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RESEARCH ARTICLE

Limiting control: vocabularies and strategies of unpredictability in contemporary art

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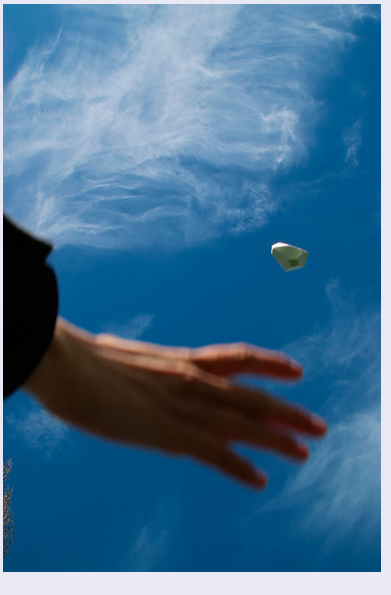
ABSTRACT

Contemporary artists utilise a variety of methods which allow unpredictable forces, such as randomness, chance, chaos, the subconscious, participation, and others, to influence their creative process. These sources of unpredictability are situated against the artist's control in the creative process. We developed a system of control-limiting strategies that enable the simultaneous study of different methods with similar sources of unpredictability. Through examples – including works by other artists and works by one of the authors – we introduce Internal, External, Relational/ Interactive and Mechanical strategies. We analyse the way control is limited in the creative process and draw conclusions on how this affects the artwork.



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Introduction

This investigation is part of a line of research, called Negation of the Representation, dedicated to studying contemporary artistic practices which impede or interfere with vision, such as processes of distancing, interposition, delay, or concealment. Aligned with Rosalind Krauss's (1986) *antivision* and Lucy Lippard's (1997) *dematerialisation* ideas, these strategies contradict modernity's hegemonic ocularcentrism and visual formalism by fracturing the gaze, leaving only a part of the image visible, while most of it remains hidden. By obscuring a total vision, a split is created between the observable and what is 'known' to be there (occasionally only alluded to by the title or accompanying texts), thus shifting the interest to the creation itself (Hernández-Navarro 2006). In this case, our subject is the use of unpredictability and how it can limit the artist's control in the creative process. Unpredictability as part of artistic creation has marked twentieth-century and contemporary art, opening pathways into investigating the methods used to distance author from work. We will argue that artworks tend towards dematerialisation when the lowest limits of control in the creative process are approached and explore the ways in which some processes tend towards absurdity or become more dependent on additional information, such as accompanying literature or titles, to stake their creative claim.

Control as a term often appears in bibliography as a counterpart to processes which integrate unpredictability. The timeline of the exhibition *Chance Aesthetics*, defined by its curator Meredith Malone as a 'focused examination of the dynamic tension between chance and control' (Malone 2009, 4), begins in the early twentieth-century with Marcel Duchamp and other vanguardist explorations of the unconscious, before sampling a range of works whose processes involved unpredictability throughout the century. The simple method laid out in the title of Ellsworth Kelly's *Brushstrokes Cut into Forty-Nine Squares and Arranged by Chance*, 1951, which was included in the show, can serve as an example. Through this title, Kelly clearly indicates it was chance that composed the work, removing part of his authorial agency to an unpredictable end. Ham (2009) writes that relinquishing control was adopted by Dadaists to emphasise the absurd, while Surrealists surrendered conscious control to connect with the unconscious, a part of the mind resistant to control. Susik (2016) elaborates on how Dada's methods pitted chaos against control, and how they differed from Surrealist methods of subduing artistic agency to a receptive role. Interactive or participatory practices can also introduce unpredictability if we consider that participants act freely. Consider, for example, Pilvi Takala's control in *The Committee*, 2014, in which the artist invited a group of children to decide how to spend a production budget awarded to her, which resulted in a bouncy castle. In addition, we may consider generative art, which also reduces the artist's direct control over the result, although these practices often use precision machinery, such as computers or plotters, that were originally designed to offer greater control. *Art Ex Machina*, a portfolio of computer-generated silk-screen prints by M. Barbadillo, H. Kawano, K. C. Knowlton, M. Mohr, F. Nake and G. Nees, edited and published by G. Gheerbrant in Montréal, Canada, 1972, shows that, since the very early years of computer-generated art, artists have employed these machines to generate randomness and leave part of the process out of their control. In this tense relationship between unpredictability and control, we have found a common thread connecting diverse artistic practices, allowing them to be studied together.

To do this we grouped control-limiting strategies not according to their methods or formal similarities, but according to their source of unpredictability.

Chance, randomness, accidents, the unconscious, machines, games, participatory practices, automatism, chaotic systems can all be sources of unpredictability in the creative process. The reasons why artists adopt such strategies vary, encompassing:

> […]aggressive anti-art agendas, revolutionary attempts to bypass the conscious mind and transform the way reality is perceived, statements on free will, and radical programs meant to open the artwork to the random flow of everyday life, to name a few. (Malone 2009, 3)

These reasons, however, are beyond the scope of this paper. We are focusing on the one thing all these practices have in common, the reduction or distancing of the artist's control. Certainly, the motives are not irrelevant to the works themselves, but our analysis does not hinge upon them. Instead, our objective is to present a system of studying artistic practices which involve control-limiting unpredictability. Using this to analyse artworks can help understand control and unpredictability in art better. We aim to identify ways to limit control and discuss the effects of this limitation on the artwork.

For this paper, we sampled an index of artworks collected from bibliography and art exhibition checklists related to terms such as control, chance, randomness, automatism, unpredictability, indeterminacy, subconscious, unconscious, generative art, systems art, stochastic art, precariousness, participation and other (Apostolou 2021). The index consists of works created between 1970 and 2019, so it serves as a sample of contemporary art practices in which unpredictability substitutes part of the control of the artist in the creative process. We do not claim that in 1970 a universal and radical shift occurred in the way artists treat unpredictability and their control, but the date acts as an effective marker for the delineation between what could be considered a destabilised and decentralised 'contemporaneity' in recent visual art practice, removed from the tenets of the pre-established, geographically-bound movements that defined artistic production throughout much of the century.

One could also say that it was around that time that a new generation of artists began adopting a different approach towards control (Apostolou 2021). This can be effectively illustrated by comparing two seminal works from just a decade apart; Yves Klein's, *La Saut dans le vide*, 1960 and Bas Jan Ader's, *Broken Fall (Organic)*, 1971. Klein's staged fall is a fiction, a trick planned to reduce the risk of harm and achieve a predictable result, while Ader's actual fall entails real risk and less control, fusing art with life (Hontoria 2011). By comparing creative processes from the index against a baseline creative process, in which the artist strives for maximum control, we identified how artists can limit said control. Shared strategies emerged depending on their sources of unpredictability. We then reflected on empirical data gauged from the use of these strategies in the artistic practice of one of the authors of this paper, Thomas Apostolou.

In continuation, we will define what we consider control in the creative process and its tension with unpredictability. We will set working definitions of common terms used to describe sources of unpredictability. After this, we will introduce control-limiting strategies and use examples to analyse the way control is limited in their creative processes. We will conclude by identifying the effects of limited control on the artwork.

Control and terms antagonistic to it

Terminology relevant to this paper is often used liberally, without clear definition, and is allowed to slide between meanings, especially in less academic texts. Chance and randomness are all-too-often treated as synonymous terms, when they vary in meaning (Eagle 2019) especially in the context of their integration into artistic production (Chevrier 2008). To avoid such generalisations, we shall set out some working definitions of the most significant terms that will be referred to throughout this paper.

Control

Control, the main term referred to in the formulation of this paper, has been associated with the artistic process to the point it has been identified as being integral to the making of art by some authors. In antiquity, it was even part of the definition of art. In *The Principles of Art* (1938/2016), Collingwood sets out by disentangling graft from art, which he sees as being bundled in the same word, *ars* in Latin and *τέχνη* in Greek; meaning:

> The power to produce a preconceived result by means of consciously controlled and directed action. (Collingwood 1938/2016, 13)

Kant suggested that anything that is not created through 'freedom, i.e. through a power of choice that bases its acts on reason' (Kant and Pluhar 1790 trans. Pluhar 1987, 170) should not be considered art. Choice and reason are both part of what we consider control. More recently, artistic production has been referred to as a 'controlled process' by Ecker (1963, 283–290) who looked into how decisions are made in the artistic process and how artists address this in their texts. According to Ecker, control fluctuates in the creative process – some initial stages seem uncontrollable and random and create a base upon which the artist later exercises conscious control and makes choices. Every action in the making of an artwork is an experimentation, according to Ecker, involving the artist checking if a component of the work fits alongside the others. With every such decision the possible paths an artwork might take narrow towards a quality the artist is seeking (Ecker 1963).

Sally O'Reilly (2006) asserts that not only can chance and control co-exist in the same work, but their existence need not be antagonistic. She refers here to the results of controlled and unpredictable processes being compatible as components of the same work. Through our development of a system of control-limiting strategies, we too acknowledge the notion that control and unpredictability co-exist in the creative process, though we aim to focus on the process itself, rather than the result. Our results indicate that unpredictability and control are set in tension during the creative process, even if their results are not. O'Reilly also discusses the notion of *controlling devices,* such as the use of perspective to create optical illusions of three-dimensional reality prevalent since the artistic and scientific breakthroughs of the Renaissance (O'Reilly 2006). In O'Reilly's reading, these controlling devices functioned much like scientific instruments of precision, enabling artists to imitate what they believed was the objective form of the world around them. They had a clear idea of the results they sought and used calculated, predictable, and repeatable methods to achieve it. This is not to say that a method based on chance cannot be calculated, but the stance of the artist using it can differ in a

fundamental way. The artist allows for a portion of their creative process to be dictated by unpredictable sources, instead of controlling it fully.

The anecdote, from Shilleto's 1989 English translation of *Plutarch's Morals*, of the desperate painter whose thrown sponge produced the desired effect of a foaming horse's mouth by chance, is presented as the only exception to the ancient rule that art is governed by reason. Since antiquity, precision and predictability were understood to be diametrically opposed to chance. The use of chance was further radicalised in artistic practice during the twentieth-century, when it took centre stage in increasingly globalised cross-cultural impulses and began to represent the main objective rather than simply play a supporting role (Lejuene 2012). The inherent tension between the potential of chance and the limits of control began to become more evident in the creative process.

Allan Watson (1992) defines chance in the creative process as the counterpart to any willing or intentional control by the artist and presents a model of creativity with two opposing poles: control and chance. He makes it clear that neither end of that scale is viable or even possible to achieve. He considers that 'conscious control and purposeful intention are essential elements of creativity' (Watson 1992, 24). Watson describes control in the creative process as a necessary opposite of anything unpredictable. For Watson, control is conscious, purposeful, intentional and a result of premeditated free will.

What we consider control in the creative process is the artist's ability to act consciously, precisely and with predictable results. Generally, control can be considered anything that is intentionally used by the artist to guide a work towards a specific predictable result, formally or conceptually. The choice to incorporate unpredictability in a creative process is itself part of the artist's control. We are, nevertheless, referring to direct control, as opposed to distanced control. For example, generative artist Golan Levin describes his authorial relationship with such works as *Floccus,* 1999 through the term *meta-control* (Zanni 2004). This is not direct control, rather randomness filtered by control. Generative art requires artists to cede control to external autonomous systems, Sol LeWitt's *Wall paintings,* for example, are considered to function in such a way (Galanter 2016). Museum technicians execute the artist's pre-determined instructions that require randomness, not choice, much like a computer would execute an algorithm.

Artists have experimented with ways to cede an element of control to circumstances since the beginning of the twentieth-century (Hoptman 1996), and even earlier in the nineteenth-century (Gamboni 1999), across a great variety of methods, but always operating within a maximum and minimum limit of control. Collingwood suggests that a minimum amount of control is required for the creation of a work of art, since control distinguishes natural from artistic activity. At the same time, contrasted against both mechanistic and teleological explanations of creativity, Collingwood's idea of a 'vague telos' opens 'the way for novelty' and 'does not provide full artistic control' (Anderson 1990, 53). Thus, there must be at least a minimum amount of control in the creation of a work of art, while acknowledging that wholly controlling the processes involved is impossible. Allan Watson (1992) also writes:

> The artist may have a vague idea of where he/she is heading; however, because of the unfolding of the process itself, and a willingness to explore new avenues and change direction, the artist

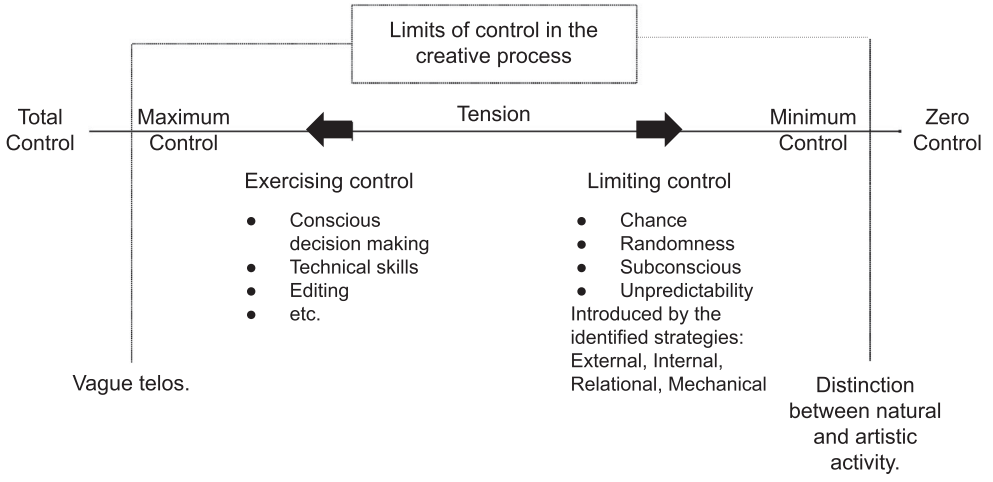

Figure 1. The tension and the limits of control in the creative process.

> can never be certain about what it is he/she is going to make […] The artist can never claim to be in complete conscious control because of the part of the mind known as the unconscious, which exerts a permeative influence upon all his/her creative actions. (Watson 1992, 36)

Similarly, Beardsley (1965) presupposes the existence of some control even in practices influenced by unpredictability, specifically mentioning lucky accidents. It follows that artists operate within limits of control that fall short of total and zero control. In Figure 1, we illustrate the tension between control and unpredictability in the creative process and the limits within which artists operate. The artist's control, and the forces that limit it, are in set both in tension and competition with each other. The level of control can be reduced by introducing unpredictability, in any of its many forms, but can never be wrought to zero. We find it impossible to imagine an artistic process vacant of control, as the notion of authorship itself requires it. Neither can control be total since some aspects of the world and the artist's own mind are, by default, uncontrollable.

Chance

A variety of terms used to describe the sources of unpredictability appear as antagonistic to control. Some of them are problematic because their meaning in fine arts is not well defined. Chance, for example, is often used in bibliography as an umbrella term, covering a variety of sources of unpredictability.

> The term chance is used to denote any action within the creative process which causes an event to result in any way which is not controlled by the artist's will or intention, and as such may manifest itself in a number of different disguises, such as accident, disorder, indeterminacy, randomness, or spontaneity. (Watson 1992, 2)

Watson packs many other terms in the term chance. This is not uncommon at all, many authors lean on the term when grouping practices with unpredictability. Chance often fills the 'gap between intention and outcome' and the term has been associated with a great variety of practises including readymade, collage, performance, participation and

more (Iversen 2010, 12). There are two different stances artists can adopt when working with chance – waiting for something unpredictable to happen or setting things in motion so that something unpredictable happens (Iversen 2010). Andre Breton in *Mad Love* (1937/1987) starts with a definition of chance as 'the encounter of an external causality and an internal finality' and refines it as 'the form making manifest the exterior necessity which traces its path in the human unconscious' (Breton 1937/1987, 21). For Breton, chance is found in the world via the observer's unconscious. Chance is an intersection, in Breton's view, of the external world's supposed causality and the internal subjectivity of an observer. Breton's concept of chance (though his understanding of it would continue to evolve over the years) is that of a non-causal connector of events which can carry its own meaning (Lejuene 2012). On the contrary, Clément Rosset doesn't see chance solely as an event, which would necessitate an initial stable state, like nature, to which it could be compared. Instead, for the French philosopher, chance is an uncaused origin, outside the realm of causality, of everything that *is*. Out of it, order emerges as a highly unlikely happenstance (Lejuene 2012). Rosset's view has many repercussions, but what we can take away from it is that chance is entangled in every instance of being. This is reflected in several points in this text when we mention that chance is inherent to the world. Strictly in arts, chance is the unexpected, unforeseeable, and unpredictable, that which defies or undoes causality, related with loss of control (Chevrier 2008). Gamboni (1999) opted for a definition of chance as 'that which escapes or resists deliberation or planning (in the future), control (in the present), repetition, and explanation (in the past)' (Gamboni 1999, 206). This set of predispositions bring us closer to a working definition of chance. So does Ham (2009), who, by precisely addressing difficulties in the definition of chance in art, disentangled it from another common term, randomness. Ham's (2009) chance is based on the real world and has meaning. Although both statements could be challenged if the author intended to provide a universal definition of the term, we could, with small adjustments, approach a working definition of chance through these different prisms. The first consideration that is required to be omitted is Breton's implication of the unconscious in the manifestation of chance. We consider chance to be a separate type of unpredictability independent from the unconscious. Chance is inherent to the world and, when captured or allowed to affect an artwork, seems to defy causality. Its unpredictability is linked to an openness to infinite possibilities. We don't consider that chance naturally carries meaning, but that meanings can be attributed to it by authors.

Randomness

Efforts to untangle the meaning of randomness from that of chance in the arts have led to definitions like 'an unpredictability that communicates no information' (Ham 2009, 86). This may sound very generic, but it points to randomness' lack of pattern. A meaningful pattern emerging from a grid of random colours is not information embedded in the image but projected onto it by the beholder. Other efforts to define the term have identified two kinds of randomness in arts, one involving technique, where randomness factors as the input of a structured system, and another which exploits its visual effects (Bork 1967). This is indicative of the slippery meaning of the term. Bork cites works by Jean Arp and Jackson Pollock and quotes Rudolf Arnheim and James Thrall Soby for this second kind

of randomness. The problem is that some of these authors preferred terms like chaos, chance, or accident to describe their processes, while Pollock specifically denied any relation to randomness altogether. Randomness is, like chance, often used to cover other more specific and nuanced terms. Instead of using randomness as an umbrella term, we can use it to signify a quality of outcomes which lack predictable patterns (Díaz 2011). This, however, only covers part of the definition. Another important distinction is that these outcomes emerge from a 'limited set' (Alpert 1984). Limited sets point to closed systems, like dice or computer algorithms, and away from the infinite unpredictability of open systems, such as the external world. Randomness is sometimes only apparent since it can be the result of deterministic systems, the workings of which are unknown to the observer. We are referring to pseudo-randomness, most often used by computer algorithms. Nevertheless, there is no need to differentiate it from true randomness in the context of this text, as they have indistinguishable results as sources of unpredictability in the creative process. Additionally, randomness is sometimes used as part of stochastic processes, which combine a source of unpredictability with a selection process.

Accidents

Other terms used as antagonistic to control in the artistic process are accidents, the unconscious, serendipity, chaos, spontaneity, precariousness, and indeterminacy. In art-related texts these terms mostly maintain their colloquial meanings, rendering other extended definitions less necessary. Regardless, it is worth mentioning that while accidents are dependent on expectations, something other than them is expected to occur under normal circumstances. Additionally, an accident cannot be intended but only accepted once it transpires. This distinguishes it from chance, which can be sought-after. A good example is the famous accident involving Duchamp's *The Bride Stripped Bare by her Bachelors (The Large Glass),* 1915–1923, which was damaged during transit in 1927. It was later repaired by the artist with lead wire and varnish, but the cracks were preserved. When, in 1965, the artist Richard Hamilton reconstructed the work for a Tate exhibition, he reverted to its original form, omitting the accidental cracks. For Duchamp, the accident was an acceptable addition, whereas Hamilton described it as an 'accidental finality' (Bery 2016). This decision was a judicious one, since accidents by their very nature cannot be intended, and their results are uncontrollable and unpredictable. A simulated accident would be no accident at all, which is why Hamilton wisely left it out of his otherwise faithful reconstruction.

The unconscious

The unconscious has been a subject of a great interest to much of the avant-garde of the twentieth-century, although the agendas and methodologies of the various movements and ideologies that explored it varied. It can be said the unconscious mind plays a part in the creative process even when the artist does not actively seek it (Watson 1992; Andreasen 2011). But when they do, unconscious processes are equated to a 'detachment of partial psychical functions from central control' (Arnheim 1957, 26). Lomas (2012) mentions that, by relying on the unconscious, surrealist automatism obscured the outcome of a process from the artist. However, Krauss (1999) underlines

that automatism, whether related to objective chance or the unconscious, is less about not knowing the result beforehand and more about not having control over it. The unconscious has both been sought after and downplayed by artists. It has been seen as a realm of a deeper truth, as well as, a one plagued with subjectivity, and, by definition, it escapes direct conscious control.

Other terms: serendipity, spontaneity, chaos, the precarious and indeterminacy

Serendipity is often tied with an unexpected discovery, a conjunction of an unpredictable event and intuition. Artist and self-proclaimed Professor of Serendipitology, Eilidh McKay, proposes that serendipity is present in all processes concerning free will and specifically defines it in the artistic creative process as 'a method of intuitive interaction' (McKay 2012, 16). Spontaneity in the creative process relates to improvisation and the rise of artforms that are focused on the process as much as the product of creation (Sawyer 2000). Chaotic systems are very well defined in areas of knowledge outside art as systems sensitive to initial conditions, in which a tiny variation will produce vastly different and unpredictable results. In relation to art practice, the term chaos appears as the opposite end of a scale to order (Challinor 1971). Chaotic systems are unpredictable because unperceivable variations can dramatically change results.

Precariousness is related with processes balancing between success and failure, being and not being (Dezeuze 2017). Contemporary art uses this constant danger of failure to underline the tendency of human endeavours to disappear, break or fall apart and fade to nothingness. Alison Knowles' performance *The identical lunch,* c.1969, an example of precarity, is constantly in a uncertain and transient state. The artist invited people to share the experience of her habitual lunch. Certain structures keep the artwork from dissolving to simply being a lunch routine. Most importantly, the artist framed these experiences as performances, titled them and used them as material for a subsequent publication. For this precariousness, such works took a long time to be accepted by institutions (Maroja 2014), which hints at a historicised resistance to consider such diverse forms of practice as 'art' in the traditional sense that informed the reception of such works at the time of their conception.

Finally, indeterminacy is the lack of a conclusively fixed form (Díaz 2011) and has thus been used to avoid aestheticizing form (Morris 1968). An indeterminate artwork maintains the capacity to change from one iteration to the next, or between different viewings, challenging aesthetic theories that are partial towards more determined artforms (Cormier 1975). This constant flux can be used to limit control through open-endedness. Although the term can also refer to images that are not immediately identifiable, or can be identified as more than one thing, for the purposes of our study we will not be referring to this meaning of the term.

Control limiting strategies

We have identified control-limiting strategies according to their sources of unpredictability. A common strategy does not imply similarity in methods, intention or visual qualities. We focus on how the introduction of unpredictability in the creative process

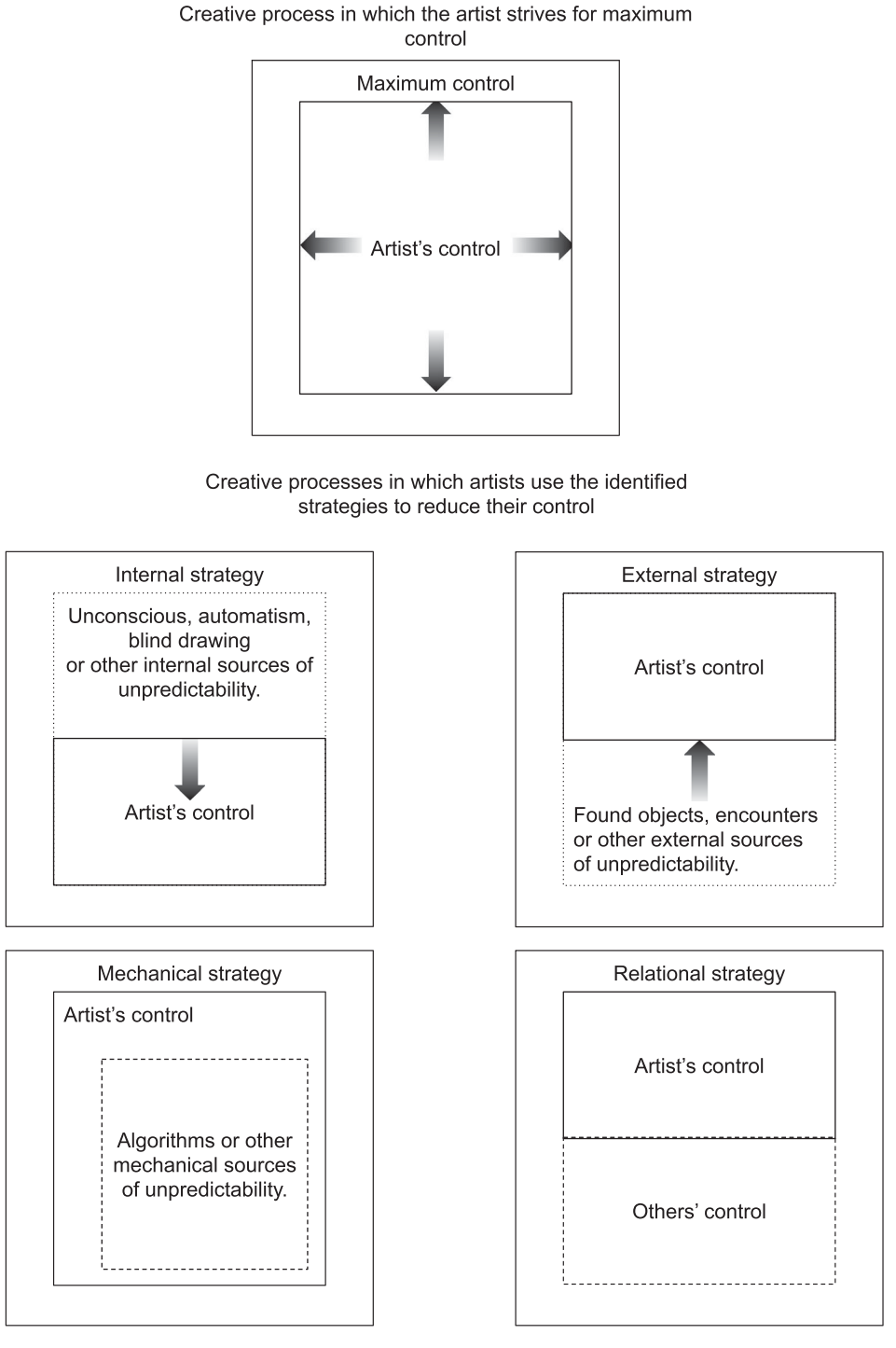

Figure 2. The four identified strategies in comparison with the traditional model of maximum control.

limits control. There are four main strategies, Internal, External, Mechanical and Relational or Interactive. There are also Hybrid strategies which combine more than one source of unpredictability.

Figure 2 shows how different strategies function compared to a baseline artistic process whereby unpredictability is not introduced in the process. If we imagine all the influential factors of an artistic process as the outer square, artists may apply control until the all the potentially controllable factors are covered. Notice that not everything is under the artist's control, because as we have already indicated total control is impossible. In the strategies, we call Internal, unpredictability stems from within the artist. Artists restrict their control over their bodies or minds. Terms like the unconscious and spontaneity are most often related with mental sources of unpredictability used in some internal strategies. External strategies limit control by allowing the inherent unpredictability of the outside world to affect the artistic process. The term chance is most often applicable here, but also accidents and chaos. In Mechanical strategies, artists cede control to closed systems with unpredictable results. These strategies are often related with randomness and generative art. Finally, although we do not consider them identical, we group Relational and Interactive strategies together, because they allow *others* to shape the artwork, assuming their free will is unpredictable, and uncontrollable by the artist. These strategies hinge on the participants' freedom to contribute content to the work.

We would consider many of the strategies related to the unconscious used by the twentieth-century avant-garde artistic movements Internal, since they waived direct conscious control, seeking results otherwise unpredictable and unobtainable. With Internal strategies involving mental processes, we must often rely on what the artist reports. Jackson Pollock's practice, for example, could not fit here. Although Abstract Expressionism's roots are often traced back to earlier automatisms, which we would consider Internal, and his works have been included in exhibitions about chance, the artist declared repeatedly that he was in control (Pollock and Rose 1980). Pollock's process has been framed as a tension between control and '*uncontrol*', the self and the '*other within*', but the artist ultimately pursued control over those '*inner forces*', while the paintings registered the struggle (Leja 1993). The artist defended his overall control over the process, repeatedly and clearly. Pollock's assertions of control are themselves a form of control, setting a canon that excludes accidents, chaos, or other sources of unpredictability. Here we will take reports about spontaneity, arbitrary decisions, or the unconscious at face value, since we are interested in the experience of the artist regarding his or her control. Susan Morris, for example, describes her practice as very systematically registering the movement of her body when she is not consciously thinking about it. By repeatedly flinging a suspended string, coated in vine ash, in front of a paper, she left a series of parallel vertical lines on the surfaces of her *Plumb Line Drawings*. The artist partially attributes the irregularity of those lines to a fluctuation of her body between *herself* and a *self* she had no control over (Morris 2012). In her very analytical account of her own processes, Morris affirms the involvement of '*phenomena that are untraceable, inexplicable or unconscious*' (Morris 2012, n.p.). Thus, we would consider she uses an Internal strategy, but the categorisation might have been different without her exegesis.

Processes impeding the artist's vision or movement can also be considered Internal. For example, for *Buddha Drawings*, 1996, Claude Heath drew a sculpture of Buddha

Figure 3. Thomas Apostolou, *Stone in two versions*, 2014.

he was touching while blindfolded, directly limiting his visual access to both his subject and, more importantly, his drawing. Similarly, Greek artist George Lazogas draws on the back of carbon paper without seeing what is transferred to the paper underneath (Lazogas 2018). These methods limit the artists' ability to control their technique, literally placing a barrier between them and the surface. Others, like William Morris in his *Blind Time* works or William Anastasi in his *Subway Drawings*, have used similar methods of obstruction to limit decisions made as a response to what is already drawn. Instead, decisions were made in advance, binding the artist to execute a process with results that are unpredictable in their details. These artists turn themselves into drawing machines by reducing their physical control over their actions. Rebecca Horn's *Pencil Mask*, 1972, a mask with attached pencils used to draw with head movements, functions along the same lines of bodily restriction while turning the use of the unconscious, as seen in other Internal strategies, on its head. In this interpretation of automatism, the unconscious is removed from the equation (Lomas 2012).

In Thomas Apostolou's *Stone in two versions*, 2014 (Figure 3) a strip of a rock was smoothened and subsequently reconstructed in clay by memory, resulting in two, possibly equally inaccurate, versions. The task exhibited, and drew from, the unreliability of memory; an internal mental process expected to be accurate and reliable. Internal strategies produce unpredictability by reversing the notion that bodies, and minds are under our control, as they are expected to be under normal circumstances.

On the other hand, External strategies draw on unpredictability from the outside world, the default state of which is beyond our control. External strategies are often related with finding, collecting, coincidences, accidents, and chance. Gabriel Orozco's *Maria, Maria, Maria*, 1992, an erased phonebook page with only the names Maria remaining, used an External strategy, a form of collecting found or quotidian objects

Figure 4. Thomas Apostolou, *Fair/Unfair*, 2017.

much like the French artist Arman's *poubelles*, accumulations of everyday trash and detritus. A rule is set which the artist follows to encounter and extract something from an inherently unpredictable world. Chance, chaos, accidents, or coincidences condition these encounters. Bruce Nauman's recording of the nocturnal activity in his studio during his absence, in *Mapping the Studio I*, 2001 and Dennis Evans' *Composition for 100 Discrete Rain Events*, 1976 also draw unpredictability from external sources, in both cases as observers, waiting for something out of their control to happen, then registering it. Letting go or losing can also be considered an External strategy, cutting the artist off from the means of asserting their authorial control. In *Fair/Unfair*, 2017 (Figure 4), Thomas Apostolou threw a series of irregular polyhedra into the ocean like dice whose result remains unknown so long as they remain lost. The work merges the open-endedness of the throw with the inherent unpredictability of the world by literally abandoning control of the objects.

Mechanical strategies use closed systems to generate unpredictability. Machines, algorithms, game mechanics, but also processes that are unpredictable but isolated, can all be considered Mechanical strategies. In *Dice Works*, 1990, the Greek artist George Lappas rolled dice on a scale model of the exhibition space. Then he placed scaled up sculptures of dice in the real space according to the rolls (Lappas and Tessa 1990). All aspects of the work's production, save for the decisive dice roll itself, was controlled by the artist, but a lot of decision-making was substituted by that roll. Esther Ferrer in her performance *Mallarme revisado,* 1992, dropped a stone die balanced on her head each time a recording repeated a phrase from Mallarme's poem *Un coup de dés jamais n'abolira le hasard*, 1897, subsequently picking it up and declaring the result out loud (Aizpuru 2011). In Lappas' mechanical strategy, decisions traditionally

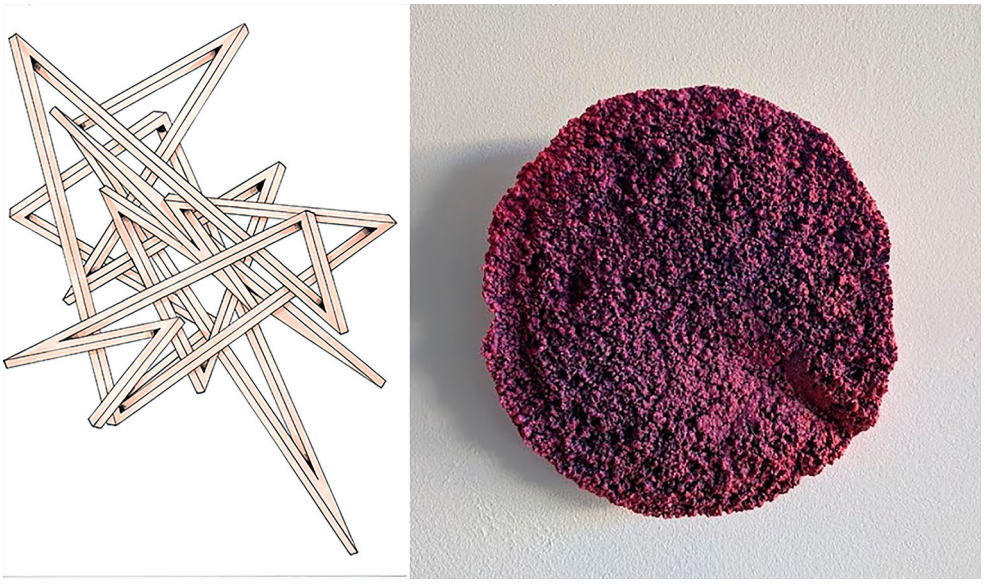

Figure 5. Thomas Apostolou, Left: *Random Drawing*, 2020; Right: *Rain Cast II*, 2019.

taken by the artist were relegated to randomness. On the other hand, the rolling of the die in Ferrer's performance produces a sort of randomness that does not affect her control or alter the content of work significantly.

We already mentioned the idea of distanced control in some generative methods. Golan Levin, who uses the term 'meta-control' and points out that, if the generative algorithm is considered a component of his work, then his loss of control is minimal (Zanni 2004). If we, on the other hand, consider only the visual iterations of a work like Levin's *floccus*, 1999, then part of the artist's control has been surrendered to a mechanical strategy. We can see some visual similarities in Tim Knowles' *Tree Drawings*, where markers hung from tree branches create drawings on a sheet of paper placed beneath as the tree moves in the breeze. Nonetheless, the meticulous control required for the Levin's computer algorithm is not necessary here. The external input, from the chaotic meteorological system to the tree drawings, is translated through the simple branch-marker-paper system. Interestingly, Knowles also considers the mechanism inseparable part of the work, pairing each drawing with a photograph documenting the process. Still, the artist seems more open to unpredictability, which might be related to the nature of each mechanism. Levin's complex and involving computer algorithms leave him this sense of distanced control, while Knowles simpler method does not.

Thomas Apostolou used Mechanical strategies in *Rain Cast II*, 2019, allowing plaster to set under the rainfall, and in *Random Drawings*, 2020 (both Figure 5) using dice to define line coordinates on the paper. In both works, after the initial planning, unpredictability was allowed to set an initial state. Then the artist took control, either reacting to, or guided by, that initial state, until the work was finished.

Relational or Interactive strategies use participation to introduce unpredictability. Participatory works can function as systems that harvest individual or collective encounters, to produce unpredictability (Bourriaud 2010). These 'entail the aesthetic benefits of

greater risk and unpredictability' (Bishop 2010, 12). Participants must act freely and make contributions to the work based on their decisions. Relational and Interactive strategies are not identical – the former more often refer to human relations, while the latter to interactions with elements of the work. We study them together because of their shared source of unpredictability, the 'others'.

In *Rhythm 0*, 1974, the artist Marina Abramović allowed the public to use a selection of 72 items on her in whatever way they wished, while she remained prone to their interventions. The surrender of the artist's control was literal. Still, one is left wondering if the context created by her specific reputation and other works exhibited in the space somehow guided the reaction of the public (Ward 2012). Nevertheless, the emphatic surrender of the artist allowed participants to shape the work in unpredictable ways.

Francis Alÿs, on the other hand, commissioned artisan sign makers to interpret images made by him (*Set theory*, 1993), gathering the most interesting features of the results and producing new pictures to be again interpreted by the artisans, and so on. He created a feedback loop of control and delegation of control, which allowed the choices of others to flow into the work. The participants are professionals, regardless they are not asked to execute, but to interpret, which affords them some creative freedom filtered by the artist's selection. In LeWitt's *Wall Painting #273,* the technicians who are asked to follow set instructions using random points on a grid are not bestowed with sufficient creative freedom, rather they are expected to execute a pre-determined plan. Therefore, we would consider that *Set Theory* uses a Relational strategy while *Wall Painting #273*, a Mechanical one. Rafael Lozano-Hemmer's *Subtitled Public*, 2005, projected (using tracking technology) a word on each visitor as they moved, the words could be exchanged between visitors by touch. The artist compared this to LeWitt's instructions, in the sense that it is not dependent to its physical components, rather the instructions or code behind them. Nevertheless, the interactions with the work, and among visitors, could be considered open to new possibilities unexpected by the artist, who wants the work, in its final form, to be out of his control (Lozano-Hemmer in Boucher, Harrop, and Lozano-Hemmer 2012). Although the artist generally prefers the term relational, *Subtitled Public* uses an Interactive strategy, since initial interactions are with the code and subsequent interactions are facilitated by it.

It's worth underlining that Anna Dezeuze (2010) warns that participation does not constitute a true connector when merely used as an engaging mechanism in a predetermined system in which the participant wields no control. Thomas Apostolou has experimented with several methods, such as instructions, prompts or play as interactivity initiators. He concluded that context determines the extent that participants can exercise their freedom. By far the most unexpected interactions occurred outside cultural institutions and with participants unaware of their participation. For example, leaving a sculptural element on the street produced larger number and variety of interactions (Figure 6) compared to doing the same in a gallery, although a prompt to interact was included in the second case. The participants' actions and decision-making process seems to be affected by the environment of the interaction.

We call strategies which use more than one source of unpredictability Hybrid. Sometimes these combinations are simple, like Sascha Pohlepp's *Buttons*, 2006, a device with a single button which, when pressed, searches the internet for images with the same timestamp and displays them on its small screen. Interactive (the press of the button which

Figure 6. Thomas Apostolou, *surveilled randomness (or how I learned to lose control)*, 2012.

produces the time stamp) and External strategies (the internet search) are combined in this Hybrid strategy.

Hybrid strategies can also be very complex systems with many sources of unpredictability. Philippe Parreno's installation *Anywhen*, 2016 in Tate Modern's Turbine Hall is an excellent example of a complex Hybrid strategy combining 'aspects of chance and control' (Tate.org.uk 2016). The work captured meteorological data and sound recordings (External strategy). Once interpreted by computer algorithms and machinery, these altered the environmental conditions of a yeast cultivation whose reactions, in turn, controlled the audio-visual elements of the installation (Mechanical strategy). At the same time, fish-shaped balloons floating in the space were affected by the slightest breeze from the visitors' movements (Interactive strategy) (Figure 7). Apart from this last part, the incredibly complex system made unpredictability almost irrelevant to the experience of visitors. It could all have been controlled by a pre-recorded sequence with no perceivable difference, which happened at times, when the complexity of the work led to regular breakdowns. In addition, spectators were asked by the institution not to touch the floating fish, restricting interactions to mostly involuntary.

Other control limiting factors in the creative process

There are factors that affect the efficiency of control-limiting strategies. In general, reducing the necessary decisions or minimising the artist-controlled activity in the creative process can also reduce control (Apostolou 2019). As we just illustrated through the example of Perreno's *Anywhen,* more sources of unpredictability do not necessarily mean less control. Complicated systems often demand a lot of decision making and deliberation by the artist to make everything work together. We also already mentioned Golan Levin's *meta-control*, whose feeling of control, regardless of the generative nature

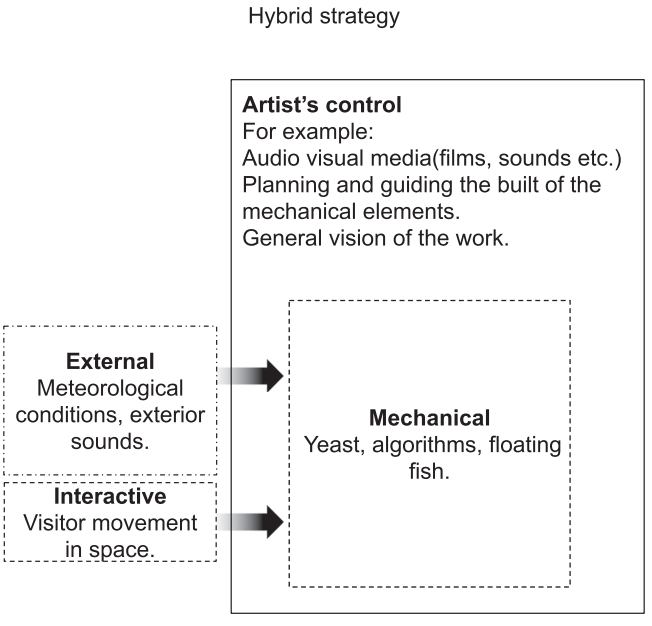

Figure 7. Hybrid strategy in Philippe Parreno, *Anywhen*, 2016.

of the work, could be related to the large number of decisions involved in its complex coding. On the contrary, decision making in Fermín Jiménez Landa's work *Mapas irreversibles*, 2017 (Figure 8) is kept to a minimum. He asked passers-by to draw him an improvised map to a location in the city. Once there, he had someone else draw the way back. The simplicity of the artist's gesture requires a minimum decision-making process which in turn allows for the unpredictability to take up a more prominent role. Although, the artist later turned similar drawings to murals (2020), adding another level of control to the process, the minimum gesture – rid of complicated decision-making – could be understood to amplify the effects of a control limiting strategy.

To show how decision-making is relevant to control we compare different iterations of Bruce Nauman's *Mapping the Studio I (Fat Chance John Cage)*, 2001. The following diagram compares factors of control and unpredictability in each of the four versions, *Mapping the Studio I (Fat Chance John Cage), Mapping the Studio II with color shift, flip, flop & flip/flop (Fat Chance John Cage), Mapping the Studio I (Fat Chance John Cage) All Action Edit and Mapping the Studio II with color shift, flip, flop & flip/flop (Fat Chance John Cage) All Action Edit.*, all 2001 (Figure 9).

Nauman recorded his studio during his absence over several nights, from seven camera angles, capturing sporadic animal activity, namely his cat and some rats, sounds from the outside, as well as evidence of the daily activity reflected in moved objects between takes. The prime matter of this work, 45 hours' worth of footage, is the result of an External strategy, capturing unpredictability from the world beyond the artist invading his studio. The four versions share this footage and its original source of chance. All titles include *Mapping the Studio (Fat Chance John Cage)*, hinting towards certain concepts and possible interpretations of the work. As mentioned,

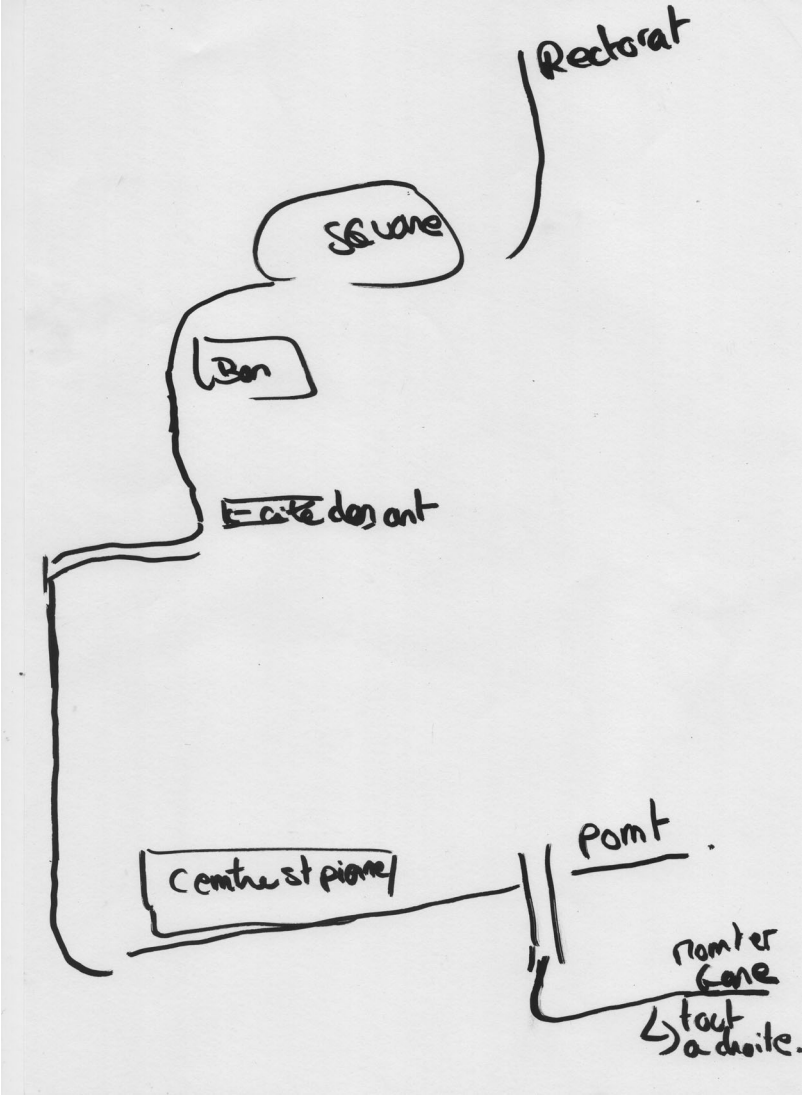

Figure 8. Fermín Jiménez Landa, *Mapas irreversibles*, 2017.

titles can be a mechanism of control. Another aspect of control shared between all the versions of the work is the original editing of the footage down to 5 hours, as well as the *activity logs* of the edited footage, pointing to moments in it where something happens. Each version is the result of different sets of decisions, clearly indicated in their titles. Two are shorter edits of the footage, containing all the action, subtitled '*All Action Edits*'. The versions with '*color shift, flip, flop & flip/flop*' in their titles, also called *Mapping the Studio II,* have been manipulated, with the original images changing colour or orientation. With these sets of decisions, the artist exerted further control over the footage. Originally, the work was shown as a 5 hour-long, 7-channel video installation. Visitors were not expected to watch the video in its entirety. They could come and go or sit on swivel chairs so they could shift their view between projections. The

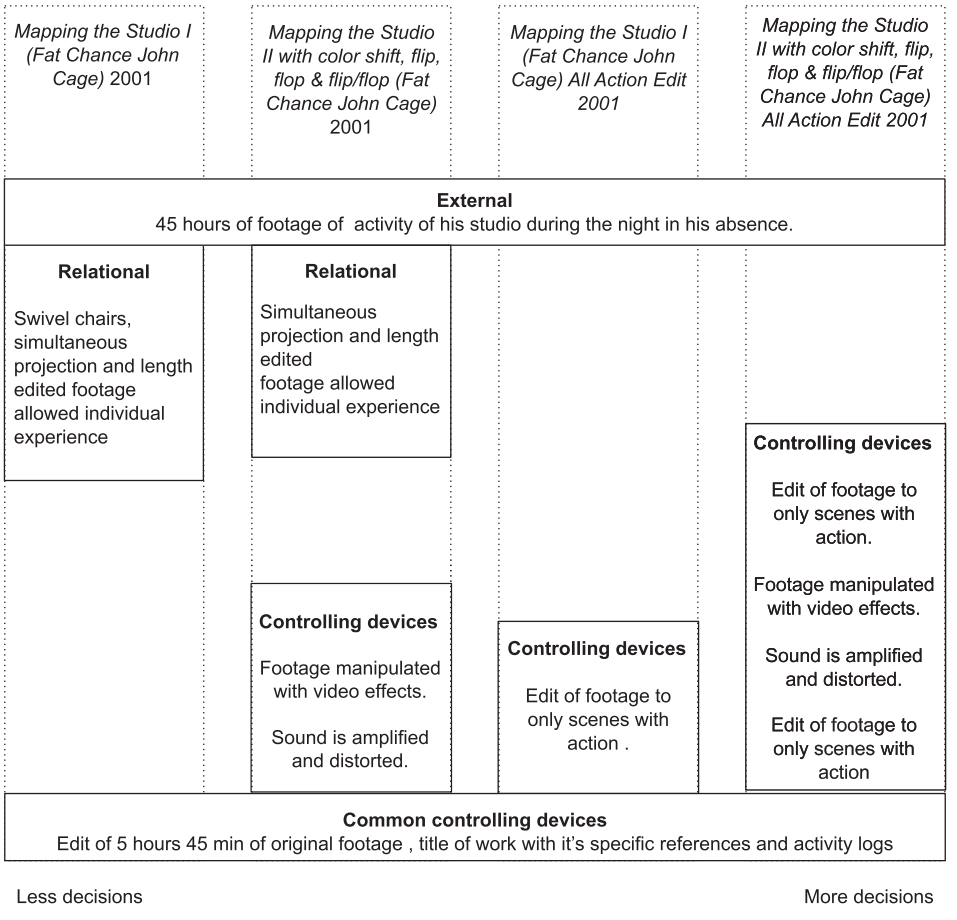

Figure 9. Levels of control in versions of Bruce Nauman's *Mapping the Studio,* 2001.

visitors' decisions regarding when and where to look simulated the casual type of observation we are used to in our everyday life, minimising the possibility of seeing the fleeting activity in the video. On the other hand, *All action edits* remove this element from the work and a concentrated expectation to see action replaces the generally less focused attitude towards the longer edit. At the same time, in the *color shift, flip, flop & flip/flop* versions, the appreciation is diverted away from the captured chance and towards the stylistic responses of the artist towards it. Although all four versions come from the same footage, capturing the chance effects of an External strategy, the number of decisions integrated into each one affects the artist's level of control.

Having shown that decisions are related to control, we can go back to the idea of the minimum gesture and practices with as little decision making as possible. Practises like these are mentioned by Dezeuze (2017) as precarious art. These are artworks that only qualify as such through an action or decision of the artist. Francis Alÿs, *To R.L.*, 1999 is a series of photographs documenting a street sweeper aligning rubbish under the artist's request. Save the artist's decisions, requesting, documenting, and titling the event as a homage to Richard Long, the event is hardly distinguishable from the everyday, equating this work in its conceptual bearing to our previous examination of Alison

Knowles' *Identical Lunch* performances. The tendency of these works to disappear can also be connected to their immateriality. Alÿs' photographs and Knowles' 1971 publication about the performances are key factors to the distinction of their works from anecdotes. Documentation is the only material part of these works, and it grounds the actions with specific references, connecting them to the authors and their intentions. Without this structure (titles, documentation, etc.) there is little proof that the actions happened, let alone them being artworks.

As mentioned, titles that draw attention to certain aspects of a work hint towards specific interpretations and condition interactions with it. In this way, they can be considered an extension of the artist's control. The same is true for artist statements and any other literature generated by the artist. Artists have tried removing this aspect of control from their titles. Martin Creed, for example, uses a numbering system instead. *Work No. 233*, 2000 is a standard A4 paper with the words 'fuck off' printed on it. The title defines its status as an artwork but gives little further information. Apart from that, only contextual evidence indicates this piece of paper is an artwork, namely the signature of the artist, the number of its edition and the fact that it forms part of a collection alongside other artist editions. The artist's work 'often consists of small adjustments to everyday objects and situations', this particular example gives a simple instruction, 'a command to disappear, to revert to nothingness' (Taylor 2004). There is no unpredictability involved in *Work No. 233*, the artist's control is intact. This shows that minimum decision making by itself can lead to artworks whose identification as such relies on contextual evidence.

Conclusions

We showed that unpredictability in the creative process can be used to limit control and that neither total nor zero control are achievable. The control-limiting strategies identified preliminarily reveal some common characteristics which can inform their use. External strategies, which open practices to the inherent unpredictability of the world, depend on the posture of the artist – either looking for chance or waiting for it to happen. Internal strategies, especially those related to mental functions, rely heavily on the artist's reports. Artists in this case can claim or deny their control at the time of creation relatively unchallenged, since they have exclusive access to their internal processes. Early avant-gardes championed the use of the unconscious, whereas contemporary artists have invented Internal strategies intended to be physically restrictive to the body, rather than freeing to the mind. Mechanical strategies, depending on the complexity of their mechanism, might involve a lot of decision making, which gives the artist a sensation of meta-control, a type of distanced control. Relational strategies are sensitive to the context of participation, with less formal contexts being more unpredictable. Interactive strategies must be distinguished from interaction solely as an engaging mechanism, which produces no unpredictability and thus does not limit the artist's control. In both Relational and Interactive strategies participant freedom and agency are paramount. Hybrid strategies can range from simple to very complex, regardless, the number of sources of unpredictability used is not analogous to less control. In fact, all strategies have similar control-limiting potential, but there are other factors crucial to approaching the lowest limits of control.

One of these factors is the number of decisions made by the artist in the creative process. Minimum gestures and simplified processes favour fewer decisions and less control. However, minimum decision-making tends to result in works difficult to distinguish from objects or situations drawn from everyday life. There is an uncanny quality to these works that only slightly deviate from the mundane. Their only bid to be classified as artworks, rather than quotidian oddities, hangs on contextual evidence. This hints to the controlling quality of documentation, titles, artist statements, etc.

> Sometimes, when I find a stack of procedures, leaflets, postcards, promotional material etc., in a supermarket, a museum or the entrance of my building, I shuffle it, so the person after me does not take the copy they were meant to, but another identical one.

Take the above as an example. Is this anecdote immediately identifiable as an artwork? Not without clarifying, that it is an undocumented and untitled action by artist Thomas Apostolou, created to illustrate the effects limiting control can have on an artwork. Such artworks, low in control, complexity and decision making, depend on context to be identified and appreciated as such, an idea that is also relevant to the *readymade.* Umberto Eco (1989) exemplified this as framing a wall crack and appreciating its aesthetic qualities. These qualities, however, are a product of chance, making the frame the only nexus of control.

Finally, we would like to address the paradox of trying to lose control. All the processes we described begin, or finish, with the artist in control. Leaving something to chance, generating randomness, tapping into the unconscious, or letting others take the wheel is a controlling decision. Control can be found in the most earnest efforts to experience the unpredictable. At the same time, the inherent unpredictability of our world and the uncontrollable part of our minds could mean that our control is merely an illusion, albeit an indispensable one. Regardless of the paradoxical nature of the endeavour, investigating how – and to what extent – control can be limited in the creative process reveals important nuances of art production and opens pathways to further research.

Disclosure statement

No potential conflict of interest was reported by the authors.

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