Cyberformance? Digital or Networked Performance? Cybertheaters? Virtual Theatres?... Or All of the Above?

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The following article is the extended version of Maria Chatzichristodoulou's introductory lecture that provided an art-historical context for the CyPosium.

Steve Dixon, in the preface to his book *Digital Performance* (2007), acknowledges the problematic nature of the term, which is due to the wide-ranging applications of both its elements: 'digital' and 'performance'. According to Dixon, "'Digital' has become a loose and generic term [...] and the term 'performance' has acquired wide-ranging applications and different nuances [...]".[1] Though the terms remain contested, there is no doubt that the last two decades have witnessed a proliferation of performance practices that unfold not in physical or proximal environments but online, in purpose-built platforms or appropriated virtual environments and worlds. This article offers a condensed art historical overview of the newly emergent genre of digital performance (or whatever else you want to call it), focusing on perfor- mance practices that develop exclusively – or primarily – online.

1 Steve Dixon with Barry Smith, *Digital Performance: A History of New Media in Theater, Dance, Performance Art and Installation* (Cambridge, MA, MIT Press: 2007), x.

Introduction: links to the past

We think of cyberformance or digital performance as a eld of practice that emerged with the advent of digital technologies; however this is not the case in art historical terms. I will start by introducing the term 'cybertheater': a term which, though not more accurate than others employed to describe relevant practices, highlights the direct connections with the genre's cultural antecedents, acknowledging its lineage and grounding it within art history.

The term 'cybertheater' is credited to the Russian kinetic art group Dvizjenije (which means Motion or Movement): an interdisciplinary team inspired by the 'cosmic' ideas of Russian Avant-garde painter Kazimir Malevich. Dvizjenije created work across the elds of visual art, music, design, and education. Their piece *Cybertheater* (1967) was an

immersive machinic environment that invited audiences to enter a world both virtual and physical, partaking in a communal sensual experience. The piece was responsive to visitors' movements,[2] as Dvizjenije's aim was "to involve the spectator both actively and totally in the event".[3] Lev Nusberg, the initiator of Dvizjenije, describes *Cybertheater* as a "model of [...] the relationship between Machine and Man";[4] a vision of man-machine symbiosis. Its title and Nusberg's discussion point to the discovery of cybernetics, de ned by Norbert Wiener in 1948 as the science of "control and communication in the animal and the machine".[5] Underlying cybernetics was the idea that all control and communication systems, "be they animal or machine, biological or technological, can be described and understood using the same language and concepts".[6]

Dvizjenije's *Cybertheater* emerged within a period of sociopolitical and scienti c developments that led to the zealous adoption of cybernetic theories as a vehicle of scienti c reform. This enthusiastic approach to development and innovation is re ected in Cybertheater's visionary character and in the attitude of the group, which envisaged an ideal of unity between technology, art and science.[7] They were not alone: as early as the 1930s, artists throughout Europe had become interested in Kineticism. According to Frank Popper, Kinetic Art at the time "assumed the role of symbolically representing scienti c and technical progress". It also became signi cant on a social level as publics were invited to "participate effectively in transforming the existing environment".[8] Moreover, in the sphere of aesthetics, a wholly new relationship has grown up between the artist, the work of art and the spectator. The work loses its materiality, and becomes simply an effect or an event; the artist loses his halo and becomes a researcher; the spectator leaves the domain of cultural conditioning and himself becomes active and creative.

2 For more information see Frank Popper, *Art – Action and Participation* (London, Studio Vista, Cassell & Collier Macmillan:1975), 59-61. 3 Frank Popper, ibid, 158. 4 Lev Nusberg, "Cybertheater," in *Kinetic Art: Theory and Practice. Selections from the Journal Leonardo*, ed. Frank J. Malina, (New York, Dover: 1974), 104.

5 Michael J. Apter, "Cybernetics and Art," in ibid, 176. 6 Michael J. Apter, ibid. 7 See: Lisa Haskel, "Time Machine," in *Star dot Star Exhibition Catalogue*, (Shef eld, Site Gallery: 1998), n/p. 8 Frank Popper, *Art – Action and Participation*, 7-8

You say 'tomato', I say 'tomato'

'Cybertheaters', as is clear from the title of this paper, is a contested term. Within the last decade or so, several practitioners and theorists have employed a range of terms to refer

to this emergent genre (or to overlapping phenomena, as the relevant practices are extremely diverse). Prominent examples are:

- Cyberformance: Helen Varley Jamieson introduced this term in 2000 to describe "live performance with remote performers coming together in real time via internet chat applications".[9] Jamieson aimed to identify an adequate term for the new genre that she was experimenting with, while avoiding polarisations between terms such as 'real' and 'virtual'.

- Digital performance: Barry Smith and Steve Dixon used the term in 2001 when they launched their project Digital Performance Archive.[10] They de ned digital performance as: "performance activity with new digital technologies – from live theatre and dance productions that incorporate digital projections, to performances that take place on the computer-screen via webcasts and interactive virtual environments".[11] Their book *Digital Performance* (2007) offers an updated de nition of the term: "We de ne the term 'digital performance' broadly to include all performance works where computer technologies play a key role rather than a subsidiary one in content, techniques, aesthetics, or delivery forms."[12]

- Digital practices: Susan Broadhurst employed the broader term 'digital practices' in her book that came out in the same year as *Digital Performance* (2007) to refer to performance practices that "prioritize such technologies as motion tracking, arti cial intelligence, 3-D modelling and animation, digital paint and sound, robotics, interactive design and biotechnology."[13]

- Cyber-theater: Matthew Causey contributed the following de nition of the term to the *Oxford Encyclopaedia of Theatre and Performance* (2003): "cyber- theatre, not unlike lm and television, does not rely on the presence of a live actor or audience." He went on to ask: "is it necessary that some live element be present in the performance of cyber-theatre to make the genre distinction of theatre a useful model?"[14] Whereas in a later publication (2006) he notes that a major possibility of computer-aided performance is "to allow audiences interactive access to the performance."[15]

- Virtual theatres: Gabriella Giannachi used the term in her book of the same title, published in 2004, to denote "the theatre of the twenty- rst century in 9 Helen V. Jamieson, "Cyberformance," www.cyberformance.org (accessed March 20, 2006) 10 Barry Smith and Steve Dixon, "Digital Performance Archive," 2006, www.ahds.ac.uk/performingarts/collections/dpa.htm (accessed August 22, 2013) 11 Barry Smith and Steve Dixon, ibid. 12 Steve Dixon with Barry Smith, *Digital Performance*, 3. 13 Susan

Broadhurst, *Digital Practices: Aesthetic and Neuroaesthetic Approaches to Performance and Technology* (New York, Palgrave Macmillan: 2007), 1. 14 Matthew Causey, "Cyber-theatre," in *Oxford Encyclopaedia of Theatre and Performance*. Vol. 1, ed. Dennis Kennedy, (Oxford, Oxford University Press: 2003), 341. 15 Matthew Causey, *Theatre and Performance in Digital Culture: from Simulation to Embeddedness* (London, Routledge: 2009), 48. Original emphasis.

which everything – even the viewer – can be simulated."[16] She also de ned it, following Bolter and Grusin,[17] as "a form of theatre which remediates – which means that it is always also about other media."[18] Furthermore, Giannachi referred to Pierre Lévy's discussion of 'cyberart', in which he identi es two types of virtual worlds: "those that are limited and editorialised, such as [...] 'closed' (off-line) installations, [and] those that are accessible over a network and in nitely open to interaction, transformation, and connection with other virtual worlds (on-line)."[19] Giannachi suggests that all virtual theatres "share the characteristic of being open works in which the viewer is variously participating to [*sic*] the work of art from within it."[20]

- Networked performance: USA-based organisation Turbulence.org[21] and Michelle Riel have used the term since the launch of their Networked Performance Blog[22] in 2004 to signify "any live event that is network-enabled, including any form of networking in which computational devices speak to each other and create a feedback loop." In a more recent endeavour to de ne the genre they offer the following: "Networked performance is real-time, embodied practice within digital environments and networks; it is, embodied transmission."[23]

- Finally, Christopher Salter emphasizes that performance, whether physical or networked, "involves the moment of action, its continuity, inherent temporality and relationship to the present."[24] Those are only some of the de nitions offered by scholars and artists who develop work in the eld. They are diverse – indeed, as diverse as the practices themselves – and they do not necessarily refer to the exact same type of practice (for example, cyberformance is a sub-category of digital performance, as it only refers to live performance that unfolds remotely and does not include digital practices that develop in physical space). It is important to note, though, that all de nitions I have 16 Gabriella Giannachi, *Virtual Theatres: an Introduction* (London and New York, Routledge: 2004). 17 See: J. David Bolter and Richard A. Grusin, *Remediation: Understanding New Media* (Cambridge, MA, MIT Press: 2000). 18 Gabriella Giannachi, *Virtual Theatres: an Introduction*, 5. 19 Pierre Lévy, *Cyberculture*, trans. R. Bononno, (Minneapolis and London, University of

Minnesota Press: 2001), 125-6. See also: Gabriella Giannachi, *Virtual Theatres*, 4. 20 Gabriella Giannachi, *Virtual Theatres*, 4. 21 New Radio and Performing Arts, Inc. Turbulence, www.turbulence.org/ (accessed March 1, 2006). Turbulence.org are Jo-Anne Green and Helen Thorington, co-directors of New Radio and Performing Arts, Inc. See: Jo-Anne Green and Helen Thorington, "About networked_ performance," www.turbulence.org/blog/about.html#green (accessed September 19, 2009). 22 See: Turbulence, "Networked_Performance blog," http://turbulence.org/blog/ (accessed September 20, 2009). 23 Turbulence, ibid. There is no precise indication as to when this de nition was updated (though dated June 29, there is no indication of year). It is certainly posted after March 2006 when I last made a note of the de nition offered. It is most likely that the date refers to June 2009. 24 Christopher L. Salter, "Unstable Events: Performative Science, Materiality and Machinic Practices", 2007, www.mediaarthistory.org/replace/replacearchives/salter_abstract.htm (accessed September 20, 2009). 22

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offered have one thing in common: they foreground, in different ways, the notion of liveness. A vital characteristic of all theatre and performance art practices, liveness remains a central focus also for practices that evolve online. Peggy Phelan, in her seminal book *Unmarked*, approaches theatre and performance as practices whose liveness de nes their ontology, as it means that the performance is created through a process of disappearance:[25] its being 'live' entails that performance 'dies' with its own enactment. Every single moment of a theatrical experience is entwined with the loss of a unique relational experience that cannot be preserved or reproduced. Though Phelan argues that only embodied and visceral performance can be perceived as live, this conference demonstrates that this is an inaccurate and outdated assumption that has been radically challenged not only by Philip Auslander in his book *Liveness*, but also, and more importantly, by all the digital /networked or cyber- performance practices developed over the last twenty or more years.

I will here focus on two types of digital performance practices: cybertheatres/ cyberformances, that is, practices that unfold online in digital performance platforms; and telematic performances that bring together distributed collaborators in a live screen image. Those histories are by no means exhaustive: they are meant to facilitate some kind of developmental trajectory of the genre rather than list the numerous practices and artists that were, and are, active in those elds.

Online digital performance platforms

Currently a proliferation of digital performance events take place online in Second Life and other virtual worlds and platforms such as the teen focused Habbo Hotel, The Sims

Online, and the gaming World of Warcraft. The antecedents of those virtual worlds and rst multiuser virtual environments were called MUDs (Multi User Dungeons), and were developed in the late 1970s as text based virtual reality environments. At the time Sherry Turkle described MUDs as:

a new kind of virtual parlor game and a new form of community. [...] participating in a MUD has much in common with script writing, performance art, street theatre, improvisational theatre – or even commedia dell'arte. [...] As players participate, they become authors not only of text but of themselves, constructing new selves through social interaction.[26]

MUDs were role-playing games with clear rules and goals, and their programming required a high degree of technical expertise. In 1990 Pavel Curtis, a Xerox programmer, developed the rst MOO (MUD Object Oriented); MOOs were easier to program, more exible spaces that focused on social interaction rather than gaming. Online performance company The Plaintext Players started performing in MOOs soon after – their rst performance was *Christmas 9* on PMC MOO (created

25 Peggy Phelan, *Unmarked: the Politics of Performance* (London and New York, Routledge: 1993). 26 Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet* (New York, Simon and Schuster: 1997), 11-12.

by the online journal *Postmodern Culture*) in March 1994.[27] Moreover Juli Burk, at the time Vice President of the Association for Theatre in Higher Education, created ATHEMOO, the rst MOO designed speci cally for theatre, in 1995.[28] In 1997 Rick Sacks presented *MetaMOOphosis*, based on Kafka's novel *Metamorphosis*, which was the rst performance to be created speci cally for ATHEMOO.[29] Visitors to *MetaMOOphosis* found themselves at the house of Gregor Samsa, the main protagonist. They could enter the house by typing 'in' or 'enter' and, once inside, access a closet with 'costumes' for various characters. Those costumes were descriptions of the characters and came with built-in script: selecting a costume meant entering Gregor Samsa's world as a dramatic character. Each space in Samsa's house also had in-built characteristics or 'behaviours'.

That same year (1997) California-based artists Adriene Jenik and Lisa Brenneis established their online performance company Desktop Theatre, which performed in the two-dimensional online chat environment of The Palace: a hybrid between an on-line chat area and a multi-player game server. A free and cross-platform application that had no predetermined narrative or rules, The Palace turned into the rst graphical virtual social space, and Desktop Theater was the rst group to use The Palace for online performance.

The Palace's public nature meant that Jenik and Brenneis approached Desktop Theatre events as internet street theatre in a two- dimensional space: "Here, live theater has new parameters: gestures, emotions and speech are compressed into two dimensions and computer speech".[30]

In 2002 Jamieson and her colleagues founded Avatar Body *Collision* – a distributed group of female performers. Originally, Avatar Body *Collision* performed in The Palace, iVisit (an audiovisual conferencing platform) and on stage. In January 2004 they launched the purpose-built, open source software platform UpStage, which still serves as a stage for their cyberformance practices, and is open to all to use and experiment with. On UpStage one can create two-dimensional purpose- built backdrops, avatars, and props; integrate animation, web cams, text-to-speech function and audio les; and draw in real time. Audiences click on a link to attend live events and can chat live while the performance unfolds. Unlike The Palace or Second Life, UpStage is not a public space.[31] Participants mostly visit the site for a speci c reason: either to develop a performance piece or other distributed online event, in which case they use the website like they would use a studio space; or to watch a show, like going to the theatre. Unlike virtual worlds such as Second Life, UpStage offers a web-based, low-tech option for online performance: it is server-side software, therefore does not need to be downloaded; it requires minimal RAM or bandwidth; and one can access it on any computer with a dial-up connection.[32]

27 See: The Plaintext Players of cial website, http://yin.arts.uci.edu/~players/xmas.html (accessed October 20, 2012). 28 Juli Burk, "ATHEMOO and the Future Present: Shaping Cyberspace into a Theatre Working Place," in *Theatre in Cyberspace: Issues of Teaching, Acting and Directing*, ed. Stephen A. Schrum, (New York, Peter Lang: 1999), 109-134.

29 See: *MetaMOOphosis* of cial website, www.vex.net/~rixax/Kafka.html (accessed October 20, 2012). 30 Desktop Theatre original website, www.desktoptheater.org/ (accessed October 20, 2012). 31 Here public space is understood as a social space that is constantly open and accessible to the public, such as a public square, park or natural reserve.

32 See: UpStage of cial website, http://upstage.org.nz/blog/ (accessed October 20 2012).

Another example of online digital performance, albeit one of very different dramaturgy and aesthetic, is Entropy8Zuper!'s piece *Wire re* (1999-2003): a performance/software/net.art piece about 'sex in a virtual world'.[33] The piece differed radically from online performance practices I have up to now discussed: performances in MUDs and MOOs (that is, in text-based environments) inevitably entailed a strong focus

on the script, characters and plot. *Wire re* on the other hand was a 'performance of the database' that did not depend on a linear narrative. Instead, the piece was characterized by visual exuberance, resembling a live online VJing session. It is not accidental that *Wire re* was launched at the same time the rst commercial live video applications such as Vjamm, Arkaos and Motion were being released, and VJing was becoming popular within clubs and artistic contexts alike.[34]

The end of *Wire re* (2003) coincided with the launch of VisitorsStudio by Further eld.org: a real-time, multiuser environment where users can "upload, manipulate and collage their own audio-visual les with others, to remix existing media".[35] VisitorsStudio is an environment that can host online performances and other activities, such as discussions, interviews and collaborative projects. KeyWorx, launched by the Waag Society in Amsterdam the same year (though the platform actually started its life earlier as KeyStroke), shared similar aims as well as an open- source ethos: "KeyWorx aimed to enable developers to invent, develop, integrate and deploy applications with multi-user/multimedia features".[36] KeyWorx aimed to have wider applicability, targeting diverse creative and artistic communities that used the platform to create original performance works but also to publish and share media (especially real-time audio and video sharing).

Telematic performance

The spirit of internationalism projected by the Fluxus movement through works such as Nam June Paik's *Global Groove* (1973), a piece that aimed to offer "a glimpse of the video landscape of tomorrow",[37] was pertinent to all networked and telematic work, which aimed to bring together artists that were separated by physical and geographical boundaries. The work of artists Kit Galloway and Sherrie Rabinowitz was seminal in this eld. Galloway and Rabinowitz created *Satellite Arts Project* (SAP), "a space with no geographical boundaries", in 1977.[38] SAP, one of the rst telematic performances, used a live video satellite link to connect artists

33 See: *Wire re* of cial website, http://entropy8zuper.org/wire re/ (accessed October 20, 2012). 34 Angelina Voskopoulou, "A Brief History of VJing", 2007, http://avos.wordpress.com/a- brief-history-or-vjing/ (accessed August 5, 2009).

35 See: VisitorsStudio of cial website, www.visitorsstudio.org/?diff=-60 (accessed October 20, 2012). 36 See: Keyworx of cial website, www.keyworx.org/ (accessed October 20, 2012). 37 Nam June Paik, "Global Groove", 1973, www.medienkunstnetz.de/works/global-grove/ (accessed February 27, 2013).

38 Electronic Café International, "Telecollaborative Art Projects of ECI Founders Galloway and Rabinowitz, 1977 to Present," www.ecafe.com/getty/table.html#2 (accessed July 20, 2005).

performing in different places around the world. The objective of the project was to demonstrate for the rst time how artists based in distant physical locations could meet and perform together, in the same 'living image'.[39] The artists were looking to challenge the limitations imposed by physical boundaries (between countries and bodies) and initiate collaborative practices that would link like-minded people from around the globe.

"On a November evening in 1980 and for three consecutive evenings the unsuspecting public walking past the Lincoln Center for the Performing Arts in New York City and The Broadway department store in Century City, Los Angeles, had a surprising encounter with each other".[40] *Hole-in-Space* was one of the most celebrated pre-internet telematic installation/performance works or, as the artists themselves described it, a "public communication sculpture".[41] Suddenly, people walking past each of these places were confronted by life-sized, televised images of people on the opposite coast, who they could see and talk to. According to the artists "*Hole-in-Space* suddenly severed the distance between both cities and created an outrageous pedestrian intersection".[42] At rst people were surprised and intrigued; they tried to understand the phenomenon. Gradually they realised that they could arrange to telematically meet friends and relatives living on the opposite coast. Eventually, whole families would meet their distant loved ones through the 'hole', some of whom had not seen each other for several years.[43]

Galloway and Rabinowitz's experimentation with satellite technologies was funded by NASA and other councils and corporations – those were expensive technologies that very few could access. In the 1990s though the World Wide Web brought the possibility for telematic connectivity to much broader constituencies.[44] One of the most well-respected pioneers working in this eld is the New York-based Gertrude Stein Repertory Theatre (GSRT), founded in 1990 to "promote and support innovation in the performing arts."[45] GSRT explores the application of lm and internet technologies to live theatre practices. In Cheryl Faver's adaptation of Stein's *Doctor Faustus Lights the Lights* (1995) four actors on a physical stage in New York performed together with two actors based at the Paris Opera, while computer- generated gures of a boy and a dog joined the action.[46]

Steve Dixon suggests that telematic performance came of age in the late 1990s. Between 1999 and 2000 Dixon and Smith's Digital Performance Archive project recorded more telematic events than any other form of digital performance.[47] Telematic performance ourished in the dance technology eld in particular, as

the absence of textual narrative and the focus on movement and visuals made such explorations more intuitive. Notable examples of such practice are: New York-based

39 Kit Galloway and Sherrie Rabinowitz, *Satellite Arts Project*, 1977, ibid. 40 Kit Galloway and Sherrie Rabinowitz, *Hole-In-Space*, 1980, www.ecafe.com/getty/HIS/ (accessed July 6, 2009). 41 Ibid. 42 Ibid. 43 Ibid. 44 Steve Dixon with Barry Smith, *Digital Performance*, 420. 45 Gertrude Stein Repertory Theatre of cial website, www.gertstein.org/ (accessed February 27, 2013). 46 Steve Dixon with Barry Smith, *Digital Performance*, 421. 47 Ibid, 423.

group Troika Ranch, who in *The Electronic Disturbance* (1996) linked dancers and singers situated in remote geographical locations in an attempt to synthesise the corporeal and the electronic into a new 20th century body;[48] Houston-based company AlienNation that explored the performative potential of telepresence as well as connections between live performance, visual and digital arts, real time synthesis and electronic music;[49] and Melbourne-based Company in Space that aimed to "create dialogues between our visual, aural and kinetic perceptions".[50] Though telematics possibly favour experimentation within the eld of dance, there have also been several theatre projects that experiment with telematic connections, such as the UK-based Chameleons Group – in particular the piece *NetCongestion* (2000), an ambitious live, interactive webcast performance[51] – and Station House Opera with works such as *Live from Paradise* (2004-5) and *What's Wrong With The World?* (2008), among many others.[52]

Among the most important artists using telematics since the early 1990s is Paul Sermon, who has developed a series of celebrated telematic installation/performance projects, such as *Telematic Dreaming* (1992) and *Telematic Vision* (1993). Sermon was inspired to create *Telematic Dreaming* by Jean Baudrillard's essay *Xerox and In nity,* in which the writer discusses the celibacy of the 'Telematic Man' in front of his computer: the 'Telematic Man', argues Beaudrillard, does not ever target the Other, the interlocutor, but only the screen.[53] *Telematic Dreaming* invites two strangers who are not located in the same physical space to share a bed together – one as physical presence, the other as disembodied image.[54] According to Sermon:

The ability to exist outside of the users own space and time is created by an alarmingly real sense of touch that is enhanced by the context of the bed and caused by an acute shift of senses in the telematic space. [...] the body can travel at the speed of light and locate itself wherever it is interacting.[55]

48 Troika Ranch, "Works", www.troikaranch.org/vid-earlierWorks.html (accessed August 5, 2009). 49 AlienNation, "Mission Map", www.aliennationcompany.com/mission.htm (accessed August 5, 2009).

50 Company In Space, "Introduction", www.companyinspace.com/front/cis_fs.htm (accessed

August 5, 2009). 51 Steve Dixon, *Practice: Chameleons 3: "Net Congestion"*, www.robat.scl.net/content/ PaiPres/presencesite/html/dixchamel.html (accessed August 12, 2013).

52 See: Station House Opera of cial website, www.stationhouseopera.com/ (accessed August 5, 2009). 53 Jean Beaudrillard, "Le Xerox et L'In ni", 1987, www.egs.edu/faculty/baudrillard/ baudrillard-le-xerox-et-lin nity.html (accessed August 5, 2009). My translation.

54 Paul Sermon, "Telematic Dreaming – Statement", http://creativetechnology.salford.ac.uk/ paulsermon/dream/ (accessed August 5, 2009). 55 Ibid.

Conclusion

As is evident by this brief, selective historical overview, digital performance practices are diverse in the way they manifest themselves in virtual and physical spaces; distribute actions and participants across geographical boundaries; invite audience engagement, interaction and participation; and evolve through time alongside speedy and radical technological and social developments.

In my view, the genre is currently developing towards two main directions:

1. A great deal of practices and practitioners have moved towards virtual worlds. Those practices follow on the tradition of early online performances on MUDS, MOOs, and 2D graphical chat environments like The Palace. Entropy8Zuper!, for example, re-launched themselves in 2002 as Tale of Tales, a games design studio, and created among other works *The Endless Forest*: a virtual forest, which exists as a persistent world and a continuous live performance through its users who appear inworld as deer (the authors perform there too as Twin Gods).[56] Currently the most notable site for online performance in virtual worlds is Second Life (SL), launched by Linden Lab and American entrepreneur Philip Rosedale in 2003. Several groups have taken advantage of the creative opportunities presented by this virtual world, such as Second Front, who claim to be the rst group to create performances for SL. Founded in 2006, Second Front create "theatres of the absurd that challenge notions of virtual embodiment, online performance and the formation of virtual narrative".[57]

2. Another breakthrough in digital performance practices that unfold online has come through streaming media. As streaming platforms become more ubiquitous and embedded within our daily lives – with the use of Skype, VOIP and other internet telephony protocols to converse with family and friends that are often distributed around

the globe – several practitioners today use streaming media. Such examples are, among many others, France-based performer's Annie Abrahams's works,[58] and the BMW Tate Live: Performance Room series launched by Tate Modern (London). Tate Live is promoted as "a series of performances commissioned and conceived exclusively for the online space, and the rst artistic programme created purely for live web broadcast"[59] (which arguably is a false claim as demonstrated by this conference). Those performances are following on the long tradition of telematic art and performance, offering new approaches and new dramaturgies to telepresence and the shared space of the live screen.

I would like to close with a reference to Waterwheel, created by Suzon Fuks in 2011.[60] Waterwheel is a platform dedicated to performance and online collaboration rather than a persistent virtual world, and in that respect resembles UpStage and VisitorsStudio (which are also purpose built platforms) in attracting targeted audiences. Waterwheel is concerned with the water as a subject or metaphor. This thematic concern with a subject that is of major importance to the sustainability

56 See: *The Endless Forest* of cial website, http://tale-of-tales.com/TheEndlessForest/ (accessed October 20, 2012). 57 See: Second Front of cial website, www.secondfront.org/ (accessed October 20, 2012). 58 See: Annie Abrahams of cial website, http://bram.org/info/aa.htm (accessed October 20, 2012). 59 BMW Tate Live: Performance Room of cial website, www.tate.org.uk/whats-on/tate- modern/eventseries/bmw-tate-live-performance-room (accessed October 20, 2012). 60 See: Waterwheel of cial website, http://water-wheel.net/ (accessed October 20, 2012).

of life in the 21st century demonstrates the platform's social relevance, as it touches upon matters related to environmental science, political economy, human rights, equality and gender, as well as the artistic and aesthetic pursuits of digital performance and art. Waterwheel is a platform that aims to facilitate scienti c debate, bring together communities affected by water scarcity and stress, raise awareness about environmental and social issues related to water and the uneven distribution of resources, and bring together like-minded people who care about those issues. It also functions as a platform for artistic creation and experimentation with media and online performance practices, and it creates or facilitates digital performance events. Accessibility is a major concern for Suzon Fuks, as it has been for the creators of UpStage and VisitorsStudio, all of which are web-based platforms with limited technical speci cations.[61] This makes them widely accessible and particularly suited to projects that seek to connect countries and communities with limited access to infrastructure and resources, and restricted

connectivity.

Waterwheel, and other platforms that have evolved or are currently evolving towards a similar direction, bring welcome developments in the eld of online performance for two main reasons. Firstly, on a technical level, they represent hybrids that bring together different types of platforms as those existed in previous decades, combining a range of features: for example, Waterwheel's live video streaming facilities and sharing methods follow on the collaborative creativity traditions established by VisitorsStudio and KeyWorx, as they provide a space where like-minded people can publish, share and mix audiovisual content. On the other hand, the possibility for rst-person (embodied) action and narrative development follow on UpStage's 'theatrical' functions. The virtual environment of the Tap thus combines the capacity for live audiovisual mixing, rst person immersion (through avatar agency), and live videoconferencing facilities.[62] Secondly, in relation to content and approach, Waterwheel is the rst online performance platform to be concerned with a speci c area of interest, that is, water. The mission of previous tailor-made platforms VisitorsStudio, KeyWorx and UpStage was to facilitate collaborative creativity and experimentation, and to support the development of a new, emergent area of artistic practice. As open platforms, those projects depended on users to validate their cultural relevance through generating content, and

elected to remain open and devoid of pre-imposed thematic content or overarching narratives. Their role was crucial in providing tools for creative experimentation in the eld of online performance, and in inviting users to employ those for the development of new forms of creativity. Their contribution in establishing online performance as a valid and fruitful area of artistic practice cannot be underestimated. Emerging ten years later, Waterwheel does not have to concern itself with introducing formal categories and genres to new intermedial audiences; it does

not need to de ne a new area of practice. Today the widespread and casual use of both virtual worlds and videoconferencing services in our everyday lives, for the purposes of entertainment, communication, education and commerce, create a very different context for the launch of a new online performance platform: a context

in which audiences/participants are familiar with the technologies involved and

61 Persistent virtual worlds are better navigated through specialized graphics hardware. 62 There is a long and rich history of such practices. Dixon's book *Digital Performance* (2007) offers a succinct art historical overview.

engaged in practicing their effects (virtual selves, telepresence) in other areas of life.[63] Thus, Waterwheel enters the eld of online performance at a different stage within the genre's trajectory: though one might not be able to call this a mature eld of practice as yet, online performance has certainly moved on a great deal from the embryonic stage in which it found itself in the early 1990s.

In my view the proliferation of online performance practices today in virtual worlds, through videoconferencing, pervasive and mobile technologies, and through mainstream entertainment ventures, propagates the relevance of creative projects such as Waterwheel, UpStage, and the work of all artists, practitioners and scholars presenting in CyPosium. The range of practices and platforms that engage with digital and online performance is still as varied and diverse in 2012 as it ever was. Digital performance, cybertheaters, cyberformance or whatever you might want to call it, one thing is clear: the genre is alive and kicking in terms of creative outputs; it is becoming increasingly well established in its reach; and it continues to innovate in dramaturgical, aesthetic, conceptual and also social terms.