Play and Technology in Twentieth Century Dutch Cultural Criticism (From the 1930s to the 1960s)

Dick van Lente

This article traces the development of critical thought about the socio-political impact of technology in the Netherlands between the 1920s and the 1960s, from the perspective of thinkers and movements that developed theories about play and put these into practice. The historian Johan Huizinga, the painter Constant Nieuwenhuys and the Provo youth movement shared the conviction that play was a crucial element in society. In the late 1930s, Huizinga argued that play, which he believed was at the basis of all culture, was gradually suppressed in modern societies, as a consequence of the ascendancy of utility and technological efficiency as dominant goals. A much more optimistic view of the future of play and technology was developed after World War II, first in the utopian designs of Nieuwenhuys and then, from the middle of the 1960s, in more practical proposals developed by the Provo youth movement and its successor, the Kabouter Partij. This article describes an intellectual trajectory from deep cultural pessimism and technological determinism towards a utopian constructivist view, issuing in what was later called 'appropriate technology'.

INTRODUCTION

In his *Letters upon the Aesthetic Education of Man*, published in 1795, the German playwright and philosopher Friedrich Schiller famously claimed that man only realizes his essential humanity when he plays. By play, he did not mean ordinary games and fun, but an idealized activity, in which our two basic and contradictory drives, sensuous desire and rational thought, are harmonised. By fully employing both, play would liberate us of the tyranny each

Dr. Dick van Lente is senior lecturer at Erasmus University in Rotterdam, the Netherlands (vanlente@eshcc.eur.nl). He thanks Hans Braun, Jannie Bos, Anton van der Lem, Stefan Poser, Anders Schinkel, *ICON*'s editor James Williams and the journal's anonymous reviewers for their help, critical comments and encouragement.

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drive usually exercises over us and enable us to create and enjoy pure, purposeless beauty. Once people learned how to really play in this sense, they also could create a beautiful community, based on liberty, equality and brotherhood. This was Schiller's comment on the French Revolution, which had entered a phase of terror and war at the time he was writing the *Letters*. In his analysis, the capacity for 'aesthetic play' in a society was a measure of its quality.[1]

Although Schiller's dictum is often quoted in essays on play, the rather complicated reasoning behind it is not very well known. Yet in twentieth-century explorations of the significance of play, we can still recognize the core of his vision. The writers I will discuss in this essay were all, just like Schiller, concerned with the good society, which they measured by its capacity to foster creative freedom. Of course, their world differed from Schiller's: while the German playwright worried about the consequences of the French Revolution, twentieth-century authors were more concerned about the ways modern technological systems were changing society. But Schiller's concept of play, as connected to basic human drives, freedom and the quality of society, proved to be highly relevant in this context as well, because technology could be seen both as an expression of creative freedom and as a threat to it.

On the 'freedom side', authors have emphasised the role of play in invention, the learning of technical skills and the uses of new devices. Thus, Lewis Mumford noted how innovations such as steam power and all kinds of mechanical devices started life as toys used to amuse the rich and impress their guests, from Hero's dancing figures and automatic doors in the second century CE to the mechanical dolls in French baroque gardens.[2] More recently, Richard Sennett, following the psychiatrist Erik Erikson, pointed out that learning a craft is very similar to play.[3] And several historians of technology have shown how innovations such as the telephone and the personal computer provoked experimental, playful uses, quite distinct from the practical purposes for which they had been designed.[4]

On the other hand, when technology was identified with work and production, play was usually seen as its opposite. Children, who do not have to work, play. And adults sometimes do so in their leisure time – the freedom of play is contrasted with the constraints of work.[5] This did not necessarily entail a positive view of play. Thorstein Veblen thought of competitive sports as a stylised version, developed by the leisured classes, of an atavistic desire to outdo others by wounding or killing them. It was opposed to the spirit of workmanship, which sought constructive cooperation, aimed at human well-being.[6]

While play was only one of many themes in the work of Mumford, Veblen, Erikson and Sennett, it was a central concern of the men I will be discussing in this article. Each of them conceived play as a fundamental and (unlike Veblen) an eminently beautiful human activity that was repressed and

marginalised in modern society. The Dutch historian Johan Huizinga's *Homo Ludens* ('Man Playing') was published in 1938, and still is considered a classic exploration of the subject. After the war, it helped shape the ideas of a small, Paris-based revolutionary movement of writers and painters, who first called themselves *Lettristes* and later *Internationale Situationiste*. One of the movement's most prominent members was the Dutch painter Constant Nieuwenhuys, whose attempt to design a new urban habitat for *homo ludens* we will examine here. Constant was one of the sources of inspiration of an oppositional youth movement, Provo, which flourished in the middle 1960s. Provo pioneered the use of 'ludic' acts – playful provocations that unsettled the authorities – in the streets of Amsterdam and other cities as a means of political protest.

The less than thirty years that separated the appearance of Huizinga's book from the actions of the long-haired youngsters in the Amsterdam streets were a time of extreme turmoil. Constant and Provo's adaptations of Huizinga's concept show the evolution in a small western society of one thread of socio-political comment from the economic and political crises of the 1930s, through war, poverty and rising affluence, until the wave of protest in the 1960s.

HISTORIAN JOHAN HUIZINGA INTRODUCES *HOMO LUDENS* (1938)

In 1938, Johan Huizinga, a 66-year-old history professor at the University of Leiden, published *Homo Ludens: An Attempt at Determining the Element of Play in Culture* (the subtitle is commonly and inaccurately translated as 'A Study of the Play-element in Culture'). He was already famous, in the Netherlands and abroad, for his book on Burgundian culture in the fifteenth century, *Herfsttij der Middeleeuwen* (*Autumn Tide of the Middle Ages*, usually translated as *The Waning of the Middle Ages*), which came out in 1919 and was translated in many languages.[7] Although the late Middle Ages and the early modern period remained his speciality, by the end of World

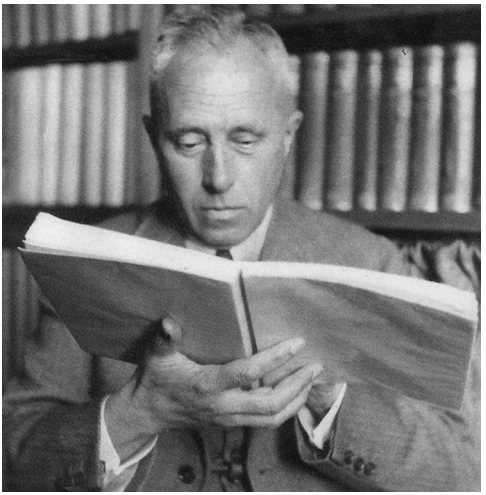

Figure 1. Johan Huizinga, 1872–1945. Photo *Algemeen Dagblad*.

War I he also began to speak and write about contemporary developments, which fascinated and worried him. He published two books on American culture (one in 1918 and another in 1926),[8] and during the 1930s expressed his deep concerns about the rise of populist and authoritarian movements and regimes, which he believed were symptoms of the decline of western culture. His book *In de schaduwen van morgen* ('In the shadows of tomorrow') came out in 1935 and was translated into German, Spanish and other languages, and reprinted several times during the next few years, especially in the Netherlands and Germany.

Homo Ludens was also widely read.[9] In 1940, two years after its appearance, the Dutch edition was reprinted. After the war new editions appeared in 1951, 1952, 1958 and it remains in print today. In Germany, the book was a particularly big success with the first translation in 1939 and a pocket edition in 1956 by Rowohlt, which has been regularly reprinted. Since the 1950s, the book has been available in many European languages, including Finnish and Servocroatic.

Huizinga's main thesis in *Homo Ludens* is that play precedes culture (since very small children and some animals also play), and that all culture grows out of play: literature and the arts, philosophy and law and all our social institutions. As a culture develops, the element of play is pushed back and assigned certain specific places and times – for example, in religious ritual, in sports and in musical performance. The culture as a whole becomes more 'earnest'. However, the element of play can still be recognised in all areas of human activity, and therefore we understand ourselves better *sub specie ludis*. Huizinga focused on social, rule-governed play, such as that in games (*agoon* in Greek), and not on the solitary, free-ranging play of, for example, little children (Greek: *paidia)*. His approach was phenomenological; he attempted to find meaningful patterns in carefully observed human behaviour. His sources were his own everyday observations, the etymology of words for different kinds of play in western and non-western languages and historical and anthropological studies on cultures all over the world.* Classical Greek authors such as Plato and Aristotle were his most important guides.

So what was play, and what did it mean, according to Huizinga?[10] Play originates in our need to elevate life to a higher, spiritual sphere, which is essentially a sphere of beauty. It stems from our need to not just live, but to live well. Thus, for example, we transform experience into language and arrange words in poems to express our deepest insights and feelings.[11] Just as a poem is set apart from everyday language, so also play occupies a special

* He was helped by many colleagues, as is shown in his footnotes. The academic cooperation at the basis of this book is also nicely revealed in the letters on the subject he received from several colleagues after his first public exposé of the subject in 1933, his anniversary lecture as rector of Leiden University in 1933. See the Huizinga archive at the University Library Leiden.

place outside normal life, and players realise that it is 'only a game', that will be over after a while. Still, as with poetry, the game will typically be played with utmost seriousness and dedication. It is a freely chosen activity, not needed for survival, nor geared toward some practical purpose or material gain. Games are ruled by a strict order of explicit rules as well as a shared sense of style and fairness.[12] The importance of play to Huizinga was that it revealed the spiritual character of human existence, the dimension of beauty beyond physiological and social needs ('*superabundans*'). It signified the recognition that there were more important things than material life and practical needs; it symbolised the limitations of human understanding and power; and it instilled a sense of style, respect for others and fair play.

Most chapters in *Homo Ludens* are devoted to demonstrating the 'ludic' aspect of several kinds of human activity: sports, the practice of law, war, wisdom and philosophy, poetry and the arts. Strangely, and disappointingly, there is no chapter on technology. This is surprising, because Huizinga's other writings show that technology was an important subject to him. From 1928 to 1931, he lectured on cultural history at the Technical University in Delft, and from his lecture notes as well as his two earlier books on the United States and parts of *Homo Ludens*, we may surmise what kind of argument Huizinga would have made had he written a chapter on technology.

In 1917, Huizinga put aside his work on Burgundian culture to deliver a course of lectures, which he published as a collection of four long essays the following year, because he thought that the entrance of the United States in the European war would fundamentally change international relations. Since few in-depth studies of American history were available in Europe, he felt the need to analyse the forces that drove the new superpower forward, the type of society that had been produced by these forces and the implications for European society. Huizinga used two narrative frameworks to understand American history and society, both of which emphasised the role of technology. The first framework, surprisingly for a conservative cultural historian, was a kind of Marxist one.[13] Huizinga argued that the Americans, after having gained independence, did not have to deal much with established institutions, but all the more with the powers of nature in a huge, unexplored continent. This explained their technological inventiveness and a predominance of economic concerns to such an extent that one could say that productive forces drove American history. For example, the invention of the cotton gin by Eli Whitney in 1793 enabled mass production of cotton in the South and, hence, perpetuated the slave economy, which in the late-eighteenth century had seemed to be on its way out. 'The genius of one man had shackled thousands,' wrote Huizinga.[14] The railroad lines connecting the wheat producing farms south of the Great Lakes with the ports on the East coast provided another example. This West–East connection displaced the

North–South axis, which predominated when trade moved along the rivers, which mostly flowed southward. Huizinga quoted from a conversation between Lincoln and an aide during the Civil War. When Lincoln expressed his surprise about the dominant direction of the railway lines, the aide replied: 'if the railroad lines had run North and South, there would have been no war.' This comes close to Marx's famous saying 'the windmill gives you the society with the feudal lord'.

These examples illustrate a general cultural process. Man, said Huizinga, is always *homo faber*, 'whether he makes a word, or a bow, or a bridge'.[15] Mechanisation is the ordering of forces in order to subdue nature and make life more comfortable, and this is an integral part of the cultural process. But while mechanisation liberates, it also binds, because every invention requires a certain use and imposes a certain pattern of behaviour. A similar logic rules the second narrative frame Huizinga employed to understand American culture: the increasing scale and power of organisations, at the expense of individual initiative. Here 'mechanization' has a slightly different meaning. For example, the leaders of the large corporations, who seem to be so powerful, are actually driven by the mechanisms that rule large organisations and the market. High capital investments force them to seek monopoly powers, at the expense of other entrepreneurs. They even buy patents, but only in order to prevent the application of improved technologies in other firms and to obviate the necessity to improve their own. Mechanisation, in other words, tends to cease being an instrument of liberation and innovation; it instead becomes a binding power, even undermining basic American values such as individual freedom and technological progress.

Huizinga also used the concept of mechanisation in a metaphorical sense, for example, when he described what he saw as cultural homogenisation that resulted from modern media such as the newspaper, radio and cinema, or in his discussion of the 'party machines' of the Republicans and Democrats.[16]

Huizinga's thinking about technology was not original. Many writers had warned that man might fall victim to his own creations – think of Goethe's 'Zauberlehrling' (1797) and Mary Shelley's *Frankenstein* (1818).[17] The connection between mechanisation, the debasement of culture and the United States was also a cliché from the late-nineteenth century onward.[18] Most of all, Huizinga's analysis recalls Thomas Carlyle's 'Signs of the Times' (1829), which also generalises 'mechanization' to characterise a whole culture that was repressing what Carlyle called the 'dynamic energies of man', such as love, wonder, poetry and religion.[19] Nevertheless, Huizinga's essays are an interesting contribution to this literature, because of the thorough empirical basis of his analysis (for which he used an array of recent American publications), and because he did not simply repeat clichés, but really tried to

understand American society, in which he saw a possible future for western culture in general (and even a not entirely bad one).

The Huizinga archive at Leiden University contains Huizinga's extensive notes for *Homo Ludens*. A small envelope carries the Greek title 'technai'. It contains the following note: 'technics the only phenomenon in which the element of play (which endures in science) is gradually completely eliminated?' That sounds like a good title for a chapter or paragraph, but the envelope contains few other notes, and Huizinga's marks on them indicate that he hardly used them.[20] In *Homo Ludens*, his thinking about technology can be found mainly in the chapter on the arts and in the two final chapters, in which he describes the decline of play in western culture.

The ancient Greeks, says Huizinga, maintained a strict separation between the performing and the plastic arts.[21] The first were inspired by the muses. Their essence was in the act of performing, which allowed for play (this included poetry and history that were written for public performance). The plastic arts were very different in that they were bound to matter and related to productive work, which was done by slaves. They produced permanent, often useful objects. Therefore, they were outside the sphere of the muses and under the protection of Hephaestus, the ugly and slightly ridiculous technological genius on Mount Olympus. There was a fleeting acknowledgement of the role of 'freedom and passion' at the *conception* of an artefact, and also of competition among craftsmen, which somewhat resembled a competitive game, a test of virtuosity. But Huizinga emphasised the earnestness of the *execution* of the work, which to him did not look like play, but more like serious, skilled work, which in Greek society was done by slaves.[22] And although some artefacts were used in religious ritual, which had a ludic element, this was exceptional – utilitarian applications prevailed.

In the final two chapters, Huizinga described what had happened to the 'ludic content' of culture in more recent times in the West. These chapters are much more impressionistic than the earlier ones, and even somewhat opinionated. Huizinga expressed his distaste of Roman society, with its advanced technology and boorish public games, of bourgeois culture and of industrialism. In the nineteenth century, he argued, powerful tendencies had started to push the ludic element to the margins. Work, usefulness, productivity and efficiency became the dominant values. Progress was shamefully conflated with the increase of material wealth and productive prowess. These changes created an overdose of seriousness, a loss of the essential sense of human frailty and limitations, and an increasing lack of awareness of the mysteriousness of the world. Europe donned its working clothes, wrote Huizinga, and 'started to improve the world after the pattern of its own banality'. Even sports lost their playful character, as they became professionalised exercises in efficiency. In his *In the Shadows of Tomorrow*, that

had appeared three years before *Homo Ludens*, Huizinga argued that the development of technology was not driven by higher purposes, but only by the pursuit of power and wealth. Combined with democratic tendencies, which fostered populist politics and 'puerile behaviour', this development might very well end in disaster:

> We live in a mad world, and we know it. It would surprise no one if this insanity suddenly turned into a frenzy of destruction, leaving this poor European humanity stupefied, the motors still running, the flags waving, but the spirit gone.[23]

Huizinga's conception of play contains two related paradoxes, which appear to have bothered him (and later commentators) at times, but which also seem essential to the phenomenon he wanted to understand.[24] First, play is at the same time fundamental to all culture and limited to certain times and places. Second, it is connected with what is most sacred to men, and at the same time commonly understood as 'only a game'. In other words, it is both inside and outside normal life, and it is opposed to earnestness, while also being the most serious thing in the world. Critics argued that these paradoxes were actually contradictions. Huizinga was also criticised for his elitism and nostalgia. His conception of play was an aristocratic one, connected with leisure and the leisured classes. Modern democracy, he believed, led to a decline of cultural standards, demagoguery and mob behaviour, as in fascist countries.

POST-WAR: CONSTANT IMAGINES A SOCIETY FOR *HOMO LUDENS*

World War II left the Dutch population traumatised. Bridges, roads and harbours were in ruins; the western part of the country had, during the last winter of the occupation, experienced a famine that had killed tens of thousands, and memories of the roundup of Jews, public executions, and feelings of guilt about compromise and collaboration with the occupiers haunted the Dutch for a long time. The response of most people was to try to forget the war and focus on rebuilding the country. Government-planned reconstruction proceeded apace. There was a lot of work for engineers, architects and urban planners, and when, around 1950, most of the rebuilding was done, the country embarked on further modernisation: new polders were built, a brand new network of motorways, tunnels and flyovers was created and the government stimulated industrialisation. A mood of technocratic optimism was in the air.[25]

Curiously, however, politicians and intellectuals from the whole spectrum of public opinion – both Roman Catholic and Protestant clerics, as well as

leaders of political parties from right to left – maintained a very pessimistic tone when discussing the prospects of western society. Their basic arguments were the same as those of cultural critics like Huizinga in the 1930s; the war had been the result of a deep crisis of western societies, which was, at bottom, a crisis of values, a loss of a sense of direction. This crisis had not been overcome; on the contrary, post-war economic reconstruction reinforced materialistic tendencies and leadership was entrusted to technicians and bureaucrats, while young people abandoned religion for a materialistic, nihilistic way of life. The two technologies that generally were supposed to be the basis of a new 'industrial revolution', computers and nuclear power, reinforced these fears; society was on its way to becoming one large, automated, expert-controlled machine, which might all of a sudden be cut short by nuclear destruction. The role of technology in society was often discussed in terms of what the American sociologist W.F. Ogburn called 'cultural lag' – moral wisdom and institutions lagging behind technological progress. This argument seemed to loop into more technocracy, as social scientists like Ogburn and Karl Mannheim offered guidance in helping society to adapt to modern technology. On the other hand, widely read intellectuals with a humanistic background, such as Ellul in France, or Mumford and Fromm in the United States, or the political philosopher Hannah Arendt, advocated a reorientation toward basic values that could guide modern society; they also tended to be highly critical of modern management and technology. The debate that emerged can be explained partly from rivalries among the elites – priests and men of letters feared a loss of prestige and leadership to technicians and social engineers. It seems likely that most educated people were on the optimistic side, especially the engineers and managers who designed and led the process of material reconstruction. However, the newspapers, journals and pulpits were clearly dominated by the cultural pessimists.[26]

The arts had a peculiar position in this situation.[27] Avant-garde painting suddenly became very popular in the whole western world. Lavishly illustrated art books and exhibitions in all major European cities, brought modern art to the public at large. Abstract paintings sold well. In 1948, the Amsterdam Stedelijk Museum exhibited the work of the experimental painters Constant Nieuwenhuys, Karel Appel and their friends. A related group of poets, who called themselves Vijftigers ('We of the fifties') quickly acquired a large audience.[28] Variations of Bauhaus modernism became the dominant architectural style of post-war decades.[29] The educated public celebrated the modern arts, which Hitler had tried to eradicate, as an expression of freedom, and they feted the artist as the liberated man *par excellence* (there were very few women artists). Perhaps modern art represented the hope that a renewal of society was possible after all. The painter Constant

Nieuwenhuys, who simply went by his first name, Constant, was among the avant-garde artists who thrived in this situation.

Constant was born in 1920 and educated at a Jesuit gymnasium. He began to study art in Amsterdam in the late 1930s.[30] By 1940, he already had published some illustrations in a Roman Catholic magazine, and his paintings were exhibited in an Amsterdam gallery.[31] Being a thinker as well as a painter, he started to read philosophy and reflected on the role of the artist in society. In 1946, he went to Paris in order to catch up with the latest developments in the arts. He was impressed with the work of Picasso and Miro, and met the Danish artist Asger Jorn, who was six years his senior and a kindred spirit. Jorn was a communist who had participated in the Danish resistance. Constant liked his free, expressive style and his radical ideas. In November 1948, Constant and Jorn founded the Cobra group – the name stood for Copenhagen, Brussels and Amsterdam, the cities where its main members were based. A few months earlier, in the Netherlands, he had helped to found a group of experimental artists, which included Karel Appel and Corneille. They published a small journal, *Reflex*, which contained poems, reproductions of their own paintings and drawings and theoretical articles; and, in the first issue in late 1948, Constant published a manifesto on behalf of the Cobra group.[32]

Constant's manifesto delineated Cobra's ideas on art and society, most of them probably owing much to Jorn. They were to remain Constant's guiding principles, at least until the late 1960s. Our bourgeois society, he wrote, has established an aesthetics that 'suppresses the free expression of human vitality'. Modern artists, especially Dada and the surrealists, had tried in vain to break down this 'bourgeois formalism', and then World War II had lead bourgeois society to the brink of self-destruction. In the new society that was about to be born, all people would be completely free to express themselves, 'following their instincts'. This would be the end of aesthetics and of art as a separate activity; everyone would create the way children make drawings, completely spontaneous and entirely uninhibited by any rules of beauty.[33] The task of the artist was to usher in this revolution. His paintings should awaken the viewers' creative capacities. What counted was not the art work as an object, but the act of creation.

There was a distinct note of violence in Constant's language and painting. His *Reflex* manifesto said that the bourgeois worldview should be 'destroyed' or 'liquidated'; and, although Cobra paintings are usually seen as expressing a joyous vitality, there was an unmistakable darker note, at least in Constant's work. It came out very clearly in the early 1950s, when he started to paint scenes of destruction, with mutilated bodies, houses on fire and broken machinery. The art historian Locher suggests a connection with Constant's sojourn in Frankfurt (winter of 1950–1951). Parts of that city still showed,

six years after the war, the destruction caused by air strikes. Throughout Constant's work, this darker tone remained present. In the *Cobra* journal in 1949 (*Reflex* had disappeared by this time), Constant explained the role of violence as follows: 'la liberté ne se manifeste que dans la création ou dans la lutte, qui au fond ont le même but: la réalisation de notre vie. C'est la vie qui exige la création, et la beauté, c'est la vie!'†[34] As Constant saw the world, life, beauty, creation and destruction were all connected.

None of this was new. The radicalism of Dada and surrealism is easily recognisable ('schon Dada gewesen' ['already been there', 'da' being German for 'there'], wrote one critic[35]), including Dada's idea of breaking down the separation between art and life, and surrealism's Freudian notions of the unconscious. A penchant toward political violence was typical of the Paris milieu of intellectuals and artists wherein Constant felt at home.[36] Constant only became a true innovator when he started to apply these notions to modern technology and play. This happened during the early 1950s, when Constant began to study the interaction of humans with the built environment.

Cobra was dissolved in 1951, because its members feared that it was becoming, like many other groups of artists, associated with a style, instead of being a revolutionary movement. Constant became interested in architecture. He wandered through London and Paris, where he lived in the early 1950s, and noted the sterility of the functionalist architecture in the new suburbs; he felt that an artist was needed to help design environments which stimulated the creative capacities of the inhabitants. Back in Amsterdam, he started to study architecture, with the help of his friend, the architect Aldo van Eijck, who took him to meetings of Dutch architects of the Team Ten group, an oppositional group within the famous Congrès Internationaux d'Architecture Moderne (CIAM). Constant began building scale models in wire, aluminium and Plexiglas, trying to invent a more imaginative architecture. Together with Van Eijck he participated, in the summer of 1952, in an exhibition about interior decoration at the Stedelijk in Amsterdam. The architect and the painter attempted to show how colours in space could stimulate the inhabitants' creativity. Soon Constant established contacts with other artists and writers, who were working in the same direction.[37]

In 1953, his old friend Jorn had started a 'Bauhaus Imaginiste', that was to counteract functionalist architecture. Through Jorn, Constant met Guy Debord, the leader of a group called 'Internationale Lettriste'.[38] The Lettristes aimed at creating 'situations' in which people could have intense, unexpected experiences. Inspired by the urban sociologist Chombart de Lauwe and the

† 'Freedom manifests itself only in the creation or in the struggle, which basically have the same goal: the realization of our lives. It is life that requires creation and beauty, such is life!'

Marxist philosopher Henri Lefèbvre, they published 'psychogéographies', in which they attempted to describe the way city dwellers interacted with their environments, and criticised the poverty of functionalist architecture. They also launched an idea that was to form the basis of Constant's great project New Babylon – the process of automation would lead to an immense increase of leisure time, which could be filled with endless play.[39]

Not surprisingly therefore, *Homo Ludens*, which appeared in French in 1951, found eager readers among the Lettristes. Debord approved of the central role Huizinga had ascribed to play in human affairs, but he disagreed with Huizinga's view that play was necessarily something apart from everyday life. Debord argued that play was suppressed in present-day society, and instead of Huizinga's tragic, backward looking attitude, he proclaimed the need to liberate *homo ludens* by changing society. This became the main goal of Constant's work.

In 1957, the Bauhaus Imaginiste and the Lettristes joined to form the Internationale Situationiste. Constant was one of the founding members. From this time on, he started to elaborate his earlier architectural fantasies into designs for a whole new city, which would, he hoped, eventually cover the face of the earth.[40] Constant came to believe during the next few years, and especially after his breakup with Debord in 1960, that a new life was only possible after a global revolution, because its basis was an automated and collectivised economy. He lost interest in creating local 'situations'.[41] Constant also differed with the Situationistes as well as with most other artists, including Jorn, in that he possessed profound technological optimism, which he may have picked up during his conversations with the Team Ten architects.[42] Worldwide automation and socialised production, Constant argued, would liberate people from work. Freedom would replace utility as the basic value, and all social institutions would be abandoned – the state, the family, the permanent home and morality as we know it. Life would consist of permanently wandering around, in pursuit of whatever one wanted to do, and using all technology available to create new environments – for example, computers and electronics would be used to create ambient sounds and colours. New Babylon was, in other words, a huge, high-tech playground for *homo ludens*. Thus, the idea of modern architects that a well-designed environment would create better people was reversed; it was the New Babylonians who would create their own environments, acting upon their changing needs and moods. As a framework for this new city, Constant proposed a labyrinthine network of spaces, carried by a structure supported by columns, about sixteen meters above the ground. Traffic would take place at ground level and industrial production underground. The living spaces were mostly covered. No veneration of nature here; all spaces were entirely artificial, extensions of human desires:

> La science technique ne semble qu'attendre une esthétique de grande vue pour se déployer […] l'architecture pourra se servir de la technique comme d'une matière artistique du même valeur que le son, la couleur, la parole le sont pour d'autres arts. Elle sera capable d'intégrer dans son esthetique le maniement de volumes et de vides comme l'entend le sculpteur, le colorisme spatial issue de la peinture, afin de créer un art des plus complets, qui sera á la fois lyrique dans ses moyens, et social par sa nature meme. C'est dans la poésie que sera logée la vie.‡[43]

Comparing Constant's vision with Huizinga's views of play and technology, we note that the two men shared the notion that play constitutes the essence of what it means to be human. Both saw play as an expression of freedom and opposed it to the world of work. But there were basic differences as well. The most obvious contrast is between Huizinga's aristocratic nostalgia and Constant's socialist, forward-looking technological optimism. Another difference is that while Constant looked at children's play and children's drawings as a model (as in the Greek *paidia*), Huizinga's examples came from rule-governed games and rituals (Greek *agoon*).[44] To Huizinga, play was certainly not a spontaneous, uninhibited expression of instinctual drives, and neither was it an abandonment of aesthetics. On the contrary, it was a highly cultivated, stylised affair, expressing a sense of limitations and restraint. The marginalisation of play was, in his view, not caused by the repression of the instincts but, on the one hand, by a shift in social priorities towards material gain and utility, of which mechanisation was the expression, and on the other, by an increasing *lack* of restraints, which he called 'puerile behaviour', as exemplified in the marching and shouting of the Nazis.

But perhaps this summary overemphasises the contrasts. Constant's 'dark side' brings him closer to Huizinga than one might think. This will become clearer when we study Constant's brief involvement with the Provo movement.

PROVO: PLAY AS POLITICAL PROVOCATION AND ALTERNATIVE TECHNOLOGY

The beginnings of Provo were not at all playful, and at first, only a much generalised notion of technology informed their thinking. The group was started in Amsterdam in May 1965 by a group of young anarchists who had

‡ 'Technical science seems only to be waiting for an aesthetic great view in order to unfold itself […] architecture can use technology as an artistic material of the same value as sound, colour, words are for other arts. She will be able to integrate into its aesthetic the handling of volumes and voids as understood by the sculptor, the spatial use of colours developed by painting, in order to create a more complete art, which will be both lyrical in its means and social by its very nature. It is in poetry that life will be housed.'

been active in the antinuclear movement.[45] Its main ideologue was the philosophy student Roel van Duijn (born 1943). He had become an activist four years earlier, in 1961, when together with a few classmates at the Hague gymnasium, he had organised a sit-down demonstration against nuclear weapons at a busy intersection in the city. As a student, he started to write for anarchist papers, but soon he became convinced that Dutch anarchism was too weak to change the course of society; a more radical approach, which might include the use of violence, was needed. In order to propagate this idea, Van Duijn and some friends started their own paper, called *Provo*, a word Van Duijn had picked up from a recent sociological dissertation about rebellious youth. The views of society expressed in this paper consisted of a rather sketchy and emotional mixture consisting of fear of an impending nuclear Armageddon, the notion of a repressive state and a powerful role of large corporations, and despair at the conformist behaviour of the majority of people, the latter caused by the 'consumer society', which smothered opposition in a cheap sense of well-being created by consumer goods and television.[46] In an unpublished personal manifesto written a year before he started the Provo movement, the twenty-year-old Van Duijn expressed his need to deploy his creative potential, which he thought required rejection of all norms and conventions – a creed practically identical to that of Constant's *Reflex* manifesto in 1948. Van Duijn's views read like a very rough summary of ideas that were common in left-wing groups such as the Situationists, the philosophers of the Frankfurt School, American critics like C.W. Mills, the American Students for a Democratic Society and the beat poets; but it also was close to the ideas of conservative critics in the tradition of Huizinga, Spengler and post-war writers like Jacques Ellul, who saw modern society as a huge machine that left no room for personal initiative and freedom.[47]

Van Duijn did not believe that the socio-political order could be fundamentally changed, but he wanted to 'provoke' the authorities one last time, forcing them to show their true 'fascistoid' face, which might convince others to join his resistance movement. He was a fatalist activist, with apparently no other motive than to assert his individuality and creativity, and to urge others to do the same.[48] It may well have been this 'desperado' quality in his and his friends' public personae that scared many people, and made Provo seem more dangerous than it actually was. Although 'provocation' can be seen as an invitation to play, the intentions of the Provos were not at all playful; they aimed to bring out the sinister aspects of the authorities and chose to ignore the reformist tendencies that were also present among the elites.[49]

While the Provos were developing their anarchist theories and plans for stirring up life in the city, a much more playful person was creating a sensation in the streets of Amsterdam – the anti-tobacco magician Robert Jasper Grootveld (born 1932).[50] After a troubled youth and failure in school,

Grootveld had done odd jobs and travelled a lot. He was a transvestite and called himself an exhibitionist. In the early 1960s, he discovered social causes to which to devote his 'exhibitions', although they were always related to his personal experiences. Most of all, he set out to warn people of addiction to tobacco, marihuana and other drugs. The city at the time was full of advertisements for cigarettes, and Grootveld went around painting the word 'cancer' ('kanker' in Dutch) on them, or simply the letter K. In 1962, he started an anti-tobacco temple in a dilapidated workshop in the centre of the city, which a friend allowed him to use. Here he staged a quasi-religious ritual with lots of smoke and incantations, in order to exorcise the spirit of tobacco. On these occasions, he dressed as Black Peter, Saint Nicolas' servant in the national Dutch children's festival, with his head painted black, wearing coloured stockings and a funny hat, etc.

After a few sessions the shed burned down, and in the spring of 1964, Grootveld moved the show to a little statue in the middle of the city, called Lieverdje. This statuette, representing a young Amsterdam boy, had been donated to the city by the Hunter Tobacco Company. Grootveld interpreted it as 'tomorrow's addicted consumer'. In weekly sessions, he would march around it, dressed as a very odd Black Peter holding forth against consumerism, the cigarette and advertisements which lure people into unhealthy behaviour – all the while smoking heavily and coughing, because, as he said, he had to confront the enemy on his own ground.[51] From time to time he was arrested and spent short spells in jail, but this only led to more media coverage, which he loved. When asked to give his profession, he said 'exorcist of bad spirits'. Unlike Van Duijn, he did not oppose the authorities, only the spirit of consumerism. This was a decisive difference, for Van Duijn's aim was to show how the machinery of modern society, not being able to cope with grass roots opposition, would lapse into disproportionately violent repression.

While Van Duijn was brooding about the new course anarchism should take, he often visited Grootveld's happenings. And while his friends were not much impressed by the magician, Van Duijn recognised in Grootveld a kindred spirit; the two were artists at heart, both hated consumerism and the congestion of the cities by motor traffic and, like Grootveld, Van Duijn had a keen eye for attracting a large audience. They met and decided to cooperate. The happenings at the little statue now took on a much more political character, and confrontations with the police became increasingly violent. They also took place elsewhere, for example at a large monument for the hero of a colonial war which the Provos wanted removed or at a sit-in at the American embassy in The Hague. This was not at all what Grootveld had in mind. He tried to turn the Provos away from violence and on to more positive, playful actions. The best example of this was his plan to provide the city

Figure 2. Provo Bernard de Vries with a white bicycle. Unknown photographer, 1967. By courtesy of Nationaal Archief/Spaarnestad Photo, The Hague.

with a large number of white bicycles, freely available to everyone. Anyone could jump on a bike, ride wherever he or she wanted and then leave it there for the next user. Cars could be banned from the centre of the city. Provo Luud Schimmelpennink developed this idea into a real plan, which he submitted to the Amsterdam Municipal Council. He supported his proposals with statistics about poisonous gases in the air, the number of cars and their use of space, numbers of people wounded and killed by cars. The public presentation took place at the Lieverdje, where the first bicycle was painted white, and immediately seized by the police. Another plan Schimmelpennink developed was the 'White Smokestacks Plan', published in *Provo*, n. 6 (1966), which proposed, among other things, strict rules about the emission of substances that would be absolutely forbidden and others that would be taxed. Again, it was well-documented with data from government reports about pollution.[52]

In spite of such peaceful initiatives, confrontations with the police grew more violent, for example when the Provos, on Princess Beatrix' wedding day, 10 March 1966, exploded smoke bombs and spread the rumour that they

would feed the horses drawing the royal carriage sugar lumps with LSD. Grootveld could no longer stand the increasing violence and fled the country for a while. Soon after he came back, the movement was disbanded. In 1969, Van Duijn founded a successor, the Kabouter Movement, which won five seats in the 1970 elections for the Amsterdam municipal council. The Kabouters (gnomes) developed Provo's ideas and tried to put them into practice, sometimes successfully. Their goal was to create a better society within the city that would grow with the increasing awareness of the people. Prominent goals were to replace cars with white bicycles and electric vehicles (Luud Schimmelpennink designed several), and to make the city greener by planting trees and growing vegetables on unused pieces of ground. Kabouters and their sympathisers created organic food shops, restaurants and markets for the exchange of secondhand goods; prepared proposals for the use of solar and wind energy; and pioneered the practice of occupying empty buildings for free living. They also organised the popular resistance against a national census that was to take place in early 1971, which the Kabouters considered a big step in the direction of computerised control by the state over its citizens. The census failed mainly because of these protests.[53] In short, the Kabouters gave voice to a widespread resistance against large-scale technological systems, and tried to propagate small-scale organisations (shops and farms) and technologies (bicycles and electric cars), geared to local human needs – much like the 'intermediate technology' (later called 'appropriate technology') developed by E.F. Schumacher and others at the time.[54] Such small-scale, 'alternative' activities have, since the 1970s, become a permanent presence in cities in the Netherlands and elsewhere.

We now return to Constant Nieuwenhuys, who followed the Provo movement from its beginnings with great interest. In the summer of 1965, when the first happenings at the Lieverdje took place, Constant's New Babylon designs were exhibited in several museums and galleries, and he gave many lectures in the Netherlands as well as abroad.[55] At Van Duijn's invitation, Constant explained his plans in *Provo* and related them to Provo's activities. He wrote that Grootveld's anti-tobacco temple and the area around the Lieverdje were examples of the many free spaces he had in mind when thinking of New Babylon – places where play predominated because usefulness had been left behind ('useless' would not be taken as a compliment by Grootveld). He praised the white bicycle plan and urged the Provos to develop it further, toward all transportation. He also urged them to be less pessimistic; theirs was not a desperate last stand against a powerful capitalist system, but they were pioneers of the age of full automation and unlimited leisure – the *homines ludentes* of the future. A nuclear war might break out at some point, he admitted, but mankind would recover; the 'population

explosion' would not be a problem, because mechanised food production would easily match demand.[56]

Constant was not always so optimistic. The year before his *Provo* article, he had argued that since the war there had been no genuine avant-garde and, therefore, no chance of a real revolution.[57] Cobra, according to Constant, lacked a solid theory, and the Internationale Situationiste lacked the discipline necessary for creating real change. In 1980, looking back at the New Babylon project, which he had more or less abandoned by 1974, he argued that the energy released by increased leisure had not been used in a creative but, rather, in a destructive and spasmodic way, and he mentioned Provo's activities as an example. Such actions would not structurally change society, because of a lack of discipline. The famous happenings did not arouse the people's creativity, but were simply entertainment for a small public. When you introduce new art into an old environment, said Constant, the result is false – it loses its revolutionary substance. As long as society was not changed in a fundamental way, the release of energy would be violent rather than constructive. This explained why twentieth-century art, in his view, was mainly destructive: artists did not believe in a future for this culture.

New Babylon had been an attempt to turn destructive energy into free creation. But Constant had come to believe that violence would always be part of creation. Time and again he had to insist that New Babylon was not utopian, as many people thought: 'A Utopia is a picture of society that ignores material conditions … [that] is a world without aggression, without suffering, without doubt, without drama, but also, therefore, a world without change, without creativity, without play, without freedom.'[58] And: 'New Babylon is an unsafe world. The space of desire is finally understood as a space of conflict.' And: 'New Babylon is an uncertain universe, where the "normal" man is at the mercy of every possible destructive force, every kind of aggression.'[59] Whereas modern architects, in promoting their designs, usually present sunny drawings of their buildings, Constant's paintings from the late 1960's on presented a much grimmer picture. The New Babylonian labyrinths often exhibited red stains, as if there had been a bloodbath, or dark ones that looked like contorted human bodies. It seemed like a return to the dark images of the late 1940s. The architect Mark Wigley comments: '[…] Constant relentlessly explored the hidden menace of his bright new social space and the technology that would make it possible.'[60] For Constant and the Provos, creativity and play seemed inextricably bound up with violence.

CONCLUSION

The briefest summary of the intellectual trajectory described in this article would be: from technological determinism to voluntarism to social

constructivism, by way of reflections on play and freedom. Huizinga criticised the unrelenting progress of mechanisation, which gradually suppressed the basic human impulse to play. Since play was also the wellspring of all culture, this process was tantamount to cultural self-destruction. The determinism implicit in this view was similar to that of other famous criticisms of modern technology at the time, such as Jacques Ellul's idea of *La technique* and Lewis Mumford's 'megamachine' or monotechnics.[61] The mirror image of this pessimism, a kind of optimistic determinism, was common among modern architects such as Le Corbusier, Jaap Bakema and Cornelis van Eesteren, who believed that the lives of people were fundamentally shaped by their built environment, which gave architects and city planners a unique responsibility and power. The artist Constant picked up this idea and democratised it; rather than being moulded by the buildings they lived in, people in the future would create their own environments by themselves using the big toolbox of modern technology. They were able do so because mechanisation and automation had not enslaved, but liberated them so they could spend their lives in endless play, which was the fulfilment of humankind's aspirations. This utopian idea was turned into practice by the more constructive, less fatalistic members of the Provos, and later by the Kabouters. Luud Schimmelpennink demonstrated that an alternative technology was possible, driven by goals that differed fundamentally from the predominant ones of capitalism. Thus, white bicycles and electric cars would replace the automobile and turn city centres into much more inhabitable places. The streets would again be playgrounds, for children as well as for adults. In this way, Constant's individualistic voluntarism was turned into a program for technological and social change.

The idea has caught on that technology is not a modern Moloch, but a construction based on certain perceptions and interests and that, therefore, alternative, small-scale, ecologically responsible technologies are possible; one can see it in alternative farms and workshops throughout the western world today. The appropriate technology movement has blossomed. Regardless of how one assesses the successes and failures of this movement, the conceptual shift on which it is based is fundamental. This article has only shown some of the Dutch carriers of these intellectual shifts, not the great thinkers, such as Schumacher and the giants on whose shoulders he stood, such as Kropotkin and Gandhi, nor has it examined the causes of the transition, which were part of much larger cultural movements, as well as the great economic and political changes of these decades. The people discussed in this article contributed to a more voluntaristic and constructive view of technology by their explorations of the phenomenon of play, which turned out to be a way of breaking open the forbidding shell of technological determinism.

NOTES

1 Friedrich Schiller, *Über die Ästhetische Erziehung des Menschen in einer Reihe von Briefen* (*Letters on the Aesthetical Education of Man*; written in 1793; published in 1795 in *Die Horen*). I have used the online edition at Projekt Gutenberg, http://gutenberg.spiegel.de/buch/3355/1 (October 30, 2013). On play, see esp. letters 14 and 15.

2 L. Mumford, *Technics and Civilization* (New York, 1934/1963), 101. See also T. Misa, *Leonardo to the Internet Technology and Culture from the Renaissance to the Present* (Baltimore, 2004), ch. 'Technologies of the Court'. Other examples are in J.H.J. van der Pot, *Steward or Sorcerer's Apprentice*: *The Evaluation of Technical Progress: A Systematic Overview of Theories and Opinions* (Delft, 1994), 609.

3 R. Sennett, *The Craftsman* (New Haven, 2008), ch. 10, 'Ability'; E.H. Erikson, *Childhood and Society* (Harmondsworth, UK, 1965, rev. ed.), ch. 6, 'Toys and reasons'.

4 E.g., J. Radkau, *Technik in Deutschland. Vom 18. Jahrhundert bis heute* (Frankfurt, 2008, rev. ed.), 67–68, 407–409.

5 The increasing separation of labour from other human activities, especially from the industrial revolution onwards, which also led to a clearer articulation of the notion of leisure, is described beautifully by J. Kocka, 'Work as a Problem in European History', in J. Kocka, ed., *Work in a Modern Society* (New York, 2010), 1–16.

6 T. Veblen, 'Patriotism, Peace, and the Price System', in Max Lerner, ed., *The Portable Veblen* (New York, 1972), 581. These remarks are part of Veblen's discussion of nationalism, which, in his opinion, had no constructive purpose, only that of maiming and humiliating the opponent.

7 A. van der Lem, *Inventaris van het archief van Johan Huizinga. Bibliografie 1897–1997* (Leiden, 1998) has an overview of all Huizinga's publications, including translations and reprints, which gives an impression of the spread and impact of his work.

8 J. Huizinga, *Mensch en menigte in Amerika. Vier essays over moderne beschavingsgeschiedenis* [Man and the masses in America] (Haarlem, 1918/1928 rev.)., and *Amerika Levend en Denkend* [America Alive and Thinking] (Haarlem, 1926). In 1972, Herbert H. Rowan of Rutgers University translated and edited both works as *America: A Dutch Historian's Vision from Afar and Near* (New York, 1972). See also M. Kammen, '"This, here, and soon". Johan Huizinga's Esquisse of American culture', in J.W. Schulte Nordholt and R.P. Swierenga, eds., *A Bilateral Bicentennial – a History of Dutch-American Relations 1782–1982* (Amsterdam, 1982), 199–226.

9 J. Huizinga, *Homo ludens. Proeve eener bepaling van het spel-element der cultuur* (Haarlem, 1938/1958).

10 Definitions: ibid., 14, 29, 107.

11 Ibid., 4–5, 64, 76–77.

12 On style: ibid., 190, 216–217.

13 Small wonder, socialist reviewers, such as Romein, were enthusiastic. See ibid., 189 and 181 (Huizinga had acquainted himself with Marxism by going to lectures by his Leiden colleague Pannekoek).

14 Huizinga, *Mensch en menigte* (n. 8 above), 66.

15 Huizinga, 'Over de grenzen van spel en ernst in de cultuur', diesrede [lecture], 1933, p. 2. I have used the copy in the Huizinga archive at the Leiden University Library.

16 Besides *Mensch en menigte* (n. 8 above), 119–123, also in J. Huizinga, *Amerika levend en werkend. Losse opmerkingen* (Haarlem, 1926), 14–36.

17 Huizinga quoted the poem at the end of his second chapter in *Mensch en menigte*; the poem is based on a story by Lucianus, second century CE.

18 Van der Pot, *Steward or Sorcerer's Apprentice* (n. 2 above), 196, 210; Kroes, *De Leegte van Amerika. Een massacultuur in de wereld* (Amsterdam, 1992), 30, 37–40; R. Aerts, 'Prometheus en Pandora.

Een inleiding tot cultuurkritiek en cultuurpessimisme', in R. Aerts and K. van Berkel, eds., *De pijn van Prometheus. Essays over cultuurkritiek en cultuurpessimisme* (Groningen, 1996), 10–66. Huizinga, by the way, found a great deal to admire in the United States, and he was very impressed with some writers, especially Emerson and Whitman, as well as more recent authors such as Dreiser and Sinclair Lewis.

19 Thomas Carlyle, 'Signs of the Times' (1829) in A. Shelston, ed., *Thomas Carlyle, Selected writings* (Harmondsworth, 1971/1980), 72. I have not found any references to this essay in Huizinga's published works, the published letters or the Huizinga archive in the Leiden University library, although Huizinga did quote Carlyle's work on hero-worship and his theories of the state. There are also parallels with Ortega y Gasset's 'Man the Technician', e.g. the notion of man as a perpetual *Homo Faber*, and the idea that technologies of pleasure, such as drugs, which are *super-abundans* from the point view of physical necessity, are as old as those of food and shelter, a notion that is close to Huizinga's theory of play. See J. Ortega y Gasset, 'Man the Technician' in idem, *History as a System* (New York, 1941/1962), 97–98, 116.

20 Huizinga's notes are on tiny slices of paper, which he marked with a vertical line when he had used them. Many thanks to Huizinga scholar Anton van der Lem for his help in the Huizinga archive.

21 Huizinga, *Homo ludens* (n. 9 above), 169–177.

22 Although he wavers a little later on (ibid., 173), where he says that the sheer abundance of forms in the plastic arts suggests playful minds and hands at work.

23 Huizinga, *In de schaduwen van morgen* (1935), in *Verzamelde werken* VI (Nijmegen, 1950), 477–606, esp. first sentence.

24 Examples of recent discussions include W. Motte, 'Playing in Earnest' in *New Literary Theory*, 40 (2009): 25–42; H. Rodriguez, 'The Playful and the Serious: An Approximation to Huizinga's *Homo Ludens*', *Game Studies: The International Journal of Computer Game Research*, 6: 1 (December, 2006).

25 Intellectual climate and public opinion in Europe: T. Judt, *Postwar. A History of Europe since 1945* (New York, 2005); W. Laqueur, *Europe since Hitler. The Rebirth of Europe* (New York, 1982, rev. ed.). On intellectual and artistic tendencies in the Netherlands: J. Kennedy, *Nieuw Babylon in aanbouw Nederland in de jaren zestig* (Amsterdam, 1995), ch, 4; T. de Vries, *Complexe consensus. Amerikaanse en Nederlandse intellectuelen in debat over politiek en cultuur 1945–1960* (Hilversum, 1996). On technocratic tendencies in the Netherlands: D. van Lente and J.W. Schot, 'Technology as Politics: Engineers and the Design of Dutch Society', in J.W. Schot, A. Rip and H. Lintsen, eds., *Technology and the making of the Netherlands* (Cambridge, MA, 2009), 365–431; D. van Lente, 'Ingenieurs en het culturele klimaat in Nederland 1945–1960', in Hans Renders, ed., *Onder ingenieurs. Biografie en techniek* (Amsterdam, 2010), 98–122.

26 This rivalry is also the basis of C.P. Snow's famous 'two cultures'. See the illuminating introduction by S. Collini in C.P. Snow, *The Two Cultures* (Cambridge, 1998). I have discussed the relation of the thesis to different groups of technicians in 'Ingenieurs en het culturele klimaat in Nederland 1945–1960'.

27 E. Lucie-Smith, *Art Today. From Abstract Expressionism to Superrealism* (Oxford, 1977), 95, 145. For the Netherlands: Wilma Süto, 'Voortgaande bevrijding in beeld en kleur', in K. Schuyt and E. Taverne, eds., *1950. Welvaart in zwart-wit* (Den Haag, 2000), 466.

28 F. Ruiter, 'Het literaire leven', in Schuyt and Taverne, eds., *1950*, 444–447.

29 H. Ibelings, *De moderne jaren vijftig en zestig. De verspreiding van een eigentijdse architectuur over Nederland* (Rotterdam, 1996).

30 On Constant: M. Hummelink, *Après nous la liberté. Constant en de artistieke avant-garde in de jaren 1946–1960* (Proefschrift, Universiteit van Amsterdam, 2002); J.L. Locher, *New Babylon* (Den Haag, 1974); J.L. Locher, et.al., *Constant. Schilderijen 1940–1980* (Den Haag, 1980); Mark Wigley, *Constant's New Babylon. The Hyper-architecture of Desire* (Rotterdam, 1998). There

is a collection of letters and other papers of Constant at the Rijksbureau voor Kunsthistorische Documentatie (RKD) in The Hague. I have consulted some of Constant's letters and the magazine *Reflex*.

31 A reviewer, in the evening newspaper *Algemeen Handelsblad* (28 November 1940), said this was the work of a promising young man.

32 Brussels was mainly represented by the surrealist writer Dotremont. There were hardly any painters of note there, Jorn complained to Constant; later Pierre Alechinsky joined the group. Letter from Jorn to Constant, March or April 1949, archief Constant RKD, inv. n. 94.

33 Constant could refer to a recent exhibition of children's drawings in the Amsterdam Stedelijk Museum.

34 *Cobra. Organe du front international des artistes experimentaux d'avant-garde* 1948, cited in Locher, *New Babylon*, 7. Notice the military subtitle of the journal.

35 Quoted in Hummelink, *Après nous* (n. 30 above), 55.

36 Judt, *Postwar* (n. 26 above), finds the emphasis on violence typically French, but it spread further because of Paris's reputation as a cultural center.

37 The importance of Van Eijck is highlighted in L. Lefaivre and A. Tzonis, *Aldo van Eyck. Humanist rebel. Inbetweening in a postwar world* (Rotterdam, 1999), esp. 61–62.

38 For a brief treatment of Debord, see I. Gilcher-Holtey, *Eingreifendes Denken. Die Wirkungschancen von Intellektuellen* (Weilerwist, 2007), ch. 10. She cites Constant Nieuwenhuys, but consistently refers to him as Benjamin Constant, the nineteenth-century writer and politician.

39 This as well as other elements, are also to be found in Marcuse's *One-dimensional Man: Studies in the Ideology of Advanced Industrial Society* (Boston, 1964), for example the passage on art in the first pages of the conclusion, but I have not found any references to him and Adorno in Constant's work.

40 Good description: Constant, 'New Babylon' in *Randstad,* n. 2 (1962). It is not possible here to go into the many precedents of New Babylon: ideas from writers, construction engineers and architects that Constant put together in his designs. These are traced in detail in Wigley, *Constant's New Babylon* (n. 31 above).

41 Hummelink, *Après nous* (n. 30 above), 277.

42 Locher, *New Babylon* (n. 30 above), 12; Wigley, *Constant's New Babylon* (n. 31 above), 27, 34, 64–65; Hummelink, *Après nous* (n. 30 above), 227.

43 Locher, *New Babylon* (n. 30 above), 8. One way to show the importance of Van Eijck is to remember that shortly before Constant started to build his New Babylon designs, he cooperated with Van Eijck in the design of playgrounds for small abandoned areas in the city of Amsterdam. See Lefaivre and Tzonis, *Aldo van Eijck* (n. 37 above), ch. 1.

44 The theorist Caillois uses the words *ludus* and *paidia* to make the same distinction. See Poser, "'Kannst du bremsen'" (n. 1 above), 20.

45 R. van Duijn, *Diepvriesfiguur. Autobiografie van PD106043 in samenwerking met de AIVD* (Amsterdam, 2012); and R. van Duijn, *Provo. De geschiedenis van de provotarische beweging 1965–1967* (Amsterdam, 1985) are the main sources for the Provos's ideas and actions. See also Eric Duijvenvoorde's magnificent biography of Grootveld, *Magiër van een nieuwe tijd. het leven van Robert Jasper Grootveld* (Amsterdam, 2009); and D. van Weerlee, *Wat de Provo's willen* (Amsterdam: Bezige Bij, 1966).

46 Early thinking: Van Duijn, *Provo*, 28–30.

47 Compare the very sketchy thinking in the *Provo* magazine with the much more articulated analysis by left wing students in the United States, three years earlier, the *Port Huron Statement*, http://coursesa.matrix.msu.edu/~hst306/documents/huron.html (accessed 23 October 2013).

48 The assertion of individual autonomy in the face of overwhelming systemic power was also a theme of existentialism, which was popular at the time.

49 These reformist tendencies among civil servants and politicians have been emphasised by A. Marwick, *The Sixties: Cultural Revolution in Britain, France, Italy, and the United States, c. 1958–c. 1974* (Oxford, 1998), 13, 63, and for the Netherlands by J. Kennedy, *Nieuw Babylon in aanbouw. Nederland in de jaren zestig* (Amsterdam, 1995), 207–217; and C. Tasman, *Louter Kabouter. Kroniek van een beweging 1969–1974* (Amsterdam, 1996), 22, 29.

50 See Duivenvoorden, *Magiër van een nieuwe tijd* (n. 45 above). Grootveld can be seen performing in several clips on YouTube.

51 Happenings had been introduced in 1959 from the American art scene, but like many aspects of the post-war avant-garde, they had antecedents in pre-World War I futurism, Dadaism and surrealism (see Lucie-Smith, *Art today* [n. 28 above], 391–396). Grootveld himself had already staged public performances in the canals of Amsterdam in the 1950s.

52 See for the White Bicycle Plan and the White Smokestacks Plan, Van Duijn, *Provo* (n. 46 above), 43–45 and 148–150.

53 C. Tasman, *Louter Kabouter*, chs. 6 and 7.

54 See Schumacher's bestseller, *Small is Beautiful: Economics as if People Mattered* (London, 1973), esp. chapters I.5 and II.5, in which he summarises ideas that he developed during the 1960s. Schumacher could draw on many earlier thinkers about a technology that was more attuned to human needs and ecological responsibility, such as Kropotkin, Mumford and Gandhi. For an overview, see J.H.J. van der Pot, *Steward or Sorcerer's Apprentice*: *The Evaluation of Technical Progress, a Systematic Overview of Theories and Opinions* (Delft, 1994), 907–939.

55 Overview of his activities that year: Hummelink, *Après nous* (n. 30 above), 367–368.

56 Reprinted in Van Duijn, *Provo* (n. 46 above), 132–135.

57 Hummelink, *Après nous* (n. 31 above), has thoroughly explored Constant's changing views of the avant-garde. See esp. 1–2; 288–291.

58 Constant, 'New Babylon – Ten Years On' (1980) reprinted in Wigley, *Constant's New Babylon* (n. 30 above), 232–236.

59 The last two quotes are from from Wigley, *Constant's New Babylon* (n. 30 above), 70–71.

60 Ibid., 71.

61 See the overview in C. Mitcham, *Thinking through Technology: the Path between Engineering and Philosophy* (Chicago, 1994), 40–61.