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Cybernetic-existentialism in interactive performance: strangers, *being-for-others* and autopoiesis

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ABSTRACT

A theory of *Cybernetic-Existentialism* is proposed and developed in relation to interactive performances that draw upon or encapsulate primary themes from the distinct but interrelated disciplines of cybernetics and Existentialist philosophy. Ideas from both fields are identified as converging in classic works across the history of interactive performance including by Kaprow, Beuys, Klüver, Abramović, and Galloway and Rabinowitz. Performance collectives Gob Squad and Blast Theory are discussed in detail and argued to exemplify the aesthetics of Cybernetic-Existentialism through their complex explorations of concepts proposed by cyberneticians including Wiener, Bateson, Maturana and Varela on communication and control, negative entropy and autopoiesis, and Existentialists such as Marcel, de Beauvoir and Sartre on 'separation with communion' [Marcel, Gabriel. 1995. *The Philosophy of Existentialism*, 39. Translated by Many Harari. New York: Carol], freedom, authenticity, the 'look' of the stranger [Sartre, Jean-Paul. (1943) 2003. *Being and Nothingness*, 364–376. Translated by Hazel Barnes. Abingdon, Oxon: Routledge Classics], and *being-for-others* [Sartre (1943) 2003, 245–452].

KEYWORDS

Existentialism; cybernetics; Jean-Paul Sartre; Gob Squad; Blast Theory; the other; being-for-others; autopoiesis

Introduction: toward a theory of *Cybernetic-Existentialism*

In Volume 12 (1) of this journal, I proposed a theory of 'Cybernetic-Existentialism' (2016), presenting an argument that ideas and philosophies from the distinct but interrelated fields of cybernetics and Existentialism were re-emerging strongly as central themes in contemporary arts and performance. That article focused on theater and I now turn attention to interactive performance in order to extend and reinforce the discourse through an analysis of case studies of works that foreground and fuse primary concerns within *both* cybernetics and Existentialism.

As we will see, many classic interactive works of the 1960s and 1970s correspond with such an analysis, as do the projects of two of the most original and influential European performance collectives: Gob Squad and Blast Theory. Recently, both have attracted wide and increasing critical attention, including a book on Blast Theory's collaborative projects with the Mixed Reality Laboratory (Benford and Giannachi 2011) and many academic papers (e.g. Gibbons 2014; Kwastek 2013; Sharp 2015; Spence, Frohlich, and Andrews 2013; Wilken 2014); and numerous journal articles on Gob Squad (e.g. Cornish 2015;

Goeyens 2015; Shaw 2010; Tecklenburg 2012; Woolf 2011; Zaiontz 2015). Both companies have consistently drawn on concepts from cybernetics and Existentialism, and closely combined and interwoven them in interactive works.

This includes the construction of adaptive cybernetic environments and autonomous systems that are employed to explore the issue of human freedom, which is an overriding focus in Existentialism. Gob Squad's celebration of identity exploration and personal liberation in Andy Warhol's 'Factory' and the counter-cultural 1960s in *Gob Squad's Kitchen (You've Never Had It So Good)* (2007) is intoxicating and positive, while Blast Theory's *Kidnap* (1998) presents a darker exploration of the denial of freedom through captivity. These groups employ cybernetic feedback loops, circular dynamics and mixed reality systems to confront audiences with intense experiences including evocations of *existential crises* and revelatory encounters with strangers. Gob Squad and Blast Theory evoke vividly Existentialist ideas of authenticity, *being-for-others* and the objectifying 'look' while presenting their audiences with parallel worlds to navigate through, and interactive structures that accord with cybernetic concerns for circularity, communication and control, pattern and order, and negative entropy.

The two fields have their own concepts, insights and overarching themes, some distinct and some that closely overlap: for example, while Existentialism highlights personal freedom and our ability to continually re-invent and re-create ourselves, cybernetics seeks to create systems and environments that have the freedom to be flexible, adaptive, or *autopoietic* (self-creating or self-regulating). Autopoiesis relies upon both a unity and a circularity, as in the human nervous system, which triggers and prompts the spontaneous production of actions (such as reaching out your hands for protection during a fall) or products (such as nucleic acids or adrenalin) to correct and regulate the system or organism: 'It is the circularity of its organization that makes a living system a unit of interactions, and it is this circularity that it must maintain in order to remain a living system and to retain its identity through different interactions' (Maturana and Varela [1972] 1980, 9). Such principles are also central to the field of interactive arts. *Cybernetic Serendipity* (1968), a landmark exhibition, marked a defining moment in cybernetic arts and excited public interest in the wider field of interactive arts at precisely the same time Existentialism was reaching new heights of popularity in Europe. However, the influence of both our two fields of discussion diminished soon after, just as they had developed and risen to public prominence.

Both emerged as distinct disciplines in the 1940s, matured through the 1950s, achieved widespread popularity in the 1960s and waned in the 1970s. Existentialism's calls to assert freedom by actively resisting rules and social conformity had captured the counter-cultural imagination and become a rallying cry in the late 1960s, but lost its fervor and relevance in the more politically conservative times that followed. Meanwhile, cybernetics' appeal as a visionary new form of universal science uniting the physical and social sciences was overtaken by new ideas, emphases and semantics following the advent of the information age, when

the rich discourse of cybernetics and information theory was flattened in the utopian information narrative. The basic analogy of cybernetics – that all organisms use information-feedback paths to adapt to their environment – is reduced to the adjective *cyber*. The scientific concept of information is reduced to digitized data. (Kline 2015, 7)

In the 1990s, posthuman theory would further remediate the ideas of cybernetics and recast them in another name, with the preeminent book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999) being explicit about its centrality. N. Katherine Hayles had spent six years in preparation researching its history and ‘grappling with technical articles in cybernetics, information theory, autopoiesis, computer simulation, and cognitive science’ (1999, 2). But posthuman theories have added and accumulated their own emphases, idiosyncrasies and generalities, and I contend that a return to considering contemporary arts in relation to cybernetics may make for new and illuminating analyses using a far less broad and more incisive brush. Equally, a reconsideration of recent artworks and performances in relation to the particularities of Existentialist philosophy offers specific, valuable and revealing insights that do not come to light in analyses viewed through the more common critical lenses of wider phenomenology, of which Existentialism is one ‘branch’, and post-structuralism, which in turn has its roots in, and evolved out of Existentialism (Reynolds 2006).

Cybernetics meets existentialism – ‘new thinks not new things’

Many classic works in the history of interactive performance offer themselves up for a cybernetic-Existentialist reading, including Allan Kaprow’s first Happenings in the early 1960s and Joseph Beuys’ interactions in a cage with a coyote (*I Like America and America Likes Me*, 1974), which both employ circular causality and evolving cybernetic environments while playing out the Existentialists’ call to privilege freedom and ‘authentic actions’ above anything else. Nam June Paik, the most influential media artist of the 1960s, wrote an artistic manifesto relating cybernetics to new art processes, which included an eternally upbeat mantra for interactive artists: ‘we are in open circuits’ ([1966] 2015, 64). In a later manifesto, ‘Art and Satellite’ (1984) he ruminated on conjoining artists from remote locations, saying that the key issue is not to discover ‘new THINGS but ... new RELATIONSHIPS between things already existing’, to create what he called: ‘new thinks ... not new things’ (1984, 45).

In pioneering pre-Internet networked experiments such as *Telex Q & A* (1971) Billy Klüver and collaborators linked telex machines around the world and posed existential questions about the future (specifically 1981) to local participants: ‘Will people seek greater or less contact? To what degree will sex roles be interchangeable? Will world culture become more or less homogenous? Will pot replace alcohol? Will people be generous? What will people think about in 1981? What would be the aspiration of man?’ Klüver noted the cultural diversity of the responses circulating through the interactive system: ‘The Indians were very theoretical ... the Japanese were extremely positive’ (Obrist 1998). Kit Galloway and Sherrie Rabinowitz’s *Hole in Space* (1980) used NASA funding and the most complex technological systems of the time to cybernetically – and seemingly magically – connect people in real time and allow them intimate and (technologically) embodied encounters with strangers thousands of miles away. Video satellites linked large video screens in New York and Los Angeles, enabling passers-by to see, hear and talk to one another. Strangers struck up relationships and made a date to return to see each other the next day, while family members and friends in the two cities arranged times to meet and re-establish contact across what the artists called in its subtitle ‘A Public Communication Sculpture’.

Cybernetic principles are not confined to technologically based systems, but apply to any mechanism or paradigm that affects progressive changes within an environment, or manifests adaptive or autopoietic behaviors. Thus, many important non-technologically mediated interactive performances can be categorized as Cybernetic-Existentialist, such as Marina Abramović's *Rhythm 0* (1974). Over six hours, audience members famously adapted not only the elaborate environment of props that Abramović had assembled, but also the artist herself, who remained passive throughout. This included physically stripping her, pointing a loaded gun at her, cutting her with knives and drinking her blood, in what was an intense and visceral experience of existential 'authenticity', *being-for-others* and *being-toward-death*. These concepts are central to Existentialist philosophy, as we will explore, and can be seen to recur in a range of interactive artworks that also employ systems or environments that operate according to cybernetic principles such as feedback-loops, order-disorder relations, communication and control mechanisms, and autopoiesis.

Searching for existential 'essences' – the work of Gob Squad

Before the audience takes their seats, the performers of UK/German collective Gob Squad take them onstage for a 'backstage tour' of the set for their interactive, multimedia theater performance *Gob Squad's Kitchen (You've Never Had It So Good)* (2007). There are three rooms, where three of Andy Warhol's films from the 1960s will be recreated: Stage Right, a bedroom (*Sleep* 1963); in the center, a kitchen (*Kitchen* 1965); and Stage Left, a bare space with a chair (*Screen Tests*, 1964–1966). Each room has a video camera linked to one of three large screens at the front of the stage, and later the performers will go into the audience to coax volunteers to take part and have their 15 minutes of fame, becoming the live 'stars' of each film.

The performance itself begins with a projected 1960s-style black and white film leader-tape, with a descending number 'countdown', which gives way to a black and white live-video feed of the scene taking place in the hidden Kitchen stage set behind. One of the performers, Simon, steps forward to address the camera in Close-Up: 'Hello. Thank you for coming and welcome to Gob Squad's "Factory". It's 1965 and it's New York. This film – that we're in – is the essence of its time.' By the end of performance, Simon and the other three performers are replaced onstage entirely by audience members, who wear headphones and receive whispered instructions and their lines of dialogue to deliver on stage, from the actors who now sit in the audience: 'Hi, my name's Simon, and I'm playing Simon, in the film "Kitchen" by Andy Warhol' says one audience participant. The show ends with another coming forward to camera to repeat the earlier idea, saying: 'We are the beginning, we are the essence of our time.'

Phenomenology is 'a search for essences' (Reynolds 2006, 12) and essence lies at the heart of Jean-Paul Sartre's most quoted dictum: 'existence precedes essence' ([1943] 1994, 25). His philosophy dramatically converts Descartes' 'I think, therefore I am' into 'I am, therefore I act' by insisting that existence and Being *just is*, and precedes everything, since we are simply, as Heidegger puts it, 'thrown' into the world. We have no self, predestination, soul or universal 'essence', but are rather blank canvases who must determine our own identity and destination – and thereby define our individual 'essence' – through our authentic, concrete actions and lived experience.

Hegel stresses the need to treat and take 'each moment to be an abiding essentiality' (1979, 317) and Heidegger relates 'authenticity' to the assertion of unique individuality, discussing 'ownness', 'ownership' and 'mineness', and our potential to become 'whole'. The Existentialists' vision of authenticity went far beyond its everyday meanings:

For them, the notion of authenticity expresses, among other things, revolt against the traditional concept of truth and the ideal of sincerity derived from it. ... This is, in fact, the heart of the existentialist revolution: the eclipse of 'truth' by 'truthfulness', the transition from objective sincerity to personal authenticity. ... authenticity requires an incessant movement of becoming, self-transcendence and self-creation. (Golomb 1995, 8–9)

In the 1960s, Warhol and his associates at the Factory (as well as others within the 'revolutionary' counter-culture of the time) can be considered to have taken that route with existential gusto, rejecting societal norms and experimenting *in extremis* across new terrains of art, sexuality, drugs and socio-politics in the search for authenticity, and the construction of their particular identities and essences.

The quest for authenticity – 'the real me, the real you'

Gob Squad go through similar motions in what they themselves describe as: 'A quest for the original, the authentic, the here and now, the real me, the real you' (2014). They do so with intoxicatingly wild enthusiasm, deadpan wit and tender parody, making messianic speeches, snorting lines of instant coffee, and gyrating lewdly on the kitchen table; 'In the Factory, people were self-expressionist ... defining new boundaries, breaking the rules' shouts one of them. At the same time, the *mise-en-scène* and the performance



Figure 1. Gob Squad's *Kitchen (You've Never Had It So Good)* (2007). Photo: © David Baltzer/bildbuehne.de.

structure operate according to the principles of a responsive, recursive and autonomous interactive cybernetic organism (Figures 1–4).

The live events are mainly hidden behind large media screens, but relayed through three closed circuit cameras, and random audience members are recruited to join, adapt and refresh the system as they re-enact Warhol's anthropological-style films. *The New York Times* reviewer describes it as 'a live magic act of sorts, and one of the most enjoyable such feats I've ever seen at the theater. ... [It] excites in us a startled appreciation of the beauty in the present moment, which is among the most gratifying things good theater can do' (Isherwood 2012).

Academics have equally presented discourses on the show that one can readily align with a Cybernetic-Existentialist perspective. Patrick Primavesi's analysis evokes (though perhaps unconsciously) cybernetic ideas of interactivity, testing boundaries and send-and-receive circuits, while simultaneously conjuring Existentialist paradigms: thresholds of presence; 'isolation in exposure' (Primavesi 2009, 98); and Sartre's famous discourse on the voyeur. Sartre recounts how the self-perception of someone caught in the act of looking through a keyhole transforms abruptly from in-control *subject* to guilt-ridden *object*. Primavesi discusses the audience participants'



Figure 2. *Gob Squad's Kitchen (You've Never Had It So Good)* (2007). Photo: © David Baltzer/bildbuehne.de.



Figure 3. *Gob Squad's Kitchen (You've Never Had It So Good)* (2007). Photo: © David Baltzer/ bildbuehne.de.

possibility of taking a step behind the screen *into* the film ... [to] join the actors as ghosts in the machine, the phantasmatic sphere of the *in-between* – on the threshold between sender and receiver ... *liveness* is demonstrated as fake, *participation* as a process of isolation in



Figure 4. *Gob Squad's Kitchen (You've Never Had It So Good)* (2007). Photo: © David Baltzer/ bildbuehne.de.

exposure ... there is no way out of the circle of representation towards a pure, unmediated presence. Gob Squad's attempt to expose actors and audiences test those boundaries and challenge our roles as voyeurs, witnesses and participants. (Primavesi 2009, 97–105)

Gob Squad thus act out many of Existentialism's core themes: taking their audience into ghostly territories of Sartrean *Nothingness* (Sartre [1943] 2003); revealing notions of the inauthentic and 'fake'; demonstrating Sartre's insistence that 'an image ... is nothing but a relation' (Elpidrou 2011, 18); and evoking Gabriel Marcel's idea of 'separation with communion' (1995, 39) through what Primavesi terms 'isolation in exposure' (Primavesi 2009, 98). Marcel and Sartre discuss our simultaneous feelings of isolation yet yearnings for intimate relationships; and how 'intersubjectivity assumes a communion ... a unity. It designates a subjectivity that is made up of all subjectivities and it thus assumes all subjectivities in relation to the others – at once separated in the same way and united in the other' (Sartre 2002, 291).

Linking voyeurism and solipsism to second-wave cybernetics

In Gob Squad's six-hour durational performance *What Are You Looking At?* (1998), voyeurism, isolation and existential 'separation with communion' are even more vividly played out with the actors working inside a box constructed of two-way funhouse-style 'crazy' mirror walls. They see only their own reflections, and not the audience members who stand and walk around the perimeter, watching them through the glass. Every half hour, a lighting change briefly cancels the internal mirror effect and brings performers and audience face-to-face for moments of 'communion'; and at the performance's conclusion another lighting change reverses the entire paradigm by reflecting the audience on the external walls so that they are 'confronted by their own voyeurism' (Tecklenburg 2012, 19). The construction is a dynamic system that incorporates a performer-audience telephone link, with the first participant to answer the performers' call being brought inside the box. It is notable that Nina Tecklenburg's analysis employs explicitly Existentialist vocabulary:

The effect was astounding: What the performers had attempted to show through their stylized self-presentation of authenticity and everydayness was achieved much more convincingly by spectators. Particularly in the artificial context of the box, individual spectators seemed all the more 'authentic' in relation to the 'artificial' Gob Squad performers. ... The fourth walls that Gob Squad still breaks through are always already doubled. ... this is Gob Squad's pleasurable politics and existential poetry. ... [In] Gob Squad's affirmative guerrilla theatre ... alienation and melancholy can also stand beside spectacle, empathy, and enthusiastic engagement. (2012, 18, 19, 32)

To return to Primavesi's analysis of *Gob Squad's Kitchen*, his reference to 'our roles as voyeurs, witnesses and participants' (Primavesi 2009, 105) is of primary importance to both Existentialism and cybernetics. Sartre's discourse on the voyeur is used to offer proof of the existence of Others, since when caught in the act, the voyeur's shame would be incomprehensible were the Other not also a subject: 'being seen by the other is the truth of seeing the other' (Sartre [1943] 1994, 257). Sartre argues that being confronted by 'the look' of a stranger prompts a revelation of our purely relational aspect to the world and to Others. This is because the stranger has the power to judge us, make us apprehend ourselves, potentially challenge our freedom, and render us as

objects: 'pure shame is not a feeling of being this or that guilty object, but in general of being an object' ([1943] 1994, 288).

There is an uncanny parallel within cybernetics when 'our roles as voyeurs, witnesses and participants' prompted the move to so-called 'second order' cybernetics following consideration by Heinz Von Foerster that ran directly along Sartrean lines. The objectifying *look* provided philosophical proof both of the Other and of oneself and had 'a foundational role in Sartre's attempt to provide phenomenological evidence of other people and to deny solipsism' (Reynolds 2006, 97). In taking cybernetics to its second wave and putting the observer within, rather than outside, the system, Von Foerster used the same philosophical thinking and, 'rebelling against the closed information loops of primitive cybernetics, literally turns reality inside out, moving from "reflexivity to self-organization," from the "hyphen to the splice"' (Kroker 2012, 96). It is one of many examples of how the two fields share parallel concerns and trajectories, and of the aptness of considering artworks and performances in relation to their dual perspectives. Von Foerster's essay collection *Observing Systems* (1981) explores what Hayles calls his

thinking about reflexivity as a circular dynamic that can be used to solve the problem of solipsism. How does he know people exist, he asks. 'If I assume that I am the sole reality, it turns out that I am in the imagination of somebody else, who in turn assumes that *he* is the sole reality.' In a circle of intersecting solipsisms, I use my imagination to conceive of someone else and then of the imagination of that person, in which I find myself reflected. Thus I am reassured not only of the other person's existence but of my own as well. (Hayles 1999, 133)

Both cybernetics and Existentialism thus share a concern to 'solve the problem of solipsism' (Hayles 1999, 133). While Von Foerster's answer was to place the observer into the system itself and thus render the subject an 'object' within it, the Existentialists adopted an equivalent strategy by re-casting themselves as objects and as the Other. In a 200-page section of his book *Being and Nothingness* (1943) entitled *Being-For-Others*, Sartre discusses 'the reef of solipsism' and declares dramatically that: '*I am for others*, the Other is revealed to me as the subject for whom I am an object' ([1943] 2003, 375, original emphasis).

Blast theory – seeking cybernetic epiphanies with strangers

Sartre recounts this understanding of what he terms our '*being-as-object for the Other*' ([1943] 2003, 364) in relation to the look of a stranger or the 'Other' which in turn apprehends us to the fact that to them we are also the 'Other': 'With the appearance of the Other's look I experience the revelation of my being-as-object ... [and] A me-as-object is revealed to me as an unknowable being, as the flight into an Other' (375). At that moment, our absolute, 'pure contingency' and 'the relativity of my senses' in relation to other people is revealed, together with 'the absolute flow of *my* world toward the Other' (376). Thus, genuine communion with people including strangers is afforded great importance, since crucially we can also *return the look* (Figure 5).

Blast Theory's spokesperson Matt Adams speaks like a 'die-hard' Existentialist when he describes how his arts collective is 'looking for ways in which you can have moments of epiphany with a stranger. It is rare that you have an interesting engagement with strangers, but when it happens, it is a thrilling moment!' (Chatzichristodoulou 2009, 113) Blast Theory's approach to intimate audience interactions shares much in common with



Figure 5. Gob Squad's *What Are You Looking At?* (1998). Photo: Courtesy of Gob Squad ©.

Gob Squad, who have equally discussed their work in terms of meaningful existential encounters with strangers: 'Faith makes it possible to take a stranger by the hand, see a hero in a passerby and ultimately in doing so, make a utopia possible, if only for a split second' (Gob Squad 2010, 112).

For decades, Blast Theory has been among the most original practitioners of artistic Cybernetic-Existentialism, crafting intensely existential encounters with strangers through the employment of a range of technological and mixed reality cybernetic systems, utilizing game-based structures and locative media, and often developing customized applications. As a participant in *Uncle Roy All Around You* (2004), you are divested of all possessions – bags, phones, money – and everything in your pockets. You are then put out alone on the streets with only a palm computer through which you are contacted by the cryptic Uncle Roy as well as other online audience participants who attempt to help (and sometimes hinder) your journey through the city streets to find the said Uncle before the time is up and it's 'Game Over'. As I have discussed in *Digital Performance* (2007), my personal experience of this cybernetic 'computer game' was highly existential, including getting lost and fearing being mugged, and nearly (really) being hit by a car when hurrying across a street in the race against time (Dixon and Smith 2007, 663–669).

If you 'win' the game, the piece climaxes with the appearance of a chauffeur-driven stretched limousine containing a rather sinister man who beckons you inside. From the intense virtuality of the computer game you have been playing solo for an hour, this *deus ex machina* presents an unnerving and uncanny sense of what Sartre calls the revelatory 'shock of the encounter with the Other' ([1943] 2003, 371). As you drive off together,

he gives you *the look* and asks you all about strangers – whether you would trust one and whether you would help one – and he persuades you to make a commitment to support a real stranger for a year. You do this by correspondence, firstly by sending a postcard through the mail, and thereafter online and, if you wish, by meeting face-to-face.

Being-for-others and the extremes of interactive philosophies

This is an unusually forceful commitment to *being-for-others* to emerge from an artwork, and brings to mind the principles of openness, communal being and ‘creative fidelity’ in the ethical philosophy of the Christian Existentialist Gabriel Marcel. During and following the First World War, Marcel worked tirelessly for four years for the French Red Cross, in particular contacting and supporting families of men missing in action, which opened him to what he called ‘a boundless compassion for the distress to which each day testified anew’ (Marcel 1984, 20). Where Heidegger discussed *being-with-others* (*Mitsein*) ([1927] 1962), Sartre conceived what he considered a new ontology by changing the emphasis to the third-person perspective, *being-for others* ([1943] 2003, 245–452), and Marcel extended this further to a philosophy of what he called *disponibilité* (1951). This involves privileging other people and putting oneself at their disposal, remaining available, ‘open and exposed’ (Marcel 1951b, 145), and (as in cybernetics) totally adaptable in relation to other people and the environmental context (Figures 6 and 7).

Other Existentialist writers took *being-for-others* even further still, and in *Totality and Infinity* (1961) Emmanuel Levinas took the relationship of Self with Other to new heights, and ‘turned philosophy around entirely so that these relationships were the *foundation* of our existence, not an extension of it’ (Bakewell 2016, 197, original emphasis). Most extreme of all was the ethical Existentialist philosopher Simone Weil, who decided that since many people could not afford to sleep in beds nor to eat, neither would she, so she slept on the floor and almost entirely starved herself for several years before dying of heart failure in 1943 at the age of 34.



Figure 6. The arrival of a chauffeur-driven stranger in a stretch limousine is the *deus ex machina* climax to Blast Theory's *Uncle Roy All Around You* (2004). Photo: Courtesy of Blast Theory ©.

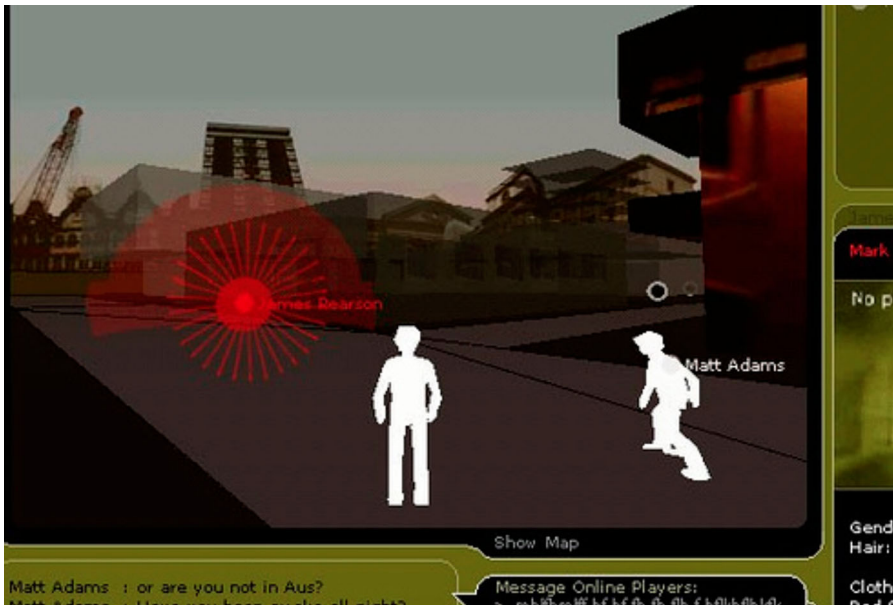


Figure 7. An online player's point of view of Blast Theory's *Uncle Roy All Around You* (2004). Photo: Courtesy of Blast Theory ©.

Susan Sontag has reflected eloquently on Weil's simultaneously 'noble and ridiculous' willingness to sacrifice herself for her 'truths', calling her 'one of the most uncompromising and troubling witnesses to the modern travail of the spirit' (1963). Sontag places her alongside a number of authors linked to Existentialism in describing how 'such writers as Kierkegaard, Nietzsche, Dostoyevsky, Kafka ... Genet – and Simone Weil – have their authority with us because of their air of unhealthiness. Their unhealthiness is their soundness, and is what carries conviction' (Sontag 1963). As those writers' works attest in vivid and diverse ways, encounters with, empathy or alienation toward, and fear of Others constitute a distinguishing feature, and a sometimes obsessive theme in Existentialist texts, both literary and philosophical.

Following a revelation of our existential *being-for-others*, the cybernetic system of *Uncle Roy All Around You* that began as an afternoon art-game journeying through city streets with a palm computer in the company of online interactants, evolves into a new system of real-world feedback loops and recursive encounters with an actual stranger for the period of a year. As Matt Adams puts it, the group's 'artistic enterprise ... is about accepting the full complexity and confusion of our existence, and trying to represent these enormously ineffable issues ... [that] always hover outside of our understanding' (Chatzichristodoulou 2009, 115).

The communication and control systems of freedom

Some years earlier in *Kidnap* (1998), Blast Theory had famously asked their online audience once again to trust a stranger, and to allow themselves to be held in captivity. They thus

played, in a very real sense, with one of the foundations of Existentialism – human freedom. As Simone de Beauvoir puts it: ‘Freedom is the source from which all significations and all values spring. The man who seeks to justify his life must want freedom itself absolutely and above everything else’ ([1947] 2000, 283).

Many people willingly volunteered and signed up online to undertake the *Kidnap* ordeal, but no one was told they had been chosen. But one day, without warning, two of them were snatched, bags were placed over their heads, and they were taken to a safe house where they remained prisoners for two days. A webcam relayed the events online, including the kidnappers feeding the blindfolded victims, taking them to the toilet and waiting outside, and washing their hands; ‘an extremely intimate interaction’ (Chatzichristodoulou 2009, 112). Like in *Uncle Roy*, the participants commit themselves to an intense form of Existentialist *being-for-others*, and an extreme system of ‘control and communication’ – the term used by Norbert Wiener as the subtitle for his 1948 book which announced the birth of the discipline: *Cybernetics, or Control and Communication in the Animal and the Machine*. This has drawn sharp criticism from commentators such as Marc Tuters who suggests that *Kidnap* represents ‘an unwelcome substitution of military logic over the “real” world’ (Benford and Giannachi 2011, 7).

The victims revealed later that they were truly upset by the emotional intensity of the experience, and not knowing what might happen and what the limits were. In these terms, both the participants’ existential experience and the ‘second order’ cybernetic system of which they were a centrifugal part went way beyond all the normal expectations of an artwork, and this is a telling indicator of the powerful and uncompromising impulses underlying artistic manifestations of Cybernetic-Existentialism.

Roy Ascott argues that cybernetic artists’ primary focus is the trigger effects they induce and the behavior they provoke ‘in the spectator and in society at large ... the art of our time tends towards the development of a cybernetic vision, in which feedback, dialogue and involvement in some creative interplay at deep levels of experience are paramount’ (Ascott 1968, 107). Of course, the self-same concerns for dialogic interplays within ‘deep levels of experience’ also lie at the heart of our other field of discussion, where ‘intensity rather than serenity is the existentialist goal’ (Foley 2010, 36). Matt Adams stresses that ‘Our projects are not hollow intellectual and aesthetic experiments, they are pieces of work that look to engage with, and ask particular questions about, the culture in which we live. If you take *Kidnap* as an example, the question we set ourselves was: why do so many of us give up control so readily to others and what is the pleasure in that?’ (Chatzichristodoulou 2009, 110).

Both cybernetics and Existentialism provide their own answers to the question: human control is yielded willingly as part of an evangelical faith in the self-regulating, evolving organism in cybernetics; and master-slave (Nietzsche) and sado-masochist (Sartre) dialectics have been widely discussed within Existentialism in terms of direct responses to issues of power, subjectivity and our simultaneously pleasurable and problematic relationship with the Other.

Sartre emphasizes that our freedom still remains even in the most unbearable situations such as imprisonment or torture, since we still have clear and free choices, such as whether to absolve or confront our tormentors, and whether to accept and submit to, or willfully resist our pain. Sartre’s philosophy was strongly influenced by his experiences during World War II in occupied France, including his time incarcerated as a Prisoner-of-War

(where he first read Heidegger's *Being and Time* (1927)) and his subsequent involvement in the Resistance, which in many ways formulated his distinctive appreciation and idiosyncratic take on freedom:

We were never more free than under the Nazi Occupation. We had lost all our rights, beginning with the right to speak. ... And because of all this we were free: precisely because the Nazi poison was seeping into our thoughts. Every true thought was a victory. ... The choice that each of us made of his life and his being was a genuine choice because it was made in the presence of death ... Everyone of us who knew the truth about the Resistance asked himself anxiously 'If they torture me, shall I be able to keep silent?' Thus the basic question of freedom was set before us; and we were brought to the point of the deepest knowledge a man can have of himself. The secret of a man is not his Oedipus complex or his inferiority complex; it is the limit of his own freedom; his capacity for standing up to torture and death. (Sartre 1949, 11)

It is also interesting to reflect on the ways in which the processes that Blast Theory devised, and in particular the strict rules and absolute sense of order that they imposed on the *Kidnap* captives, equate directly with ideas within *systems theory*. In *The Cybernetics Moment* (2016), Ronald R. Kline relates how the investigation of 'the nature of pattern and order' was a key innovation of one of cybernetics' most interdisciplinary pioneers, Gregory Bateson, who illustrated 'how radically cybernetics and information theory could be transformed when applied to subjects as diverse as New Guinea headhunters, schizophrenic patients, alcoholism and religion' (Kline 2015, 148). In the 1950s, Bateson argued that Norbert Wiener's idea of equating information with negative entropy 'marks the greatest single shift in human thinking since the days of Plato and Aristotle, because it unites the natural and social sciences and finally resolves the problem of teleology and the body-mind dichotomy' (Kline 2015, 148).

Negative entropy and the existential crisis

Within cybernetic understandings, *Kidnap* evokes a type of negative entropy by firstly staging entropy in the form of an act of apparently destructive randomness and disorder (the kidnapping), but then reversing this to impose a highly formal system based on transparent communication (via the webcam), strict rules of engagement, pattern and orderliness. This correlates with the quest for negative entropy-inducing mechanisms that Bateson and Wiener saw as a crucial cybernetic concern, whereby the natural tendencies of nature and the universe toward an entropy marked by randomness and instability (e.g. the unpredictable behavior of molecules when they become heated) is instead transformed into a coherent and orderly pattern of behavior through the process of negative entropy. Amidst the existential *Angst* and chaos of a kidnapping, a self-corrective cybernetic model is applied to establish a stable and ordered ecosystem (Figures 8 and 9).

This works toward another of Bateson's concerns, for 'somatic homeostasis' where 'self-correcting or buffering mechanisms operate to hold constant' different elements or structures (Bateson 1972, 357). Within interdisciplinary cybernetics, these can range from 'natural selection' and the chemical composition of materials to the politics and economics of human societies. Somatic adjustment and homeostasis can be achieved through mechanisms or ecosystems that simultaneously exercise (and discriminate between) *flexibility* at the individual, local or micro level and *variability* at the macro level (Bateson 1972, 357–



Figure 8. Blast Theory's *Kidnap* (1998). Photo: Courtesy of Blast Theory ©.

358). The former operates in an additive manner, the latter in a multiplicative one, and thus:

Its mathematics will resemble that of information theory or negative entropy ... there would seem to be a difference between the economic system of the individual, whose budgetary problems are additive (or subtractive) and those of society at large, where the overall distribution or flow of wealth is governed by complex (and perhaps imperfect) homeostatic systems. (Bateson 1972, 358)

This type of cybernetically inflected world, and a prevailing worldview that juggles and distinguishes between the individual and the governing meta-system above it (which is also a core Existentialist concern in relation to asserting personal freedom through sociopolitical non-conformism), is created time and time again in the work of Blast Theory. In *Day of the Figurines* (2006, with the Mixed Reality Laboratory), it is literalized in a kind of online massively multiplayer soap opera board game. An interactive narrative is developed and played out through a combination of players' SMS text messages and a physical representation of the story enacted using tiny and exquisite plastic figurines which are moved around a model town: each of up to 1000 players are represented by their own figurine,



Figure 9. Blast Theory's *Kidnap* (1998). Photo: Courtesy of Blast Theory ©.

modeled by the artists according to the biographies and physical characteristics the players invent for them. Over the course of 24 days – each correlating to one hour of a single day in the course of the town’s narrative – an absurd and increasingly apocalyptic series of events unfolds.

Existentialist concerns for freedom and self-determination are explicit in Blast Theory’s website description: ‘It invites players to establish their own codes of behaviour and morality within a parallel world ... defining themselves through their interactions’, while life’s absurdity and the classic existential crisis is also highlighted: ‘*Day of the Figurines* invites players to think about and discuss their reason for being there.’ At the same time, the game exists within an autonomous and ever-changing cybernetic world of circular causality and feedback loops where, for example, ‘players’ health deteriorates through interactions with the environment’ which ‘uses emergent behaviour and social dynamics as a means of structuring a live event’ (Blast Theory 2012).

Day of the Figures thus dramatizes an interactive world in miniature that catapults the player/character into the heart of a quintessential existential crisis. Crucially, the drama being played out involves, like life, a series of cybernetic feedback loops where certain acts are decisively made by the characters, but other acts simply and unavoidably befall them. ‘Man is not a thing, but a drama’ (MacDonald 2000, 108) wrote the Spanish Existentialist philosopher José Ortega, who agreed with Sartre’s vision that we are entirely free to choose our particular paths, but less so with his confidence that we can always counter and overcome *facticity*, including our histories, circumstances and environment. Rather for Ortega, our being is intimately subject to events happening around us and to us:

Man is what has happened to him, what he has done ... a relentless trajectory of experiences that he carries on his back as the vagabond his bundle of all he possesses. Man is a substantial emigrant on a pilgrimage of being, and it is accordingly meaningless to set limits on what he is capable of being. ... [There is] only one limit: the past. The experiments already made with life narrow man’s future. ... Man lives in view of the past. *Man, in a word, has no nature; what he has is ... history.* (Ortega 2000, 136, original emphasis)

While the players have some meaningful interactive agency that affects the narrative, their actual ‘affordances’ are relatively limited. A term coined by James J. Gibson to denote the range of latent possibilities open to inter-actors to directly affect their environment, the ‘Theory of Affordances’ (1977) was further developed in relation to human-computer interaction design by Donald Norman (1988). Like much of Blast Theory’s interactive work, *Day of the Figurines* offers the user some significant affordances in terms of a dynamic ‘three-way relationship between the environment, the organism and an activity’ (Dourish 2001, 118 in Benford and Giannachi 2011, 122), yet the major plotlines remain predestined, and emphasize Ortega’s notion that who we are is dependent not only on what we do, but on what happens to us.

All this takes place within a miniature model of a classically adaptive cybernetic society, which continually evolves in relation to user-interaction and the particularities of the tripartite affordances of ‘environment, organism and activity’ that the artists have conceived and enabled. While this particular world projects a narrative of intensifying danger, chaos and entropy, the superstructure of this ‘deliberately slow mixed reality performance’ (Benford and Giannachi 2011, 71) nonetheless equates with the type of flexible and ‘healthy ecology of human civilization’ that Gregory Bateson advocates: ‘A single system

of *environment combined with high human civilization* in which the flexibility of the civilization shall match that of the environment to create an ongoing complex system, opened for slow change of even basic (hard-programmed) characteristics' (1972, 502).

Conclusion: transcendent interactions

In Existentialism, a crucial part of 'the life continuum' is *transcendence*. This does not equate with a type of religious experience, like the Buddhist notion of reaching Nirvana, but denotes a different form of 'ascension' marked by personal transformation and realization (Nietzsche), leaps of faith and acts of authenticity (Kierkegaard), standing apart from the *herd* (*das Man*) and the 'groundlessness and nullity of inauthentic everydayness' (Heidegger [1927] 1962, 223) and 'self-transcendence' through freeing oneself from the *facticity* of the past, social conditioning and moral conformity (Sartre). Cybernetics, from its origins in the 1940s to its current iterations in complexity theory, posthuman philosophy and technoscience, has envisioned its own transcendent dreams of reaching above and beyond the everyday world: from new autopoietic organisms (Maturano, Varela) and advanced ecologies (Bateson) to man-machine symbioses (Moravec, Warwick) (Figures 10–12).

The interactive performances we have discussed draw from and reverberate with these potent impulses, combining the philosophies and practices of cybernetics and Existentialism to produce experiences that transcend the normative and everyday, and hint at new perceptions, potentials, ecosystems and interrelationships with the world. While both fields have faded largely from view, or else transformed into new ideas and discourses, their re-evaluation in relation to developments in contemporary arts is not only pertinent, but also prescient. Indeed, as we have seen, artists and academics alike are now routinely articulating such practices with reference to the central ideas and vocabularies of



Figure 10. Blast Theory's *Day of the Figurines* (2006). Photo: Courtesy of Blast Theory ©.



Figure 11. Blast Theory's *Day of the Figurines* (2006). Photo: Courtesy of Blast Theory ©.

cybernetics and Existentialism, though perhaps unwittingly or unconsciously, and rarely speaking their name.

For example, the discourses of one the leading commentators on Blast Theory's work, Gabriella Giannachi, frequently conjure and echo prevailing themes that exemplify Cybernetic-Existentialism in contemporary arts. In cybernetics, boundaries become fluid, porous

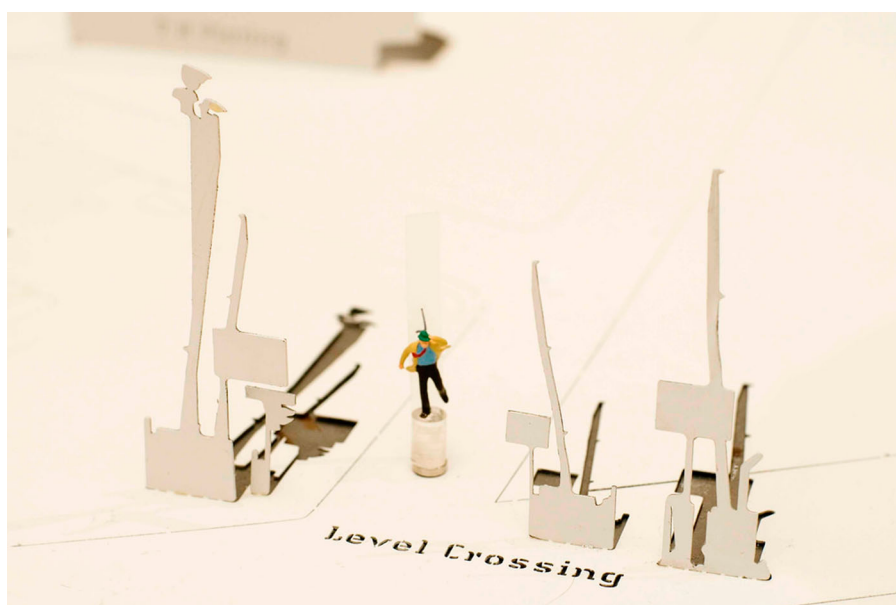


Figure 12. Blast Theory's *Day of the Figurines* (2006). Photo: Courtesy of Blast Theory ©.

and redefined; and Existentialism emphasises how our lives and relationships are similarly in a continual state of flux and dependent on whom we choose to be. Below is an example of how Giannachi encapsulates such themes in the space of just a few sentences: invoking boundaries, mechanisms, responsibility, presence, everyday *facticity*, being-with-others, 'looking and being looked at', and finally (epiphanic) transcendence:

Blast Theory's work has consistently challenged its audience by redefining the boundaries within which they are implicated. ... a mixed reality, through which to experience both the artwork, and the everyday life context within which this is set. ... Here technology does impact directly on whom we choose to be, in our relationships with others and in our engagement with locality as materiality, and in the ways these inform each other. ... It is about looking and being looked at ... [within] a Joycean, powerful epiphanic mechanism. (Giannachi 2009, 117–118).

Existentialist philosophers stress that transcendence involves going beyond the everyday, yet somewhat paradoxically, their phenomenological stance is grounded in a physically embodied, lived and worldly experience. Marcel adopted Jean Wahl's term *trans-ascendence* to emphasize a vertical 'going beyond' and insisted that in daily life: 'There must exist a possibility of having an experience of the transcendent as such, and unless that possibility exists the word can have no meaning' (Marcel 1951a, 46). Yet the experience itself may be difficult to comprehend:

There is an order where the subject finds himself in the presence of something entirely beyond his grasp. I would add that if the word 'transcendent' has any meaning it is here – it designates the absolute, unbridgeable chasm yawning between the subject and being, insofar as being evades every attempt to pin it down. (Marcel 1973, 193)

Matt Adams echoes these ideas closely when stating that their

artistic enterprise ... is about accepting the full complexity and confusion of our existence, and trying to represent these enormously ineffable issues. And always hover outside of our understanding, always be un-graspable in some ways, because it is so important to be able to find forms that enable us to represent this complexity. (Chatzichristodoulou 2009, 115)

Complexities in our encounters with strangers may also arouse darker existential moods such as anxiety and alienation, and reminders that despite all our passionate interactions with others, they will always remain strangers and we remain alone: Marcel's concept of 'separation with communion'. In *The Divided Self: An Existential Study in Sanity and Madness* (1959), R. D. Laing, who was intimately involved in both cybernetics and existentialism, describes 'the potentially tragic paradox that our relatedness to others is an essential aspect of our being, as is our separateness' ([1959] 1960, 26). Nina Tecklenburg has stressed the same idea in relation to how Gob Squad use interactive strategies to attempt to create (or pastiche) different forms of utopia:

The key actions of this utopia are the encounters with strangers, both intimate and framed by distancing barriers. Gob Squad always achieves at once a touching, emotional effect – the joy in approaching another – as well as a hesitation, a reticence, the shame and the unbridgeable gap between participants. (Tecklenburg 2012, 32)

This fundamental existential condition is foregrounded and encapsulated by the two performance collectives we have discussed, and in startling and original ways. Vividly and memorably, they create different types of autonomous, interactive cybernetic

environments and mixed reality systems to confront audiences with intense experiences including evocations of *existential crises* that ultimately bring them face to face with themselves and with the Other. The effects are transformative and aim toward a type of *transcendence*, in the Existentialist meaning of the term. But the results also highlight the difficult balances in life as philosophized in Existentialism: between *Being and Nothingness*, Self and Other, presence and absence, and separation and communion.

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References

- Ascott, Roy. 1968. "The Cybernetic Stance: My Process and Purpose." *Leonardo* 1 (2): 105–112.
- Bakewell, Sarah. 2016. *At the Existentialist Café: Freedom, Being and Apricot Cocktails*. London: Chatto & Windus.
- Bateson, Gregory. 1972. *Steps to an Ecology of Mind*. New York: Ballantine Books.
- de Beauvoir, Simone. (1947) 2000. "Ambiguity and Freedom." In *The Existentialist Reader*, edited by Paul S. MacDonald, 277–293. Edinburgh: Edinburgh University Press.
- Benford, Steve, and Gabriella Giannachi. 2011. *Performing Mixed Reality*. Cambridge, MA: MIT Press.
- Blast Theory. 2012. "Day of the Figurines." Accessed April 23, 2015. <http://www.blasttheory.co.uk/projects/day-of-the-figurines/>.
- Chatzichristodoulou, Maria. 2009. "How to Kidnap You Audiences: An Interview with Matt Adams of Blast Theory." In *Interfaces of Performance*, edited by Maria Chatzichristodoulou, Janis Jefferies, and Rachel Zerihan, 107–120. Farnham, Surrey: Ashgate.
- Cornish, Matt. 2015. "Kinetic Texts: From Performance to Poetry." *Modern Drama* 58: 302–323.
- Dixon, Steve. 2016. "Cybernetic-Existentialism." *International Journal of Performance Arts and Digital Media* 12 (1): 11–30.
- Dixon, Steve, and Barry Smith. 2007. *Digital Performance: A History of New Media in Theatre, Dance, Performance Art, and Installation*. Cambridge, MA: MIT Press.
- Dourish, P. 2001. *Where the Action Is*. Cambridge, MA: MIT Press.
- Elpidrou, Andreas. 2011. "Imagination in Non-Representational Painting." In *Reading Sartre: On Phenomenology and Existentialism*, edited by Jonathan Webber, 15–30. Abingdon, Oxon: Routledge.
- Foley, Michael. 2010. *The Age of Absurdity: Why Modern Life Makes It Hard to Be Happy*. London: Simon & Schuster.
- Giannachi, Gabriella. 2009. "Response." In *Interfaces of Performance*, edited by Maria Chatzichristodoulou, Janis Jefferies, and Rachel Zerihan, 117–118. Farnham, Surrey: Ashgate.
- Gibbons, Alison. 2014. "Fictionality and Ontology." In *The Cambridge Handbook of Stylistics*, edited by Peter Stockwell and Sara Whiteley, 410–425. Cambridge: Cambridge University Press.
- Gibson, James J. 1977. "The Theory of Affordances." In *Perceiving, Acting, and Knowing*, edited by Robert Shaw and John Bransford, 67–82. Hillsdale, NJ: Erlbaum.

- Gob Squad. 2010. *Gob Squad Reader: And The Impossible Attempt to Make Sense of It All*. Berlin: Gob Squad.
- Gob Squad. 2014. "Gob Squad's Kitchen: You Never Had It So Good." Accessed November 3, 2014. <http://www.gobsquad.com/projects/gob-squads-kitchen-youve-never-had-it-so-good>.
- Goeyens, Hein. 2015 "Media on Stage as Staged Media Theory: Intermediality in Gob Squad's Super Night Shot." *E-Journal for Theatre and Media* 2 (1). Accessed December 8, 2016. <http://etum.eu/index.php?journal=ausgabe1&page=article&op=view&path%5B%5D=39>.
- Golomb, Jacob. 1995. *In Search of Authenticity: Existentialism from Kierkegaard to Camus*. London: Routledge.
- Hayles, N. Katherine. 1999. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago: University of Chicago Press.
- Hegel, Georg. 1979. *Phenomenology of Spirit*. Translated by A. V. Miller. Oxford: Clarendon Press.
- Heidegger, Martin. (1927) 1962. *Being and Time*. Translated by John Macquarrie and Edward Robinson. Oxford: Blackwell.
- Isherwood, Charles. 2012. "Visit to Warhol's World, in All Its Goofy Glory." *The New York Times* [newspaper]. January 23.
- Kline, Ronald R. 2015. *The Cybernetics Moment: Or Why We Call Our Age the Information Age*. Baltimore: John Hopkins Press.
- Kroker, Arthur. 2010. *Body Drift: Butler, Hayles, Haraway*. Minneapolis: University of Minnesota Press.
- Kwastek, Katja. 2013. "Case Study 10: Blast Theory, Rider Spoke." In *Aesthetics of Interaction Digital Art*, edited by Katja Kwastek, 248–261. Cambridge, MA: MIT Press.
- Laing, R. D. (1959) 1960. *The Divided Self: An Existential Study in Sanity and Madness*. London: Penguin.
- Levinas, Emmanuel. (1961) 1991. *Totality and Infinity: An Essay on Exteriority*. Translated by Alphonso Lingis. Dordrecht, Netherlands: Kluwer Academic.
- MacDonald, Paul S. 2000. *The Existentialist Reader*. Edited by Paul S. MacDonald. Edinburgh: Edinburgh University Press.
- Marcel, Gabriel. 1951a. *The Mystery of Being, Volume 1: Reflection and Mystery*. Translated by G. S. Fraser. London: The Harvill Press.
- Marcel, Gabriel. 1951b. *The Mystery of Being. Vol. 2: Faith and Reality*. Translated by René Hague. London: The Harvill Press.
- Marcel, Gabriel. 1973. *Tragic Wisdom and Beyond*. Translated by Stephen Jolin and Peter McCormick. Evanston, IL: Northwestern University Press.
- Marcel, Gabriel. 1984. "An Autobiographical Essay." In *The Philosophy of Gabriel Marcel*, edited by Paul Schilpp and Lewis Edwin Hahn, 1–68. Chicago: Open Court.
- Marcel, Gabriel. 1995. *The Philosophy of Existentialism*. Translated by Manya Harari. New York: Carol.
- Maturana, Humberto R., and Francisco J. Varela. (1972) 1980. *Autopoiesis and Cognition: The Realization of the Living*. Dordrecht, Holland: D. Reidel.
- Norman, Donald. 1988. *The Design of Everyday Things*. New York: Basic Books.
- Obrist, Hans Ulrich. 1998. "Turning to Technology: Legendary engineer Billy Klüver on Artist-Engineer Collaborations." Accessed August 2, 2005. http://www.artnode.se/artorbit/issue3/i_kluver/i_kluver.html.
- Ortega, José. 2000. "History as a System." In *The Existentialist Reader*, edited by Paul S. MacDonald, 114–143. Edinburgh: Edinburgh University Press.
- Paik, Nam June. [1966] 2015. "Cyberneted Art." In *Systems*, edited by Edward A. Shanken, 64. London: Whitechapel Gallery & MIT Press.
- Paik, Nam June. (1984) 2001. "Art and Satellite." In *Multimedia: From Wagner to Virtual Reality*, edited by Randall Packer and Ken Jordan, 41–46. London: W.W. Norton.
- Primavesi, Patrick. 2009. "Moving Audiences: Strategies and Exposure in the Work of the Gob Squad." In *Interfaces of Performance*, edited by Maria Chatzichristodoulou, Janis Jefferies, and Rachel Zerihan, 95–106. Farnham, Surrey: Ashgate.
- Reynolds, Jack. 2006. *Understanding Existentialism*. Stocksfield: Acumen.
- Sartre, Jean-Paul. 1949. *Situations III*. Paris: Gallimard.
- Sartre, Jean-Paul. (1943) 1994. *Being and Nothingness*. Translated by Hazel Barnes. London: Routledge.

- Sartre, Jean-Paul. 2002. "To Me, Philosophy Is Everything. It Is The Way One Lives." In *Genius – in Their Own Words: The Intellectual Journeys of Seven Great 20th Century Thinkers*, edited by David Ramsey Steele, 241–300. Chicago: Open Court.
- Sartre, Jean-Paul. (1943) 2003. *Being and Nothingness*. Translated by Hazel Barnes. Abingdon, Oxon: Routledge Classics.
- Sharp, John. 2015. "Game Art, Case Study: Blast Theory and Games as Speculative Design." In *Works of Game: On the Aesthetics of Games and Art*, edited by John Sharp, 84–90. Cambridge, MA: MIT Press.
- Shaw, Helen. 2010. "Eating the Audience: Gob Squad's Kitchen (You've Never Had It So Good)." *Theatre Forum* 39: 24–30.
- Sontag, Susan. 1963. "Simone Weil." *The New York Review of Books*, February 1. Accessed December 2, 2016. <http://www.nybooks.com/articles/1963/02/01/simone-weil/>.
- Spence, Jocelyn, David Frohlich, and Stuart Andrews. 2013. "Performative Experience Design: Where Autobiographical Performance and Human–Computer Interaction." *Digital Creativity* 24 (2): 96–110.
- Tecklenburg, Nina. 2012. "Reality Enchanted, Contact Mediated: A Story of Gob Squad." *TDR: The Drama Review* 56 (2): 8–33.
- Von Foerster, Heinz. 1981. *Observing Systems*. Seaside, CA: Intersystems Publications.
- Wiener, Norbert. 1948. *Cybernetics, Or Control and Communication in the Animal and the Machine*. New York: John Wiley & Sons.
- Wilken, Rowan. 2014. "Proximity and Alienation, Narratives of City, Self, and Other in the Locative Games of Blast Theory." In *The Mobile Story, Narrative Practices with Locative Technologies*, edited by Jason Farman, 185–188. New York: Routledge.
- Woolf, Brandon. 2011. "(Gob Squad's) Revolution Now! Or Never?" *TDR: The Drama Review* 55 (4): 144–151.
- Zaiontz, Keren. 2015. "Human Rights (and Their Appearances) in Performing Arts Festivals." *Canadian Theatre Review* 161: 48–54.