Technoetic Arts: A Journal of Speculative Research Volume 3 Number 2.
© Intellect Ltd 2005.
Article. English language. doi: 10.1386/tear.3.2.73/1

The Fun Palace: Cedric Price's experiment in architecture and technology

Stanley Mathews *Hobart and William Smith Colleges*

Abstract

This article examines how in his influential 1964 Fun Palace project the late British architect Cedric Price created a unique synthesis of a wide range of contemporary discourses and theories, such as the emerging sciences of cybernetics, information technology, and game theory, Situationism, and theater to produce a new kind of improvisational architecture to negotiate the constantly shifting cultural landscape of the postwar years. The Fun Palace was not a building in any conventional sense, but was instead a socially interactive machine, highly adaptable to the shifting cultural and social conditions of its time and place. This constantly varying design for a new form of leisure center began in 1962 as a collaboration between Cedric Price and avant-garde theater producer Joan Littlewood. Littlewood had conceived of a new kind of theater designed to awaken the passive subjects of mass culture to a new consciousness. Her vision of a dynamic and interactive theater provided the programmatic framework on which Price would develop and refine his concept of an interactive, performative architecture, adaptable to the varying needs and desires of the individual. By assembling their own pedagogical and leisure environments using cranes and prefabricated modules in an improvisational architecture, common citizens could escape from everyday routine and serial existence and embark on a journey of learning, creativity, and individual fulfillment. The Fun Palace was one of the more innovative and creative proposals for the use of free time in postwar England. It also provided a model for the 1976 Centre Pompidou in Paris.

Keywords

Cedric Price
Fun Palace
Joan Littlewood
architecture
improvisation cybernetics.

London in the 1960s witnessed one of the most unusual architectural projects ever conceived. 'Swinging London' was already a Mecca of some of the most exciting developments in popular culture, from the counterculture anthems of the Beatles and Rolling Stones, to the psychedelic fashions of Carnaby Street and the tantalizing scandal of Mary Quant's miniskirts. A decade before Andy Warhol began to paint soup cans, the artists of London's Independent Group had reveled in the vernacular imagery of Pop Art. Not to be outdone, architects joined the fray. Young architects in the Archigram group began to produce psychedelic, science

fiction images of self-constructing plug-in cities and spidery buildings that would walk among the ruins of a post-apocalyptic world. Yet these outlandish ideas for new architectures were inspired by the work of the late British architect, Cedric Price, and specifically, on his watershed project for the London Fun Palace. Price's Fun Palace was to be unlike any building before that time, but set the stage for architecture for years to come. It was

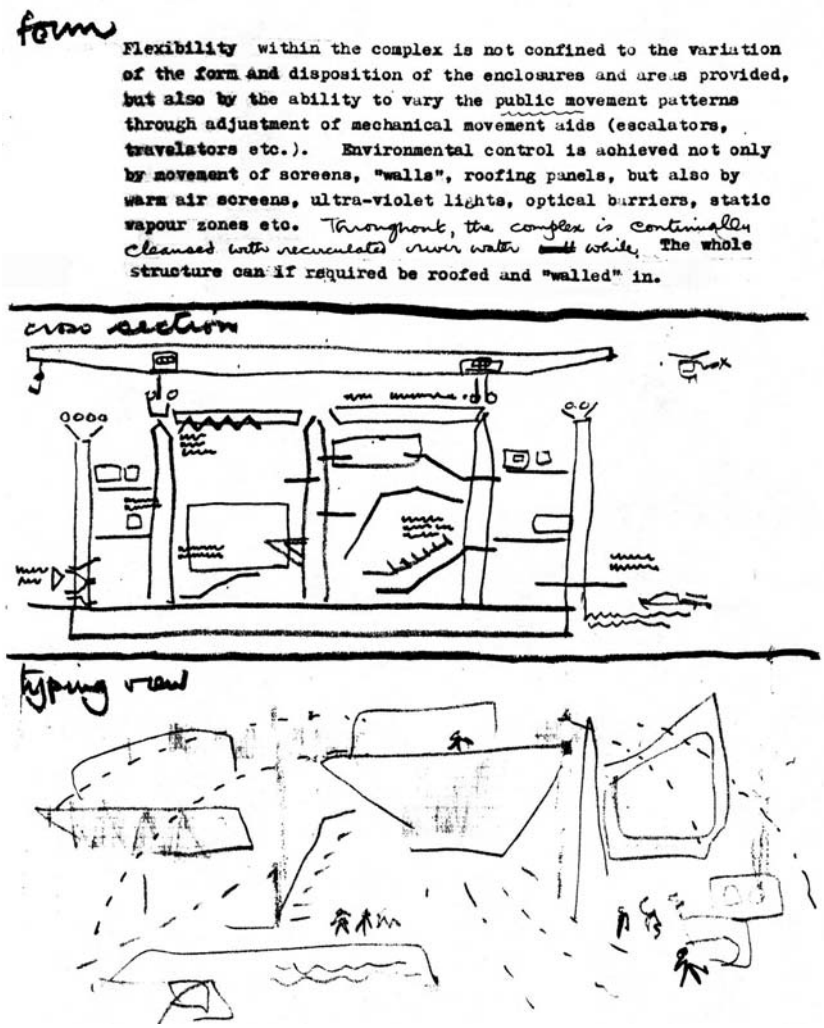

Figure 1. Cedric Price, Fun Palace, sketches and notes, c. 1964. Cedric Price Archives, Canadian Centre for Architecture, Montreal. Price worked with avant-garde theater producer Joan Littlewood to create an improvisational architecture endlessly in the process of construction, dismantling, and reassembly. The Fun Palace was to be a "university of the streets," providing educational opportunities in the guise of leisure entertainment.

the inspiration for the Pompidou Centre in Paris, and it has continued to inspire architects in the decades since.

The Fun Palace would challenge the very definition of architecture, for it was not even a conventional 'building' at all, but rather a kind of scaffold or framework, enclosing a socially interactive machine - a virtual architecture merging art and technology. In a sense, it was the realization of the long-unfulfilled promise of Le Corbusier's claims of a technologically informed architecture and the 'machine for living'. It was not a museum, nor a school, theatre, or funfair, and yet it could be all of these things simultaneously or at different times. The Fun Palace was an environment continually interacting and responding to people. By the mid-1960s it had become a vast social experiment and a *cause celebre* for scores of London intellectuals who saw in it the germ of a new way of building, thinking, and being.[1] People as diverse as Buckminster Fuller, Yehudi Menuhin and Tony Benn volunteered their services to the project.

The original idea for the Fun Palace was the brainchild of the late avant-garde theatre producer Joan Littlewood. As a young actress, she stayed only one step ahead of the police in her early work with her revolutionary agit-prop street performances with the Red Megaphones. In the 1950s, she founded the Theatre Workshop in London's East End, and finally enjoyed a string of successes in the West End theatre district with such hits as *A Taste of Honey* and *Oh! What a Lovely War.* Yet, Littlewood's heart had always remained with the ad hoc improvisational street theatre of the early agit-prop days. Her enduring dream had been to create a new kind of theatre - not of stages, performers, and audiences, but a theatre of pure performativity and interaction - a synthesis of London's public gardens, its music

1. The apparent affinity with the work of the Situationist International is hardly accidental. Both Joan Littlewood's ideas and those of the SI grew out of common ideological and artistic roots. Moreover, both Price and Littlewood were close friends with Scottish poet and Situationist Alexander Trocchi, who briefly joined the ranks of consultants and collaborators on the Fun Palace. The 'spontaneous university' described in Trocchi's *Project SIGMA* manifesto, 'Invisible Insurrection of a Million Minds,' may well have been inspired by Price and Littlewood's plans for the Fun Palace.

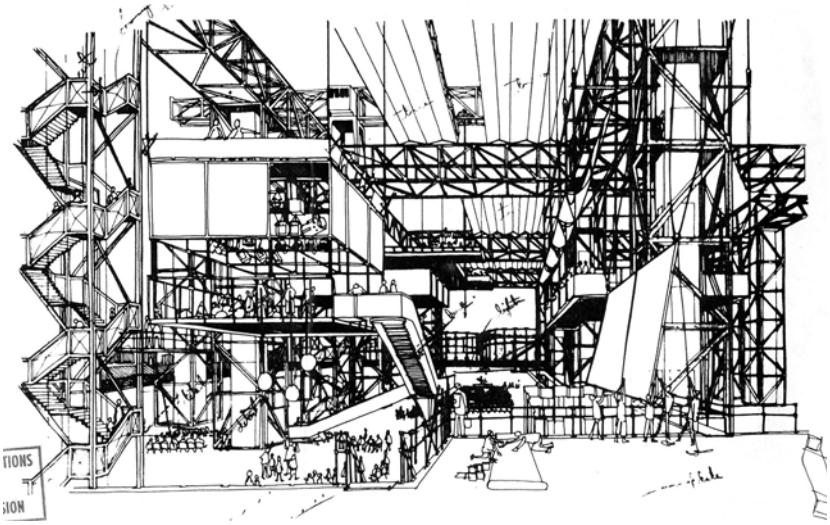

Figure 2. Cedric Price, Fun Palace, section, c. 1964. Cedric Price Archives, Canadian Centre for Architecture, Montreal. Pivoting escalators and moveable wall panels would permit endless variation and flexibility.

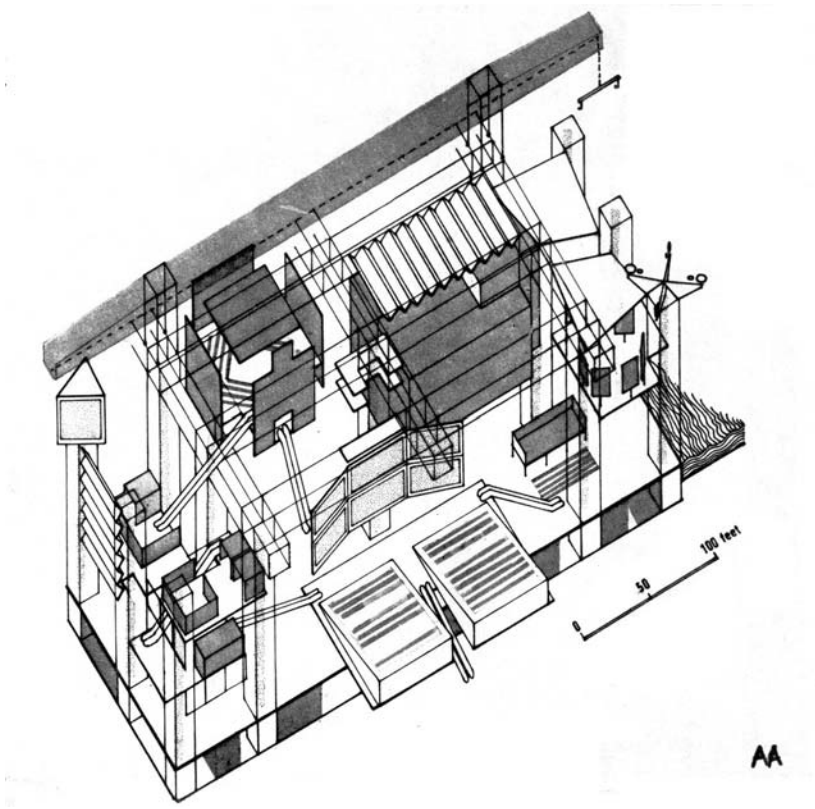

Figure 3. Cedric Price, Fun Palace, axonometric section, c. 1964. Cedric Price Archives, Canadian Centre for Architecture, Montreal. Cedric Price and structural engineer Frank Newby designed a structural matrix with overhead cranes to allow assembly of prefabricated modules.

halls, and the life of its neighbourhoods and streets. She envisioned an ideal realization of Brechtian theatre as a place of cultural bricolage where people could experience the transcendence and transformation of the theatre, not as audience, but as players and active participants in a drama of self-discovery.

The time was right for Littlewood's idea, for the postwar era was a prolonged identity crisis for Britain and the British. Since the end of the Second World War, British society and economy had changed dramatically. As the pomp and circumstance of empire faded, Labour leader Aneurin Bevan's Welfare State reforms placed new emphasis on the common person, and new educational policies made higher education available to people of all classes. At the same time, Britain was struggling to keep pace in an increasingly competitive world market. Redundancy, factory closures, and automation meant that fewer people would be employed, and those who had jobs would work shorter hours. As the need for unskilled labour decreased sharply, it was clear that new kinds of workers would be needed in the future - more intellectually agile, and able to learn new and as yet unforeseen skills.

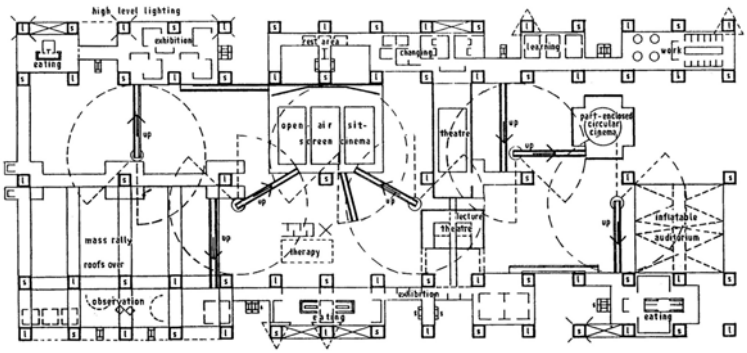

Figure 4. Cedric Price, Fun Palace, plan, c. 1964. Cedric Price Archives, Canadian Centre for Architecture, Montreal. This plan shows the structural "tartan grid" that Price and Newby designed. There is no main entry, and people could have entered at any point. Stair towers and columns are located along the sides, while the centre of the structure is left open and unobstructed. In these centre bays, pivoting stairs and escalators provide access to the upper levels.

Leisure emerged as a major political, economic, social, and architectural issue in Britain at the time. British social critics and politicians alike sought (sometimes in rather patronizing and Puritanical spirit) to channel working-class free time away from idleness and unacceptable forms of leisure (such as crime, alcoholism and political revolution), towards new constructive and productive uses. Depending on their political affiliation, they should enjoy newly organized recreational, educational opportunities (the Liberals) or consumerist ventures (the Conservatives). A 1963 editorial in the *New Statesman*, entitled 'The Terrible Challenge of Leisure' spoke to lingering suspicions about free time in the hands of the working classes: 'Leisure is still confused with idleness - and sin. Too many of us still uncritically accept Dr Johnson's axiom: "A man is never so innocently employed as when making money."'[2] The 1959 Labour Party platform predicted that workplace automation would soon lead to a predominantly leisure-based economy for Britain:

> The post-war Labour Government proved that, in a properly planned society, it is possible to guarantee full employment; and, as automation spreads, it will also become possible, while maintaining full employment, steadily to lessen the number of hours that most people have to work.
>
> These two great advances will mean a drastic shift in our social thinking. Once full employment is again secured, the emphasis will increasingly be not on jobs for all but on leisure for all - leisure *and how to use it.*[3]

Littlewood thought of the Fun Palace as a creative and constructive outlet for this expected windfall of leisure. She saw it as a way to open the British public to new experiences and the possibilities of lifelong learning and discovery. She spoke directly to the new economic conditions and the anticipa-

2. 'The Terrible Challenge of Leisure,' *New Statesman* 66 23 August, 1963, p. 1.
3. The Labour Party (1959) *Leisure for Living*, London, p. 5.

tion of the leisure society in a 1964 article in *The New Scientist* announcing her idea for the Fun Palace:

> Politicians and educators, talking about increased leisure, mostly assume that people are so numb, or servile, that the hours in which they earn money can be made little more hygienically bearable while a new awareness is cultivated during the hours of leisure . . . In London we are going to create a university of the streets - not a gracious park, but a foretaste of the pleasures of the future. The 'Fun Arcade' will be full of the games that psychologists and electronics engineers now devise for the service of industry, or war. Knowledge will be piped through jukeboxes ... An acting area will afford the therapy of theatre for everyone: men and women from factories, shops and offices, bored with their daily routine, will be able to re-enact incidents from their own experience, wake to a critical awareness of reality ... But the essence of the place will be informality - nothing obligatory - anything goes. There will be no permanent structures. Nothing is to last more than ten years, some things not even ten days: no concrete stadia, stained and cracking, no legacy of noble contemporary architecture, quickly dating ... With informality goes flexibility. The 'areas' that have been listed are not segregated enclosures. The whole plan is open, but on many levels. So the greatest pleasure of traditional parks is preserved - the pleasure of strolling casually, looking at one or other of these areas or (if this is preferred) settling down to several hours of work-play.[4]

4. Littlewood, J.'A Laboratory of Fun,' *The New Scientist* 14 May 1964, pp. 432-3.

Littlewood knew that that if she ever hoped to realize her dream, no conventionally-minded architect would be capable of designing such a place. In 1962, she met the young architect Cedric Price, whose interests had taken him far from the conventions of international style modernism to embrace the ideas of Buckminster Fuller, the art of the Independent Group, and emerging technologies of cybernetics, game theory, and computers. Price had already begun to make a name for himself as an architectural renegade, although he had as yet built little, save for the tensile Aviary at the London Zoo, whose graceful curves were modeled after the flight patterns of birds. Littlewood explained her ideas to Price, who listened eagerly and rose to her challenge. He recognized that her idea would require a radically new kind of interactive and variable architecture, highly adaptable to the rapidly shifting cultural landscape of England now and in the future. While developing his design ideas for the Fun Palace, he described his own visions for such a place:

> Old systems of learning are now decayed. The new universities will be of the world and in each man. The old clubs and condescension no longer operate .
>
> It is necessary to extend the frontiers of the minds. To know how to work out a problem for oneself ... The variety of activities cannot be completely forecast; as new techniques and ideas arise they will be tried. The structures themselves will be capable of changes, renewal and destruction. If any activity defeats its purpose it will be changed. The elimination of the word 'success' is

> important. The place is a constantly changing experiment in which the old human categories are forgotten, e.g. brilliant, superior, stupid, dull. Here each person can discover in himself new skills and increase his enjoyment of life. Each man and woman has one life, one mind, one body, unique and 100% unrepeatable. Each is capable of what was once called genius.[5]

The many notes and manifesto drafts that Price and Littlewood produced indicate that the Fun Palace was intended explicitly as a response to the social and economic crises that faced post World War Two England, and especially to the way in which technology was changing the distinctions between work, education, and leisure. With a sense of urgency, Price and Littlewood wrote,

> Automation is coming. More and more, machines do our work for us. There is going to be yet more time left over, yet more human energy unconsumed. The problem which faces us is far more than that of the 'increased leisure' to which our politicians and educators so innocently refer. This is to underestimate the future. The fact is that as machines take over more of the drudgery, work and leisure are increasingly irrelevant concepts. The distinction between them breaks down. *We* need, and we have a right, to enjoy the totality of our lives. We must start discovering *now* how to do so.[6]

In approaching the design of the Fun Palace, Price began by considering Joan Littlewood's 'theatrical' brief as a problem not of static and solid 'building', but in terms of a new kind of active and dynamic architecture which would permit multiple uses and which would constantly adapt to change. It would be a network of multiple events, a space of oscillation between incongruous activities simultaneously played out like some Dada performance. Spaces should be endlessly varied in size, shape, lighting and accessibility.

Rather than seek design ideas from the conventional repertoire of modernist objects and spaces, he considered the programme in temporal terms, and sought the solution within the problems it posed. The Fun Palace would have to be an entity whose essence was continual change, which permitted multiple and indeterminate uses. His designs began to describe an improvisational architecture of constant activity, in a continuous process of construction, dismantling, and reassembly. It would be a vast framework where the working - class population of East London could assemble their own learning and leisure environments, where Littlewood's dream might be realized, where people might escape from everyday routine and serial existence and embark on a journey of creativity and personal development. Price thought of the Fun Palace in terms of process, as events in time rather than objects in space, and embraced indeterminacy as a core design principle.[7]

Price's first drawings presented the puzzling spectacle of a three-dimensional matrix with bits and pieces stuck into it here and there. It was a scaffold of constant activity which would never reach completion, because the

5. Draft of Fun Palace Booklet (1964?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives, Canadian Centre for Architecture, Montreal.
6. Draft of Fun Palace pamphlet, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
7. To both Price and to Henri Bergson life processes are essentially creative, not aimed at a particular goal or telos, but an unceasing source of novelty without ultimate objective.

ultimate plan, programme and goal were never finite and always changing. He thought of it as a skeletal framework, like a Meccano set or garden trellis, within and around which the activities might grow and develop. He described it as resembling,

> a large shipyard in which enclosures such as theatres, cinemas, restaurants, workshops, rally areas, can be assembled, moved, re-arranged and scrapped continuously. Its mechanically operated environmental controls are such that it can be sited in a hard dirty industrial area unsuited to more conventional types of amenity buildings.[8]

In her memoirs, Littlewood recalled her first glimpse of Price's initial design sketches:

> The drawing was almost inexplicable. I could make out filigree towers, varied areas at different levels, there were galleries, gantries and escalators - it looked airborne.
>
> 'Can it be kept clean?'
>
> 'It's a self-washing giant.'
>
> 'And those things?'
>
> 'Moving walkways and catwalks. No, you're pointing at the radial escalators. They can be steered.'
>
> 'It's not easy to read.'
>
> 'It's a mobile, not a watercolour. And I am rather busy.'[9]

As the design progressed, Price and Littlewood remained circumspect and said little about the project, but as word of the Fun Palace gradually leaked out, architecture and design magazines began requesting details and plans of the building. Price initially refused all such requests, claiming to puzzled questioners that there was no 'building', since it was really only 'a kit of parts, not a building. I doubt whether it will ever look the same twice'.[10] Littlewood and Price soon realized that if the Fun Palace were ever to become a reality they would need a great deal of help and support.

Price sought the expertize of his friend and structural engineer Frank Newby with whom he had worked on the London Aviary.[11] Newby and Price devised a structural system consisting of fourteen parallel rows of service towers, sixty - feet apart, forming two sixty - foot side 'aisles' flanking a 120 - foot wide central bay. The resulting plan was a pattern of interlocking squares of different sizes which Newby referred to as the 'tartan grid'. providing both stability and programmatic flexibility. Stairs, elevators, electrical cables, and mechanical ducts were located in the square towers, leaving the wide bays free of obstructions. The structural frame would be 780 - feet long and 360 - feet wide. There would be two overhead gantry cranes spanning the full 240-foot width of the central bays, which could travel the entire length of the structure to move modular elements into place.[12]

8. Cedric Price, memorandum, (1964), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
9. Littlewood, J. (1995) *Joan's Book: Joan Littlewood's Peculiar History as she Tells It* , London: Minerva, p. 702.
10. Littlewood, J. (1995) *Joan's Book: Joan Littlewood's Peculiar History as she Tells It* , London: Minerva, p. 702.
11. Frank Newby, interview by author, tape recording, London, January 22, 1999.
12. Ibid.

Pivoting escalators and moving walkways would provide internal circulation. A membrane roof suspended from a cable grid covered most of the central space, with operable 'skyblinds' over the central 'rally area'. Between the roof and the ground level in the central 120 - foot bays, floors, walls, and modules could be lifted into place by the overhead cranes that ran the length of the building. The users could improvise and change their own spaces, using the cranes to assemble prefabricated walls, platforms, floors, stairs, and ceiling modules. The internal structures and elements consisted of plastic and aluminum inflatable and standardized modular units which could be positioned and relocated anywhere within the overall structure. There would also be a complex system of environmental controls, generating 'charged static-vapour zones, optical barriers, warm-air curtains, and fog dispersal'.[13] Virtually every part of the structure was to be variable, with the overall structural frame being the fixed element.

By early 1963, Littlewood and Price began actively recruiting more people to help on the project. The Fun Palace had hit a nerve and seemed to be the right idea at the right time. Some people were interested in the technical challenges of such a place, while others were fascinated with its creative or social implications. Price and Littlewood set up a series of consultant task forces to begin the process of programming and planning. The Fun Palace project began to resemble a modern, secular version of the collaborative coming-together of various disciplines reminiscent of the nineteenth-century visions of the construction of medieval cathedrals. The result was a meta-synthesis of architecture, theatre, technology, and cybernetics, which would become increasingly central as the project progressed.

Within a few months, the list of Fun Palace consultants included such luminaries as Labour Members of Parliament Anthony Wedgewood Benn, Tom Driberg, and Ian Mikardo, engineer Frank Newby, utopian architect Yona Friedman, cybernetician Gordon Pask, Tony award-winning producer Robert Whitehead, iconoclastic journalist and broadcaster Malcolm Muggeridge, and psychiatrist and author Morris Carstairs, who had given the 1962 BBC Reith Lectures[14] on the challenges facing England in the twentieth century.[15]

Since the Fun Palace programme would be ad hoc, determined by the users, and like a swarm or meteorological system, its behaviour would be unstable, indeterminate, and unknowable in advance. Yet, even without a specific programme or objective, the Fun Palace would have to self-regulate, and its physical configuration and operations would need to anticipate and respond to probable patterns of use. An unspecified programme and indeterminate form are antithetical to normative architectural practice, which requires specificity of programme and physical configuration. But Price found conventional practice in architecture and planning to be overdetermined and resulted in 'the safe solution and the dull practitioner,' forcing architects into the trap of trying to 'get it right the first time'.[16] He often claimed that his own creativity was 'generated and sustained through a delight in the unknown'.[17]

13. Cedric Price, notes, January 28, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
14. Carstairs, M. (1962) *This Island Now: The Surge of Social Change in the Twentieth Century-The BBC Reith Lectures 1962* New York: Basic Books).
15. 'Fun Palace consultants,' (1964?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
16. Price, C. (1984) *Works* II, London: Architectural Association, 1984 .p. 54.
17. Price, C. (1984) *Works* II, London: Architectural Association, 1984 .p. 54.

Price realized that the solution to the problems posed by the Fun Palace lay in the new fields of cybernetics, game theory, and computer technologies. The Fun Palace would need to be able to 'learn' behavioral patterns and 'plan' for future activities by modelling these according to the cybernetics principles and game theory strategies. It could thus anticipate unpredictable phenomena, because instead of a determined programme, it relied on probability to adjust its programme to accommodate changing trends and events. However, Price was also modest enough to recognize the limits of his own abilities. This is why he and Littlewood began to recruit a small battalion of cyberneticians and scientists, who knew how to go about turning theories into the control systems which would be essential to the success of the project.

Norbert Wiener's pioneering theories in the field of cybernetics provided the basis for a new theory of the behaviour of unstable systems.[18] Although cybernetics is commonly associated with computers and information technology, Wiener felt that it was really a model of the natural processes which permit all living things to actively maintain the conditions of life in a changing world. He cited French physiologist Claude Bernard, who in the early nineteenth century had described the function of feedback systems that enabled living organisms to maintain homeostasis despite unstable environmental conditions. Cybernetics allows dynamic systems to self-regulate and self-correct without end-state or definite telos. The performative objectives of cybernetics are in reality fluid criteria and are as subject to modification as is the system itself. The principles of cybernetics would prove to be crucial to the ability of the Fun Palace to adapt to a constantly evolving programme. In the Fun Palace, cybernetics would regulate the short - term behaviour of day-to-day activities while game theory provided a means of establishing long-term performative strategies.

Game theory, developed by John von Neumann in the 1920s, does not merely respond to changing conditions and suggest short term course corrections, but actually indicates long term strategies and modifications to the performative guidelines of complex systems, thus transcending the temporal limitations of cybernetics. In accounting for the indeterminate and synergistic interaction of factors, game theory resembles the dynamic behaviour of complex social and economic systems. Game theory and cybernetics are not mutually exclusive and can function in parallel within a highly indeterminate system.

Von Neumann's mathematical theory of games also provided the basis for the logical codes of the modern electronic computer, which have come to be known as the computer programme. As early as 1927, Alan Turing suggested that alterations of the sequence of von Neumann's operating codes would create a virtual machine which could be made to emulate the behaviour of many different devices.[19] A virtual machine can behave variously as a typewriter, drafting board, or whatever other 'virtual' functions software engineers can dream up for it. A 'virtual architecture' like the Fun Palace, has no singular programme, but may be reprogrammed to perform an endless variety of functions. By providing methodologies for coping with

18. Wiener, N. (1948) *Cybernetics: Or the Control and Communication in the Animal and the Machine* New York: John Wiley, p. 36

19. von Neumann, J. *Computer and Brain,* New Haven: Yale University Press, p. 70.

indeterminate systems evolving in time, cybernetics and game theory established the groundwork for information and computer technologies as well as for virtual architecture.

The 'programme' of the Fun Palace was therefore not the conventional sort of diagram of architectural spaces, but much closer to what we understand as the computer programme: an array of algorithmic functions and logical gateways that control temporal processes in a virtual device. The three-dimensional structure of the Fun Palace was the operative space-time matrix of a virtual architecture.

A major turning point for the Fun Palace project occurred in the spring of 1963, when Littlewood first learned of Gordon Pask. Pask, the 'doyen of Romantic Cyberneticians', had already begun to make a name for himself as head of the British cybernetics foundation, Systems Research Ltd.[20] Littlewood and Price wrote to Pask to ask if he would contribute his expertize in the still new field of cybernetics to the project.[21] It turned out that Pask had been a long-time fan of Littlewood's Theatre Workshop, and he wrote back offering to help out on the Fun Palace, commenting that he was fascinated with the project, which seemed to him to be more about 'seeking the unfamiliar, and ultimately transcending it' than conventional 'fun'.[22]

Pask agreed to join the Fun Palace team and organized the Fun Palace Cybernetics Subcommittee, and along with Littlewood and Price, Pask became the third major personality behind the Fun Palace.[23] To Pask, the central theme of cybernetics was the study of the ways in which complex biological, social or mechanical systems organize themselves, regulate themselves, reproduce themselves, evolve, and learn.[24] He regarded cybernetics not as a unilateral system of one-way reactivity, but as a two way 'conversation' between entities.[25] To Pask, cybernetics held particular promise for architecture and design, which he saw as essentially interactive (or 'conversational') systems of human interaction.[26] Architecture, argued Pask, is 'only meaningful as a human environment. It perpetually interacts with its inhabitants, on the one hand serving them and on the other hand controlling their behaviour'.[27] In other words, Pask believed that through cybernetic design, the architect could assume the role of social engineer.

Pask gradually shifted the focus of the Fun Palace from Brechtian theatre towards cybernetics, interactivity, and social control.[28] The latest advances in cybernetic technology appeared to hold endless promise as a means of reconciling 'bricks and mortar' with the multivalent and ever-changing functions and programmes of the Fun Palace. Price and Littlewood's unbridled optimism for science and technology may seem ill-informed and charmingly naïve, yet at the time, many people firmly believed in the limitless possibilities that science and technology promised for the betterment of mankind, and they eagerly welcomed Pask's contributions. Still, Price didn't exactly agree with Pask's notion of the architect as social engineer. Instead, he trusted that the cybernetic control systems would enable him or any other paternal, controlling force to withdraw from the scene entirely. He hoped that an autonomous cybernetic control system would allow users to shape their own environments and their own goals

20. Gordon Pask was one of the founding fathers of cybernetics, developed in the 1940s by Norbert Wiener. Pask's book *An Approach to Cybernetics* (1961) is still one of the most accessible introductions to the subject. In 1953, with Robin McKinnon-Wood, Pask founded System Research Ltd, a non-profit research organization which worked with the United States Air Force, Ministry of Defence, Department of Education and Science and the Social Science Research Council. His research teams worked on skill acquisition, styles, and strategies of learning, learning in groups, knowledge and task analysis, processes of design, decision-making, problem-solving, and learning to learn. By the 1960s Pask's many achievements and colorful personality had caught the attention of the popular press. He became known as 'the Cambridge scientist who never sleeps' because of his habit of working non-stop on problems once his interest was caught. His views were sought on a range of topics to do with the impact of computers and automation. Littlewood had met mathematician Maurice Goldsmith of the International Science Policy Foundation in early 1963 on a plane from Prague, and through him, met Gordon Pask. See Littlewood, *Joan's Book*, p. 637.

21. Price to Gordon Pask, June 9, 1963, Fun

according to their particular wishes and desires, certainly not his or those of some elite intelligentsia.

Littlewood too saw the role of cybernetics in the Fun Palace as a symbol of the technological emancipation of society:

> Can we move on from the half-light of our prehistory, snap out of our tribal attitudes and obsolete systems, and quickly devise a world government - a government infinitely more sensitive to human desire than any there have been, a government that desires its own power in order to draw out the creative potential in all men?
>
> The Greek city-state was small enough for this to happen, but Athenians' 'freedom' was for a minority: it was based on the labour of a caste of slaves who had few rights. Our slaves are robots: in the age of automation all men can be free. It is time, therefore, for all to start practising an art new to most of us - living.[29]

As the concept of the Fun Palace gradually shifted towards cybernetics, planners placed more importance on quantification and mathematical models based on statistics, psychology, and sociology. In a 1964 memorandum, Pask enumerated the specific areas where mathematical models were needed:

1. Fun Palace and environment, visiting patterns.
2. Mechanical and architectural considerations: available capacities, etc.
3. Provision of specific participant activities, interactive activities.
4. Individual participant situations: teaching machines, etc.
5. Controlled group activities.
6. Communications and information systems.
7. Specific conditioning systems: environmental variables for different users.
8. Cybernetic art forms.[30]

Pask concludes his list with a rather frightening proposal for one additional mathematical model:

9. *Determination of what is likely to induce happiness.* [my emphasis] In particular the issues of philosophy and theory and principle involved in determining what is likely to induce happiness and what role the organisation should play in relation to the leisure of an automated society.[31]

Pask's ominous plan to determine 'what is likely to induce happiness' should have alerted Littlewood that the Fun Palace was in danger of becoming an experiment in cybernetic behaviour-modification. However, in a 1964 letter to Pask, she actually agreed with his goals, and seemed naively oblivious to the possibility that the project might become a means of social control:

Palace document folio DR1995:0188:526, Cedric Price Archives.

22. Littlewood, J. (1995) *Joan's Book: Joan Littlewood's Peculiar History as she Tells It* , London: Minerva, p. 703.
23. It is telling that in his writings, Pask frequently cited the Fun Palace as an example of effective virtual architecture.
24. Pask, G. (1961) *An Approach to Cybernetics* (New York: Harper Brothers, p. 11.
25. I am indebted to Dr. Andrew Pickering for his insight into Pask's concept of cybernetics as 'conversation'.
26. Pask, G. (1961) 'The Architectural Relevance of Cybernetics,' *Architectural Design* 39 (September 1969): 494. It is telling that in this article, Pask cites the Fun Palace as an example of effective cybernetic design.
27. Pask, G. (1961) 'The Architectural Relevance of Cybernetics,' *Architectural Design* 39 (September 1969): 494.
28. Cedric Price, (late 1963?), 'Notes on Cybernetic Aspects,' Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
29. Littlewood, notes on Fun Palace, February 18, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
30. Fun Palace Cybernetics Committee, report, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

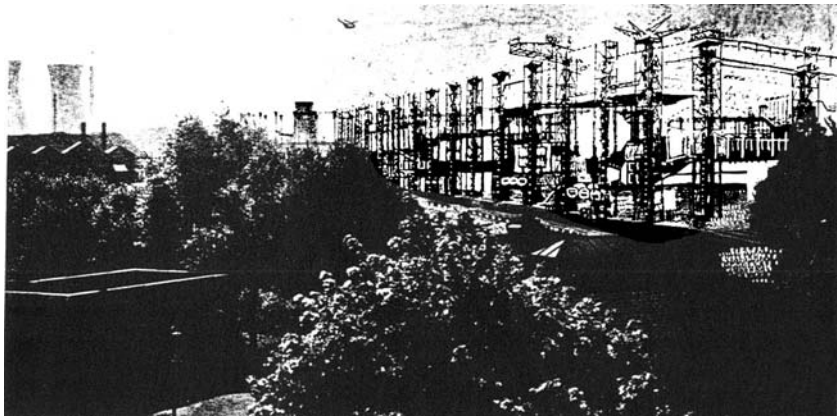

Figure 5. Cedric Price, Fun Palace, photomontage, c. 1964. Cedric Price Archives, Canadian Centre for Architecture, Montreal. This photomontage shows the Fun Palace at a site at Mill Meads in the Lea River Valley. This proposed location for the ill-fated Fun Palace will be the site for the Aquatics Centre of the 2012 London Olympics.

> In this project we also have a microcosm of a society, and in society a man's environment is chiefly determined by other men. The operators in the social system are like mirth and sensuality. Its operations are actions or intentions or changes in the shade of joy and grief. We can to some extent control these transformations, though, in this case, we and our machinery act as catalysts and most of the computation is done as a result of the interaction taking place between members of the population, either by verbal discourse, or by the competitive utilization of facilities, or by cooperation to achieve a common objective. The paradigm for the control of such a population is the maturation of a child, the subtle interplay of action and the existing language to produce thought, and the development of meaning to control action in society.[32]

That the Fun Palace would essentially be a vast social control system was made clear in the diagram produced by Pask's Cybernetics Subcommittee, which reduced Fun Palace activities to a systematic flowchart in which human beings were treated as data. The diagram produced by the committee described the Fun Palace as a systematic flowchart. Raw data on the interests and activity preferences of individual users was gathered by electronic sensors and response terminals, and then assigned a prioritized value. This data would then be compiled by the latest IBM 360-30 computer to establish overall user trends, which would in turn set the parameters for the modification of spaces and activities within the Fun Palace. The building would then relocate moveable walls and walkways to adapt its form and layout to changes in use. The process would constantly refine itself by feedback cycles which compared the responses of people coming in ('unmodified people') with those of people leaving ('modified people').

Today, the idea of 'unmodified' and 'modified' people makes us recoil in horror. Yet, in the 1960s, the prevailing and naïve faith in the endless bene-

31. Ibid.
32. Littlewood to Gordon Pask, February 26, 1964. Fun Palace document folio DR1995:0188:526, Cedric Price Archives.
33. Consultants list, Fun

fits of science and technology was so strong that the Orwellian implications of 'modified people' went largely unnoticed. At the time, the 'social control' aspect of the Fun Palace was seen as a constructive contribution to society, and Price and Littlewood welcomed Pask's cybernetic model as the dominant organizational model for the Fun Palace as the project developed. Their hope was that the cybernetic control system would be so automatic and transparent as to allow more or less direct control by the users themselves.

Of the many committees and subcommittees working the Fun Palace, the Cybernetics committee was certainly the most productive and met frequently to formulate plans and ideas. This committee was comprised of various experts in relevant fields of cybernetics, sociology, and psychology, as well as unspecialized people who might contribute new ideas.[33] In addition to Pask, other scientists joined the committee, including Lord Ritchie Calder[34] (whose son Nigel was editor of the *New Scientist*) and Professor Joseph Rotblat,[35] who had consulted with Littlewood on the 1946 Theatre Workshop production of the play, *Uranium 235*. The roster also included artist and cybernetician Roy Ascott, historian Asa Briggs, artist Reg Butler, psychologist John Clark, two Members of Parliament (Mikardo and Driberg), Pask's partner Robin McKinnon-Wood, and sociologist Michael Young.[36]

Price, Littlewood, and Pask considered that the day-to-day configuration and activities of the Fun Palace could be controlled by cybernetic analysis of usage patterns. They proposed seven administrative sections to oversee and maintain the Fun Palace. [37] Yet, again, the intent was that administration would be passive and supportive, and that the cybernetic controls could directly monitor the patterns of use and desire, thus allowing the building to control and reprogramme and control itself.

The Cybernetics Subcommittee outlined plans to use an array of sensors and inputs that would provide real-time feedback on use and occupancy to computers which would allocate spaces and resources according to projected needs. Space allotted for a popular event would grow, then shrink once interest had waned. Thus, the Fun Palace would be a sentient entity, a virtual architecture which could learn, anticipate, and adapt. The latest computerized punch card system would track and allot resources for various activities. The centres of the cards would be punched to indicate specific activities, while the perimeter holes would be punched to indicate the size, location, quality, and quantity of the activity. A second system would also record and allocate resources such as television and communications requirements, noise output, acoustic requirements, light levels, probable uses of electricity and heating, ventilation, and air-conditioning.[38]

The organization of the Fun Palace, which was outlined by the Cybernetics Subcommittee in a 1964 memo, was a division into six organizational zones.[39] Zone One was dedicated to the various types of teaching machines that Pask and his Systems Research team had already developed.

Palace document folio DR1995:0188:526, Cedric Price Archives.

34. Lord Ritchie Calder was a scientist, journalist, and educator, born in Forfar, Scotland. Specializing in the spread of scientific knowledge to lay readers, he wrote numerous books including *Men against the Desert* (1951), *Men against the Jungle* (1954), *Living with the Atom* (1962), and *The Evolution of the Machine* (1968). He was made a life peer in the House of Lords in 1966. In 1967, he joined the Planning Committee for the Open University.

35. Born in Poland, Joseph Rotblat was a nuclear physicist and Nobel Laureate, active in England. He briefly worked on the atomic bomb as part of the Manhattan Project. When Rotblat learned in 1944 that the Germans had abandoned their own atomic bomb project, he left Los Alamos and returned to England.

36. In 1967, Asa Briggs, the vice chancellor of the University of Cambridge, joined the Open University Planning Committee. Sociologist Michael Young co-authored the 1957 book, *Family and Kinship in East London* with Peter Willmott. In 1962, Young also wrote a seminal article in which he first proposed the idea of the Open University, taking advantage of educational broadcasting to make higher education accessible to everyone. See Young, M (1962) 'Is

In addition, 'real life' television feeds from coal mines, steel mills, factories, zoos, farms, House of Commons, police and hospital emergency rooms gave viewers the chance to observe such environments unedited (anticipating 'real life' television). In Zone Two, users could participate in new forms of expression, including but not limited to theatre, music, and dance. The cinemas and studios in Zone Three gave young directors a chance to make their own films, while in the Zone Four laboratories, users could conduct their own scientific experiments. Zones Five and Six provided studio space for painting and sculpture. The list was not exhaustive, since the committee felt that the variety of activities could never be precisely forecast.[40]

The Cybernetics committee began to develop mathematical models of the statistical, psychological, and sociological aspects of the project.[41] To aid in compiling the mathematical models, in 1964 the Committee circulated questionnaires among their friends designed to elicit potential activi-

Figure 6. Cedric Price, InterAction Centre, Kentish Town, 1976 (demolished 2003). Photograph by the author, 1999. Price's InterAction Centre incorporated many of the concepts and features of the ill-fated Fun Palace on a much-reduced scale. InterAction provided community services and creative outlets for local citizens until its demolition in 2003. In 1977, Reyner Banham noted Price's influence on the design of the Centre Pompidou, writing, "the concept of a stack of clear floors that can be adapted to a variety of cultural and recreational functions seems to recall the . . . Fun Palace of Cedric Price and Joan Littlewood, even if the project was never as radical as the floorless Fun Palace, or as casually innovatory as Price's Inter-Action Centre." (Reyner Banham, "Centre Pompidou," Architectural Review 161 (May 1977): 270–94)

your Child in the Unlucky Generation?' *Where?* 10, pp. 3-5.

37. 'Administration of the Fun Palace,' (1965?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

38. Cybernetics Subcommittee, meeting minutes, April 1965, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

39. See Appendix B for complete organizational outline.

40. Fun Palace booklet draft, (1964?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

41. Ibid.

ties that the Fun Palace might either house, or simulate in what was surely one of the earliest examples of the concept of virtual realities. Responses suggested a wide range of activities such as:

Eating
Ski practice
Drinking
Bowling
Go-karting
Dancing
Music concerts
Resting
Country dancing
Drama and operatics
Archery
Son et lumière
Swimming
Photography
Restoration of vintage cars
Voice patterns
Finger painting
Mutual admiration (requires pocket mirrors)
[and the ultimate activity] 'do you mind?' (sex)[42]

The Cybernetics Committee worked closely with the Fun Palace Ideas Group to generate possible activities for the Fun Palace. Lists seemed to have been a kind of obsession among the consultant groups. At the beginning of August 1964, Ideas Group chair, psychologist John Clark submitted his own 'List of 70 Projects for a Fun-Palace', which describes various virtual realities (long before 'VR') which might be created within the Fun Palace. These included such tantalizing suggestions as:

The inhabited universe
Why not try a trip around the moon in our realistic space-capsule Simulator?
Captain Nemo's cabin: An underwater restaurant
The grotto of kaleidoscopes
The Camera Lucida
The maze of silence
The cybernetic cinema
The fantasy generator
Climb the tree of evolution
The calligraphic cavern[43]

Their list of provocative suggestions resembles scenarios by Italo Calvino, or proposals put forth by members of the Situationist International a few years earlier, such as the urban 'mysteries' and the 'continuous *dérive*' described in Ivan Chtcheglov's 1953 Situationist 'Formulary for a New Urbanism':

42. Cybernetics Subcommittee, questionnaire, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

43. John Clark, 'A List of 70 Projects for a Fun-Palace,' August 1, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives. John Clark was the convener of the Fun Palace Ideas Group..

Shower-Bath of the Patriarchs
Sports Pharmacy
Martyrs Provisions
Cafe Fifth Avenue
Prolonged Volunteers Street
Hotel of Strangers
Wild Street[44]

The committee also suggested methods of identity-shifting and role-playing. Artist and cybernetic theorist Roy Ascott proposed an 'identity bar' which would dispense paper clothing, enabling people to try on different and unfamiliar social personae or even gender roles. Ascott cited the need for providing, 'physical and emotional thrills for satisfying the individual's desire to exhibit himself and to extend his sense of power and feel the sensation of sinking into a group'.[45]

Certainly the most prescient proposal for the application of computer technologies was the 'Pillar of Information', also proposed by Roy Ascott, a refinement of his earlier idea for a 'Juke Box' Information system.[46] Ascott's 'Pillar of Information' would be a kind of electronic kiosk which could display information of all sorts, based on the model of the Encyclopedia Britannica. His system was among the earliest proposals for public access to computers to store and retrieve information from a vast database. In addition, and even more innovative, it would also keep a memory of previous inquiries. As one person took information from the pillar, a trace would be recorded of the transaction, and subsequent users would be able to track the patterns of use, and the system would suggest multiple knowledge pathways, in much the same way that use patterns on the Internet of today are mapped through the use of tracking 'cookies'. Ascott envisioned that this would give users insight into the interests and queries of other Fun Palace users. Based on patterns of user interaction, the Pillar of Information would gradually develop an extensive network of cognitive associations and slippages as a kind of non-hierarchical information map, both allowing and provoking further inquiry beyond the user's initial query.[47] The resultant web of information and free association to be produced by the Pillar of Information foreshadows in many ways the more recent rhizomatic theory of knowledge developed in the late 1980s by Gilles Deleuze and Félix Guattari.[48]

There were two sites chosen for the actual construction of the Fun Palace. The first, on the Isle of Dogs in London's East End, was an area on the banks of the Thames that had been destroyed by German bombs in the Second World War. The London County Council Parks Commission, who controlled the land, denied Price's and Littlewood's' application for use of the vacant site. Still, the commission was sympathetic, even enthusiastic about the project, and suggested that Price and Littlewood approach the Civic Trust to see if the Fun Palace might be included as part of the Lea River Valley reclamation project. The River Lea flows into the Thames just to the east of the Isle of Dogs, and only a mile or so upstream, Price found the

44. These are literal translations of building and street names, cited by Chtcheglov, I. (1953) in 'Formulary for a new urbanism,' in K. Knabb (ed.) *Situationist International Anthology*, Berkeley: Bureau of Public Secrets, 1989, p. 1.

45. Fun Palace Cybernetics Committee, minutes of meeting at the AA, March 17, 1965, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

46. See 'Possible Activities,' Appendix B: 'Draft of a Fun Palace booklet,' (1964?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

47. Roy Ascott, interview by the author, New York City, February 26, 2000.

In the early 1960s, Ascott studied under Victor Pasmore and Richard Hamilton at King's College, University of Durham. Since that time, the British educator, artist and theoretician Roy Ascott has been one of Europe's most active and outspoken practitioners of interactive computer art. The Groundcourse at Ealing School of Art, London was the first of his radical interventions in art education. Ten years before the personal computer came into existence, Ascott saw that interactivity in computer-based forms of expression would be an emerging issue in the arts. Intrigued by the possibilities, he designed a theoretical framework

perfect site for the Fun Palace on a small island at Mill Meads. The Civic Trust agreed to add the Fun Palace to their reclamation proposal, and it was included as part of their 1965 prospectus.

By this time, however, the London county government had changed and redistricted, and the Lea River Valley, which had once been under the control of a single government authority, now cut through territories controlled by scores of local borough authorities. In the planning and zoning battles that ensued the unconventional Fun Palace became the major point of contention, and its inclusion in the reclamation plans threatened the entire Lea Valley proposal. Reluctantly, Price and Littlewood withdrew the Fun Palace from the reclamation plan, which then passed local and parliamentary approvals without objection.

Price, Littlewood, Pask, and their friends struggled to overcome bureaucratic opposition to the Fun Palace for several years. Finally, in 1975, Price declared the then ten-year-old project obsolete. Its time had passed, and the possibility of the first virtual architecture had faded. It was never built, but for more than forty years, the Fun Palace has captivated the imaginations of architects. It has nevertheless also remained little understood and usually misconstrued. It was no mere paper architecture or science fiction fantasy. It was a real project, far ahead of it's time, carefully designed and very nearly realized.

Although the interactive, socially oriented aspects of the Fun Palace were what interested Price, Littlewood, and their followers, it was the formal aspects of the project that would have the most lasting impact on architecture. Even while the Fun Palace was still in the early phases of design, young architecture students in London's Archigram group became fascinated with the look of the thing. In their early projects for plug-in and walking cities, the formal influence of Price and the Fun Palace is evident, though not the social and ethical depth. Over the years, the explicitly 'mechanical' imagery of the Fun Palace structure has come to be regarded as the inspiration for high-tech formalism, however, this is more a matter of reception than of intent. In reality the structural matrix shown in Price's drawings was to be little more than an armature on which an extraordinary interactive and cybernetic model of architecture would be arrayed. The Fun Palace would serve as a model for the 1976 Centre Pompidou in Paris, yet again the influence was largely formal and aesthetic. While the essence of the Fun Palace was constant change, impermance, process and interchangeability, in the Centre Pompidou this appearance is a formal treatment. For all its high tech trappings of improvisational architecture, the Centre Pompidou is a relatively conventional museum, offering exhibits and events within unconventional surroundings. The Fun Palace, on the other hand, was an interactive machine for entertainment and education.

Price regarded the Fun Palace as specific to its time and place, and adamantly opposed the idea of reviving the project, or revisiting it in light of contemporary practice. Certainly, there are lessons to be learned from the Fun Palace, but to Price, the project was temporally finite, and after ten years it would be socially irrelevant and obsolete. For the same reason, he opposed

for approaching interactive artworks, which brought together certain characteristics of the avant-garde (Dada, Surrealism, Fluxus, Happenings, and Pop Art, in particular), with cybernetics. Ascott's thesis on the cybernetic vision in the arts, 'Behaviourist Art and the Cybernetic Vision' from 1966, begins with the premise that interactive art must free itself from the modernist ideal of the 'perfect object.' Like John Cage, he proposes that the artwork be responsive to the viewer, rather than fixed and static. But Ascott takes Cage's premise into the realm of computer-based art, suggesting that the 'spirit of cybernetics' offers the most effective means for achieving a two-way exchange between the artwork and its audience.

48. Gilles Deleuze, G and Guattari, F (1987), *A Thousand Plateaus: Capitalism and Schizophrenia* Minnesota: University of Minnesota Press.

preservation of his 1976 Interaction Centre (a greatly reduced version of the Fun Palace which was actually constructed). It was recently demolished, despite efforts to have the structure listed as an historic building.

The programmatic fluidity and formal indeterminacy of the Fun Palace might be thought of as an architectural analogue to the transformations experienced throughout postwar British society. It remains as an artifact of the 1960s, a moment of social and architectural discontent and expectancy in an era of seemingly limitless hope and optimism, a time when new modes of existence seemed within reach. Price and Littlewood recognized the strategic importance of play in the Fun Palace as a means of reclaiming agency and allowing for a constructive 'alienation' in the Brechtian sense. As a critical strategy through which to counteract the more sinister forces of social control within one-dimensional society, the ludic aspect of the Fun Palace is an attempt to realize Marcuse's vision of social emancipation through play and non-alienated labour.

In retrospect, it is important to remember that although the Fun Palace represented an unprecedented architectural synthesis of technology, cybernetics, and game theory, these were the means, but never the objective. Price envisioned the Fun Palace as an anti-aesthetic architectural organism in continuous process. Throughout his life and career, he remained committed to architecture as an instrument of social improvement. As in all his projects, his motivation for the Fun Palace was primarily social: the emancipation and empowerment of the individual. Price was quite explicit on this point, and shortly before his death, he told me:

'The Fun Palace wasn't about technology. It was about people'.[49]

49. Cedric Price, interview with the author, transcribed tape recording, London, April 13, 2000.

Suggested citation

Mathews, S. (2005), 'The Fun Palace: Cedric Price's experiment in architecture and technology', *Technoetic Arts* 3:2, pp. 73–91, doi: 10.1386/tear.3.2.73/1

Contributor details

Stanley Mathews is an atypical architectural historian. Mathews holds three advanced degrees: he received his PhD in the History and Theory of Architecture from Columbia University in 2003, as well as a Master of Fine Arts degree and a Master of Architecture. Mathews is a professor of art and architecture at Hobart and William Smith Colleges in Geneva, New York. In addition, he is a practicing architect and has built projects totaling more than thirty million dollars. His varied background has given him a unique point of view on the history and practice of architecture. For the past several years he has worked extensively on Cedric Price. He has written articles for AD and the Journal of Architectural Education, and has delivered four recent papers at international conferences on Price and his work. Mathews' forthcoming book on Cedric Price will be published in 2006 by Black Dog Publishing of London, England. Contact: Department of Art, Hobart and William Smith Colleges, Geneva, NY 14456, USA. Telephone: 1-315-781-3476
E-mail: mathews@hws.edu

Copyright of Technoetic Arts: A Journal of Speculative Research is the property of Intellect Limited. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.