive academic overuse.

Whereas the material, rather than mediated characteristics of performance and embodied experience slowly but surely substituted previous academic occupations with simulation and image in the 1990s, the analytical focus still tends to be placed, as Salter's extensive literature review (see above) suggests, on linguistic or anthropological studies. In response to these well explored realms of performative engagement, *Entangled* attempts to open up new research perspectives by engaging with emergent performance discourses in science and technology studies (STS), as exemplified by the eminent works of Bruno Latour, Karin Knorr Cetina, Andrew Pickering, and Michael Callon. Investigating the material circumstances that shape the production and articulation of scientific knowledge in the context of the laboratory, STS extends the notion of performance to include nonhuman and inanimate objects alongside human actors. Particularly expedient in this context is Latour's well-known Actor-Network-Theory (ANT), which explores the performative, rather than representational relationship of science to nature. The basic assumption upon which much work in STS is predicated, namely the dissolution of modernity's artificial divide between animate and inanimate objects, is particularly applicable in Salter's venture into the encounters of technology with human performers. The conscious use of the attribute *entangled* as the title of his book is thus intended to reflect "that human and technical beings and processes are so intimately bound up in a conglomeration of relations that it makes it difficult, if not impossible to tease out separate essences for each."[11]

This premise of the inextricable entanglement between human and technological forces serves as the broad conceptual basis for what Salter identifies as the book's "ground rules": Rather than subscribing to a naïve view of technology as neutral tools merely activated by the human touch, he resorts to Félix Guattari's notion of *machinic* to advance his own, deliberately broad definition of technology, namely as a conglomerate of productive forces that construct and shape socio-cultural-political relations between humans, objects, and the environment.[12] Additionally, he advocates viewing the local and temporal situatedness of any performance as a fundamental characteristic of performative genres. It is for this reason that *Entangled* eschews any engagement with purely digital and Internet-based productions such as Cyber Theater, virtual life, or online gaming. Quite consciously, the survey restricts itself to (largely) physical events that are locally, temporally, and materially situated, thus displaying the characteristic fleetingness and contingency of performative endeavors. These concerns emerge particularly strongly in Salter's discussion of video installations and similar image-based performances that inevitably involve a virtual (the projected image) as well as a material component (i.e. the hardware needed for projection as well as, in most cases, the human performer). The following section will hence be dedicated to a brief review of chapter 4 "The Projected Image: Video, Film, and the Performative Screen," which analyzes the seminal impact of televisual media on the physical properties of performance art and the status of the artist's.[13]

Performative Projection: Film, Television, and the Video Wall

> Skin has become inadequate in interfacing with reality. Technology has become the body's new membrane of existence.
>
> Stelarc, "Beyond the Body" (1986)[14]

Chapter 4 opens with a brief review of the use of projected images throughout the history of the performance arts. With regards to the use of modern monitors, screens, television sets, and video walls, Salter advances an understanding of the traditional Greek theater as the chief incubator of many contemporary performance art scene practices and techniques. Most notably, he compellingly argues that the viewer's obsession with projections and screens can be traced as far back as ancient Athens, and specifically to the phantasmagoria of Plato's cave and the Dionysian theater. The intimate and intricate relations between human and non-human actors become even more tangible, however, when Salter discusses non-Western examples of performance. For instance, he refers to the Javanese *Wayang Kulit*, or shadow puppet theater, originating around 900 A.D. The *Wayang Kulit* perfectly illustrates how the screen, an inanimate actor merely displaying shadows, is as indispensable for a successful illusion as the master performer or *dalang*, who manipulates the puppets behind the scenes. By revealing and concealing performance both behind and through a luminal screen, these earlier and very rudimentary forms of theatrical technology thus remind readers of how contemporary artistic performances – whether or not they involve a material screen or other types of display – cannot be disassociated from their (cinematic) origins. Today, specific aspects of the *Wayang Kulit* and other early forms of theater can be found appropriated in various visual media, including cinema and video projections. As Salter convincingly demonstrates, it is vital to create awareness for the historical and local contexts in which projected images evolved in order to enhance the understanding of how the audience interacts in complex ways with contemporary installations, performances, and art scenarios. This is not only true for one particular medium such as cinema, but applies to all media devices employed in performance arts such as computers or sound systems.

Throughout Salter's discussion of the exploitation of televisual media in the performance arts, however, one cannot help but notice a slightly over-deterministic stance towards his objects of analysis, as he argues, for instance, that the audience's interactions with projected images are 'evolving' towards more complex modes. Significantly, a large part of this 'evolution' and complexity is regarded as a direct consequence of technological change. Although Salter's examples, such as the above introduced *Wayang Kulit*, are quite original, his study might have benefited from a more outspokenly non-linear approach rather than an overtly technophilic perspective. Apart from this noticeable bias, Salter's analytical survey of televisual performances is perceptive and well structured. Persuasively, it argues that due to technological progress and the emergence of new methods to record, reproduce, and manipulate images, the

relationship between human and non-human performers is undergoing fundamental changes, not least of which because human actors increasingly share their performative space with technological appliances.[15] The pivotal question which *Entangled* in general and the chapter on performative projection in particular thus settle on – What role does the human element still have to play in today's technologized and almost entirely preprogrammed artistic performances? - shall be illustrated by the following review of some of the noteworthy performances that Salter discusses in the chapter.

One of the first and still most outspoken practitioners of video-based performance art is the Korean American video art pioneer Nam June Paik. An early example of Paik's experimentation scrutinized in detail by Salter is the exhibit-happening *Exposition of Music/Electronic Television* (originally titled *Symphony for 20 Rooms*), which indeed constitutes one of the earliest of its kind in the history of video art.

Paik's first major installation *Exposition of Music/Electronic Television* held at Rolf Jährling's residence from March 11-20, 1963. The show opened for two hours every day and did not stop at the Jährling family's private quarters. (Media Art Net)

Objects such as pianos, violins, noisemaking sculptures, pieces of furniture, the head of a recently slaughtered ox, and several other objects were scattered across the rooms of architect Rolf Jährling's residence turned gallery in Wuppertal/Germany in 1963. Thirteen television sets were integrated into the exhibit, displaying footage of prime time German television programs that were distorted and manipulated almost beyond recognition.
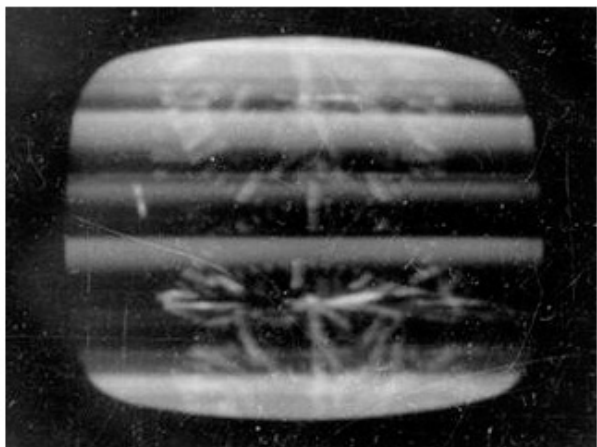

Examples of the distorted images displayed by Paik's monitors. (Media Art Net)

As Salter convincingly demonstrates, Paik used visual distortion not only to reenact the destruction of the image and the specificity of the actual objects of televisual media, but also to depict our culture's fluctuating treatment of the monitor. Indeed, *Exposition of Music/Electronic Television* not only invites the audience to question the function of the human performer for the actual installation, but also that of the television monitor. Is it still a screen or does it have more in common with the musical instruments that were also incorporated in the installation, such as pianos and violins? According to Salter, "Paik quickly began to explore within the gallery setting not what television signified (i.e., its sign) but the temporally based constitutive processes that one could engage with it before an audience."[16] His analysis of Paik's comprehensive oeuvre hence establishes time and space as focal points for the discussion of medium

specific differences in the performance arts: Performances like the exhibit-happening in Wuppertal invite the spectator to contemplate on the ways in which temporal and spatial structures are specific to cinema and/or the televised image and how the televisual use of time and space differs from the conventional theatrical world. What Paik's pioneering installations hence reflect is how technological progress, exemplified by an increasingly easy and inexpensive access to monitors and screens, has given rise to artists' heightened consciousness for medium specificity as well as to the slow, yet steady erosion of the human element in a performance situation largely mediated via screens and projections.

Echoing the work of the field's pioneer and "God of the Video" (Hans Mayer) Nam June Paik, a number of younger artists such as Woody Vasulka and Steinunn Briem Bjarnadottir (after their marriage known as Steina Vasulka) continued to experiment with television and video. These attempts, as Salter's survey demonstrates, "helped forge links between the avant-garde performing, musical, and visual arts worlds."[17] In general, the younger generation of video (performance) artists acknowledges the idea that machines will increasingly challenge the artist as the basis of performance art and cannot be ignored by directors, actors, filmmakers, choreographers, and researchers working in the field.
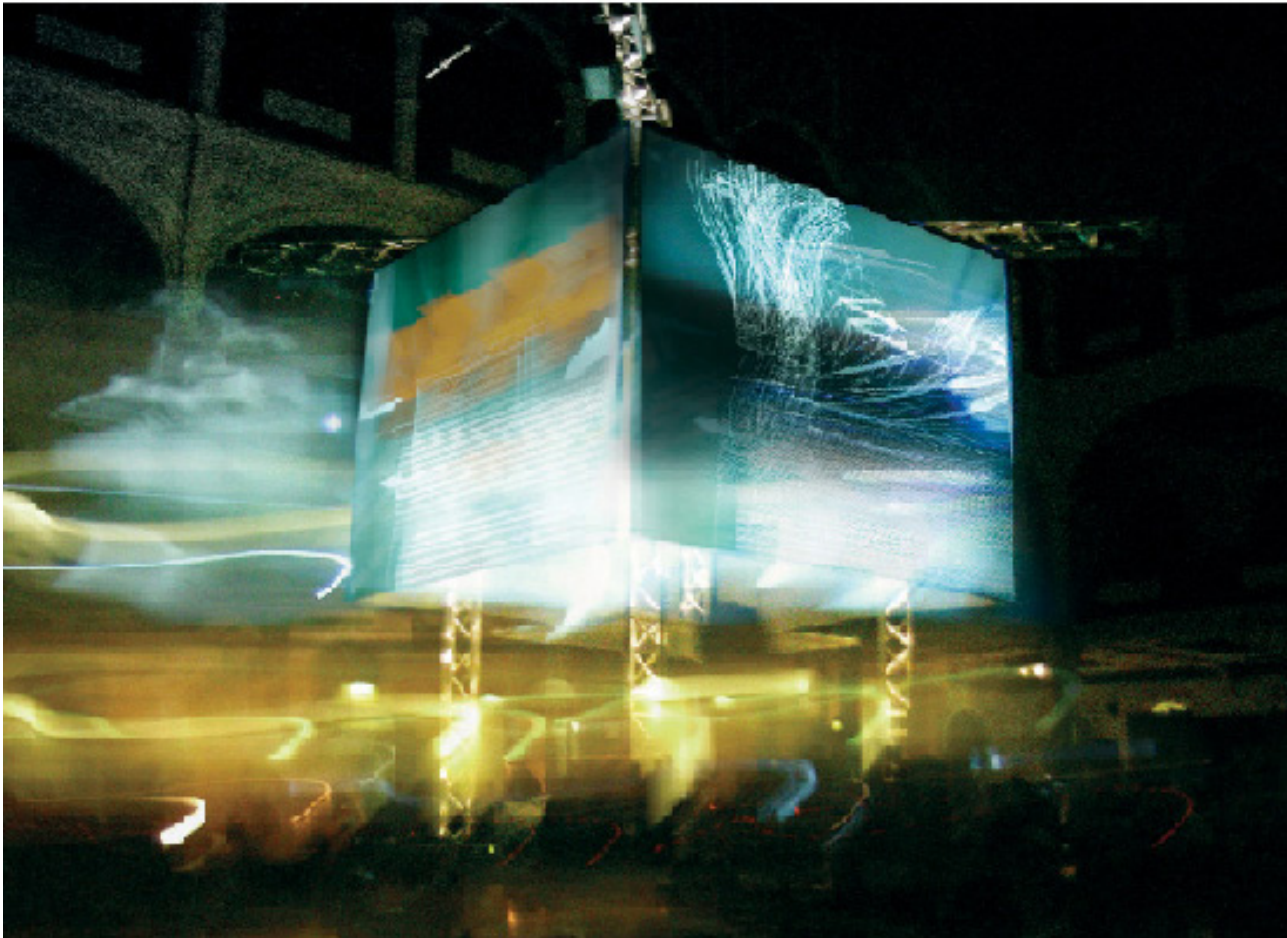

Skoltz-Kolgen, *Flüux:/Terminal* at the International Festival of Digital Creativity and Electronic Music 2012 in Montreal/Canada. The projections on the screens, including lines, grids, numbers, and textual fragments, are controlled by the two artists on stage. (MUTEK)

In accordance with this premise, the integration of machines and digital technology takes on an increasingly prominent role in present-day performances, further relegating the human performer to the very margins of the performative process. *Flüux:/Terminal* (2003) by the Quebecois art duo Skoltz-Kolgen (consisting of Dominique Skoltz and Herman W. Kolgen) and *Formula* (2001), *C4i* (2005), and *Datamatics* (2006) by Japanese composer Ryoji Ikeda, for instance, display a mix of digital technology, data networks, screens, and material machinery, which is largely preprogrammed, rather than constituted in the very moment. The material presented to the audience is usually prepared in advance and hardly manipulated during the actual screening. This effectively reduces the artist to the role of an engineer or a mediator who initiates the 'performance' by switching on a DVD player or a projector.
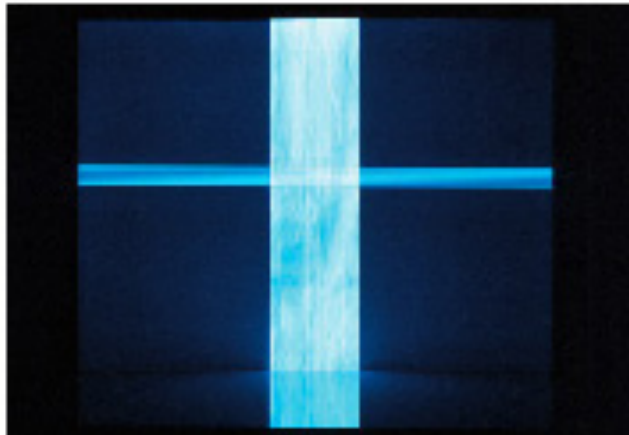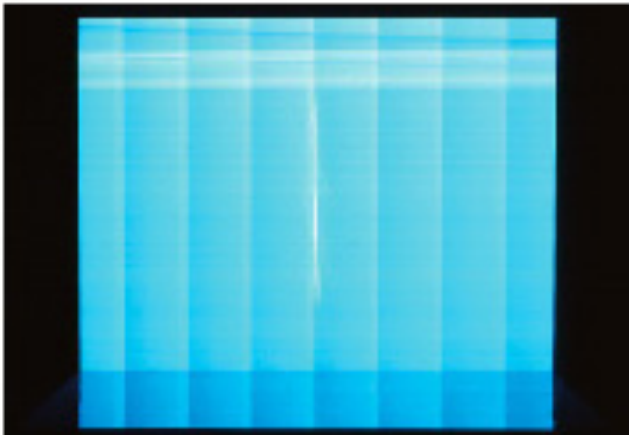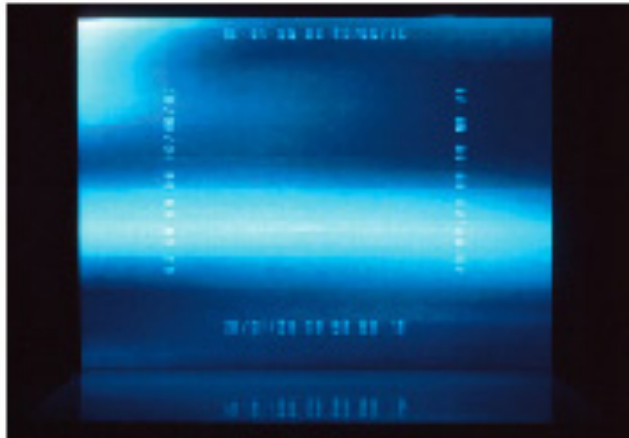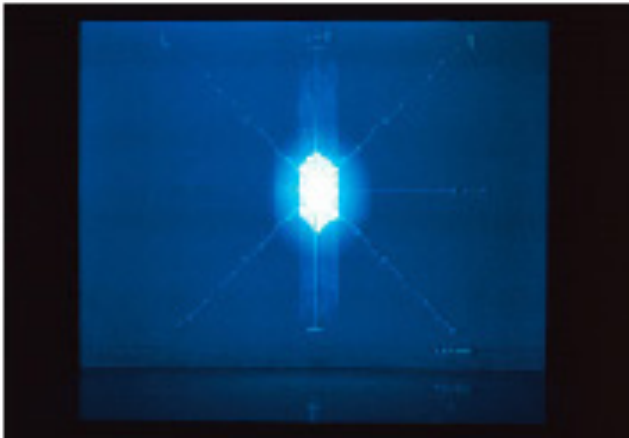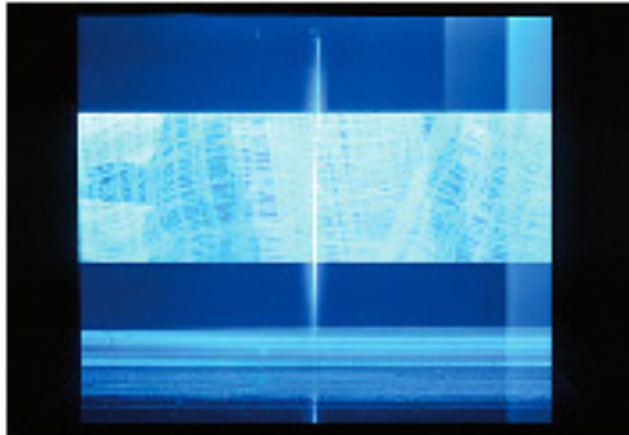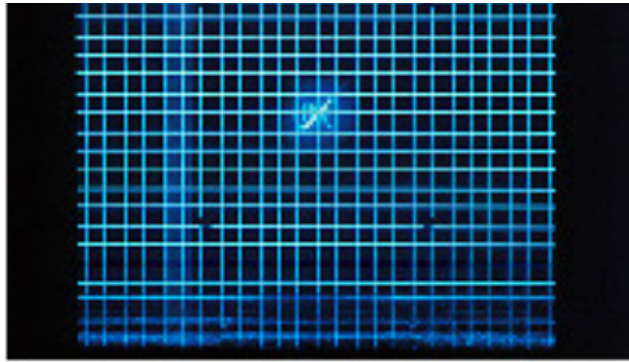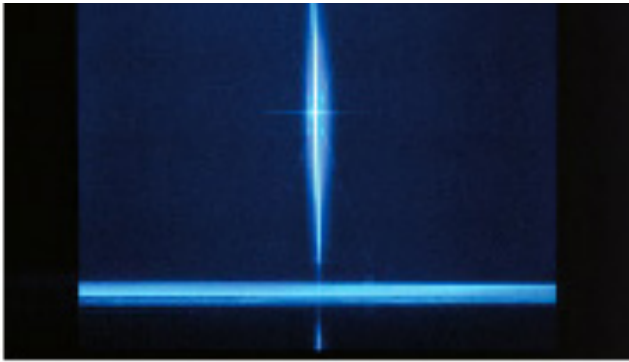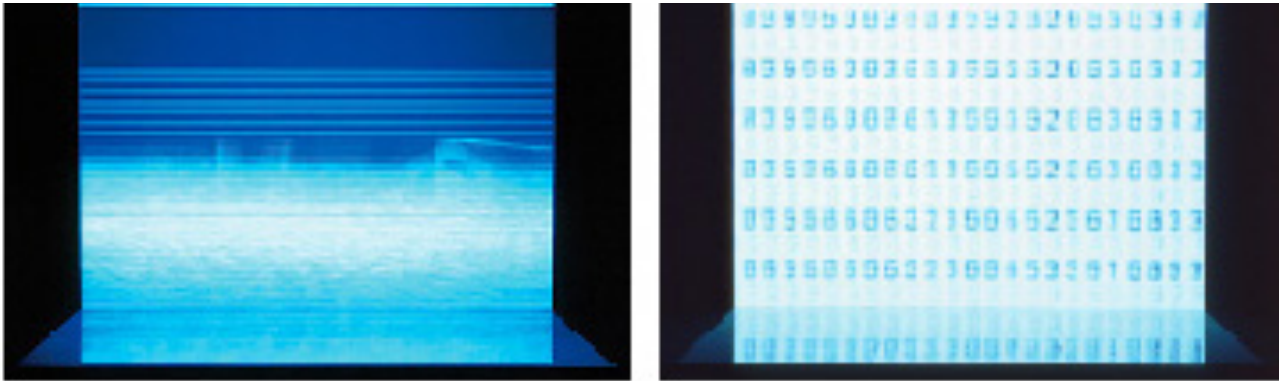
Ryoji Ikeda, *Formula* (2001). The audiovisual concert synchronizes basic acoustic signals with minimalistic movements on the screen. *Formula* is largely pre-programmed, but still refreshes with each new presentation. ([Ryoji Ikeda](#))

The varied examples by both emerging and established performance artists which Salter closely and skillfully scrutinizes in his compelling analysis hence reflect the difficulty of determining what a performance actually is and what roles human and technological actors respectively play. Along this line of inquiry, Salter eventually wonders:

> What then constitutes the 'performance' in Skoltz-Kolgen's or Ikeda's complex but mostly prepared in advance visual and sonic orchestration of machines? Did it live in waiting, fastidiously prepped in the machine and ready to take its place on the screen with the human operator's tasks reduced to the push of a laptop's spacebar or the press of the play button on the DVD player? What signified 'live,' now that the stage was reduced to the pixel and the stretched canvas, to lights, speakers, and projectors; devoid of human presence, yet still generating the excitement and pulse of a performance happening in the here and now?[18]

Indeed, it is especially in the context of video wall installations and screen-dominated works of 'live' art that the already secondary role which the human actor plays in the successful execution of a technologically saturated performance becomes even more tenuous. The actual function of the human element seems reduced to the mere push of a button behind the scenes, while the stage as such is composed of pixels, flashes of light, loud speakers, a canvas or a wall, and projectors untainted by live human presence. Salter maintains, however, that the role of the human actor can still be vital in today's media-saturated performance culture: In the emerging genres of *live cinema* and *performance cinema*, inspired by VJ culture and jazz improvisation, the artist shapes the live event by manipulating the software on stage. Consequently, the resulting work of art offers a blend of preprogrammed material and live improvisation.

At the end of his elucidative analysis of televised performances, Salter ultimately refrains from making definite claims about the changing roles of the screen and the human artist for real time and recorded performative situations respectively. While the chapter concludes with the (somewhat superfluous) assertion that the screen "had become accepted in the cultural vocabulary of performance, with or without a stage or human performer,"[19] he is compelled to concede that tensions between animate and inanimate performers do remain. Especially in artistic situations that occupy a liminal position between live performance and installation/exhibition (as is frequently the case with video-based artistic forms), technology and humanity tend to clash, yet might also mutually inform and enrich each other through their intricate entanglement.

Performance in the New Millennium

In his foreword, stage director and art critic Peter Sellars stresses one of the key arguments of this study, the necessarily provisional nature of any performative act. At the end of *Entangled*, the reader may feel that despite the impressive scope of Salter's resourceful and perceptive analysis, his overview is far from a final verdict on contemporary artistic practice: Neither performance art nor technology can be thought of as ever reaching a standstill. While Salter introduces his volume with the explicit wish to adopt a balance between technophilia and technophobia, his overall tone in discussing the diverse scenarios of human encounters with technology via performative works of art suggests that he is more overtly inclined to the former position. As he argues in his final chapter on interactive environments, one of the most laudable and promising aspects of performance arts in the early twenty-first century – an era in which the computational age appears to have reached full force – is their increasingly participatory and democratic nature, whose design, expansion, and effective realization could not have been realized without technological progress. Specifically, Salter explains that while the roles of producer and consumer in today's technoscientific culture of information fluctuate incessantly, the audience of a performative event almost always experiences aspects of both participation and distanced observation.[20] Thus, the boundaries between active/passive, receptive/creative, and machinic/organic are fundamentally challenged by the hybrid performances that Salter describes and dissects. While Salter's reasoning might appear, to the more conventional connoisseur of the theatrical landscape, like an uncritical

and wildly postmodernist endorsement of cultural relativity, ambiguity, and fragmentation, his underlying attitude towards the entanglement of traditional performance art forms with technology feels refreshing and inspirational in an age that increasingly voices concern over the dehumanizing, distancing effects of high end communication technology. It is with this buoyant spirit that Sellars' enthusiastic preface lauds the present age as one that more than any other era in human history to date bears the potential to bring about "a genuinely democratic and responsive culture."[21]

The overriding question that haunts the volume's academic and artistic engagement with issues of performance in the age of technoscience and virtual aesthetics seems to imply an affirmative answer: Yes, technology vastly affects contemporary life, but while it bears the potential to both blunt and bolster our humanity, it might be more fruitful to think of it as achieving both or, conversely, neither of these two options. Rather, Salter's book encourages the reader to question and potentially overcome the modernist divide between humanity and technology, between nature and culture.[22] Despite the fact that *Entangled* deliberately refrains from commenting on purely digital modes of performance, it stimulates the reader to reconsider the cultural labor embedded in the performative practices of even our most everyday interactions with high-end technology. In a day and age where high-end technology has become more readily accessible for an ever growing percentage of the world's population, digital practices and technogadgets, from online dating to the computerized workplace, are a cultural given. As such, they necessarily shape our perception of what it means to be human in fundamentally different ways than merely a hundred, or even fifty years ago. In the artistic realm, whether representational or performed, these fundamental and evermore rapid changes in the technocultural fabric can pose a challenge, but also a chance for new artistic directions that practitioners, audience, and theorists need to engage with. Needless to say, the instant accessibility of social networks, mobile appendages, and 24/7 online exposure transforms the quotidian into a public event that is highly stylized and aestheticized;[23] it is in view of such scenarios, however, that performance art can and will no longer be restricted to well-known territories. Indeed, it is the mundane, the ordinary, and the every-day, rather than the confined world of the clearly bounded theatrical stage, which performance in the twenty-first century must challenge, counteract, and transform. Such a vision of performance art is necessarily hinged on, as the epigraph by Donna Haraway also suggests, a radical view of the relationship between humans and technology that overcomes preconceived notions of medium specificity and restrictive binaries.

NOTES

1. Salter, Chris. Entangled: Technology and the Transformation of Performance. Cambridge, MA: MIT Press, 2010.
2. Several notable omissions, such as Salter's conscious eschewal of purely virtual performances, must thus be classified as unavoidable.
3. Salter, Chris. Entangled: Technology and the Transformation of Performance.xvi.
4. Ibid. xv.
5. Entangled here mobilizes and adeptly applies historian Stephen Kern's classification of the period between 1880 and 1918 as one that witnessed the emergence of new modes of thinking about, engaging with, and manipulating time and space. See Kern, Stephen. The Culture of Time and Space: 1880-1918. Cambridge, MA: Harvard University Press, 1991.
6. These two tendencies may appear somewhat contradictory. Indeed, Salter does not directly comment on how both a "rupture" and a "continuum" may be perceived in the transition from one historical epoch to the next (i.e. from the mechanical to the computational age). Judging by the examples he discusses, however, it seems that he implicitly distinguishes between social, economic, and political circumstances (which did, according to Salter, undergo significant change) and the progressive development of technologized performance that has continued since Modernism.
7. Salter, Chris. Entangled: Technology and the Transformation of Performance. xvi.
8. Kirschenblatt-Gimblett, Barbara. "Performance Studies." The Performance Studies Reader. Ed. Henry Bial. London: Routledge, 2002. 48.
9. Diebner, Hans. Performative Science and Beyond: Involving the Process of Research. Vienna: Springer, 2005. 21.
10. Salter, Chris. Entangled: Technology and the Transformation of Performance. xxxiv.
11. Ibid. xxxii.
12. Ibid. xxxvi.
13. Ibid. 352.
14. Stelarc's essay "Beyond the Body: Amplified Body, Laser Eyes, and Third Hand" (1986) was reprinted in Theories and Documents of Contemporary Art: A Sourcebook of Artists' Writing. Ed. Kristine Stilles and Peter Howard Selz. Berkeley: University of California Press, 1996. 427-430.
15. Salter, Chris. Entangled: Technology and the Transformation of Performance. 115.
16. Ibid. 118.
17. Ibid. 120.
18. Ibid. 177.
19. Ibid. 179.
20. The term 'technoscience' (or the adjective 'technoscientific') as coined in the field of bioethics by philosopher Gilbert Hottois is meant to capture the changed character of contemporary scientific practice. In the last decades, science has become acutely dependent on high technology gadgets, expensive equipment, and an according (inter)national industry to conduct, organize, and finance research. The amalgamation of science and

technology is understood as having thoroughly permeated our every-day lives in modern information societies. Within STS, 'technoscience' was prominently advanced by the seminal work of Bruno Latour and Donna Haraway, who established the coinage as a widely used critical concept. For more recent scholarship on technoscience, see the following collections: Ihde, Don, and Evan Selinger. Chasing Technoscience: Matrix for Materiality. Bloomington: Indiana University Press, 2003; and Marcus, George E., ed. Technoscientific Imaginaries: Conversations, Profiles, and Memoirs. Chicago: University of Chicago Press, 1995.

21. Sellars, Peter. "Foreword." Salter x.

22. Latour already called for a demise of this divide in his groundbreaking We Have Never Been Modern (1991).

23. Digital exposure as performed, for instance, through social networks or online dating services publicizes and aestheticizes private everyday experience, which challenges traditional borders between art and the quotidian. Salter refers to these practices as "ludic artifice" (350), which work by "elevating the workaday to the status of the fantastic" (352).

Author bio:

Judith Kohlenberger is a PhD candidate in English and American Studies at the University of Vienna. Her M.A. thesis on cool aesthetics in American film and television was awarded the 2010 Fulbright Prize in American Studies and the 2010 Honorary Award of the Austrian Federal Ministry of Science and Research. She currently holds a DOC fellowship at the Austrian Academy of Sciences for the completion of her doctoral project, which explores legitimatory discourses of science in American popular culture. Her research interests include cultural and literary theory, gender studies as well as hemispheric approaches to the Americas.
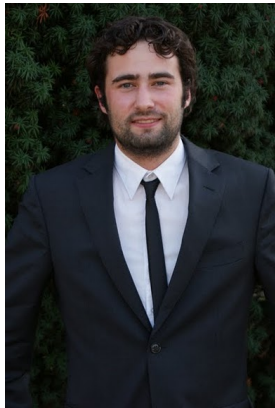
Author bio:

Samuel Zwaan was awarded a Fulbright Scholarship to enroll in the Digital Media Master at the Georgia Institute of Technology. Before going to Georgia Tech he received a Bachelor Cum Laude in Theatre, Film, and Television Studies at Utrecht University. He is currently also finishing his Research Master in Media and Performance Studies at Utrecht University. Samuel's research interests include media archaeology, maps and space, participatory culture, augmented reality and media and education. Besides this he is a fierce debater winning several awards at for instance Model United Nations at Cambridge University.