STANLEY MATHEWS
Hobart and William Smith Colleges

The Fun Palace as Virtual Architecture

Cedric Price and the Practices of Indeterminacy

In his Fun Palace project, Price turned not to traditional architecture or fantasy but to the discourses and theories of his own time, such as the emerging sciences of cybernetics, information technology, and game theory, as well as Situationism and theater, to develop a radically new concept of improvisational architecture capable of negotiating the uncertain social terrain of postwar Britain. As socially interactive architecture, the Fun Palace integrated concepts of technological interchangeability with social participation and improvisation as innovative and egalitarian alternatives to traditional free time and education, giving back to the working classes a sense of agency and creativity. The three-dimensional structure of the Fun Palace was the operative space-time matrix of a virtual architecture. The variable ''program'' and form of the Fun Palace were not conventional architecture but much closer to what we understand today as the computer program: an array of algorithmic functions and logical gateways that control temporal events and processes in a virtual device.

> 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 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. . ..
>
> Joan Littlewood, ''A Laboratory of Fun,'' 1964[1]

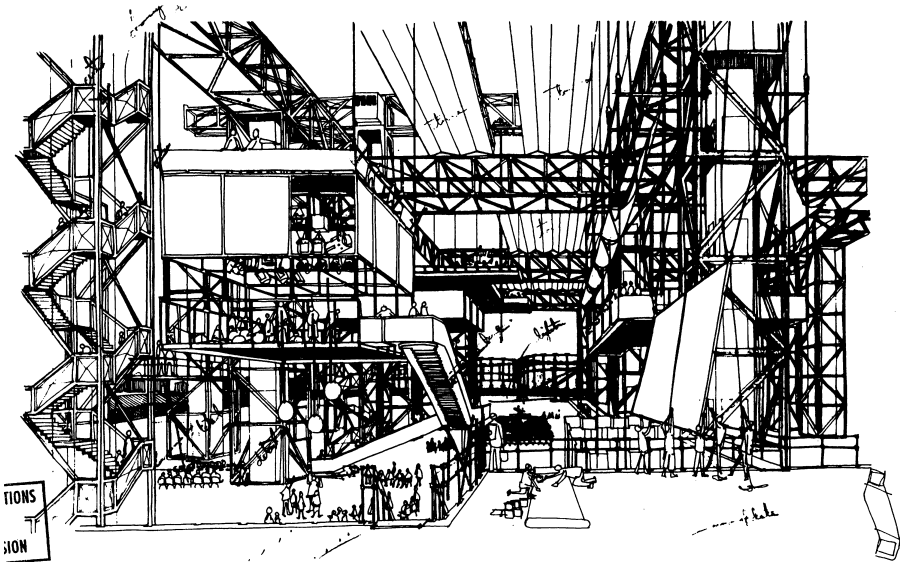
The Fun Palace would be unlike any building before or since. In this essay, I will explore how in this influential project the late British architect Cedric Price created a unique synthesis of a wide range of contemporary discourses and theories, such as the emerging sciences of cybernetics, information 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. London in 1966 was a place and a time when everything was changing and anything seemed possible, when radically new architectural ideas burst onto the scene, with vitality, energy, and originality equaling that of the Beatles, Mary Quant's Miniskirts, and the visual spectacle of Swinging London. Price's architecture reflected the changing character of British society in those heady times, but it also acted as a catalyst to expedite social transformation. Where many saw only the waning of an old order or the emergence of a new fad or fashion, Price perceived new architectural possibilities amid the apparent cultural chaos of postwar Britain.

From a Thames barge, it would have looked like a huge shipyard among the East London wharves. It would stand like the giant scaffold of some incomplete building, either in the process of going up or coming down—it would be hard to tell. This was to be the Fun Palace—not really a building at all but a vast, socially interactive machine, an improvisational architecture, constantly changing in a ceaseless cycle of assembly and dismantling. On their days off, swarms of East London workers would be there, using its cranes and prefabricated modules to assemble their own learning and leisure environments (Figure 1). It would be an immense kit of parts with which people could amuse themselves, so that for a few leisure hours each week, they might escape from mind-numbing routine and the monotony of serial existence and embark on an exciting journey of creativity, learning, and personal development. It was to be a ''university of the streets,'' where people could learn a language, watch a film, make a film, explore virtual worlds, learn to cook, teach other people to cook, learn to use a computer, rehearse a neighborhood chorus, or simply watch everyone else. Workers whose jobs had become obsolete could take lessons, hear lectures, and learn a new job skill.

The Fun Palace began in 1962 as a casual collaboration between Price and avant-garde theater producer Joan Littlewood. Despite the string of successes that her theater workshop had enjoyed on the London stage with hits such as *A Taste of Honey* and *Oh! What a Lovely War*, Littlewood had long

Journal of Architectural Education,
pp. 39–48 © 2006 ACSA

1. Cedric Price's drawing of the interior of the Fun Palace, circa 1965. It would be constantly under construction: Users would rearrange wall panels to create new spaces from old spaces as the program changed and evolved. Cedric Price Archives, Canadian Centre for Architecture, Montreal.



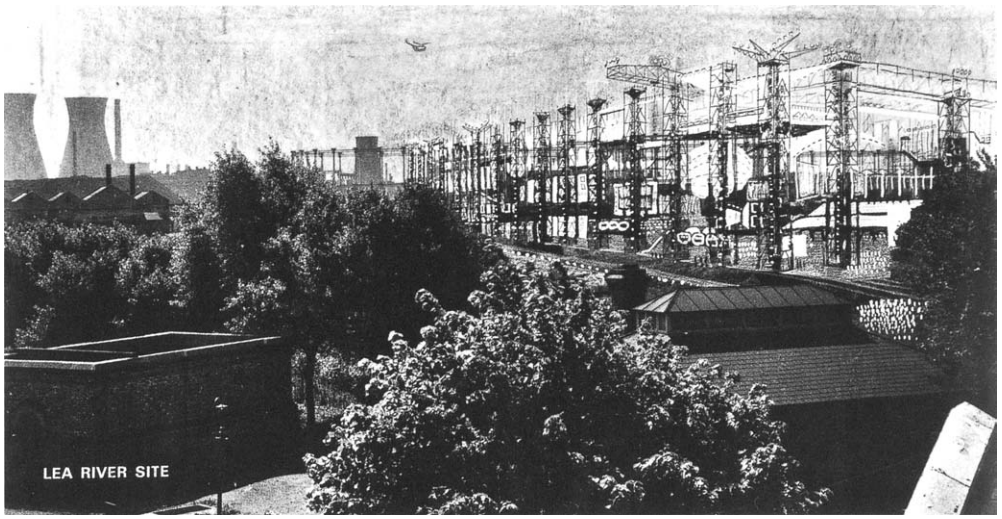
dreamt of a new kind of theater. This would be a theater beyond anything even Bertolt Brecht had envisioned—not of stages, performers, and audiences but a theater of pure performativity, a space of cultural *bricolage* where people could experience the transcendence and transformation of the theater not as audience but as players. Price had already been exploring ideas for an interactive and improvisational architecture, and Littlewood's dream became the program for his new Fun Palace. By 1966, it had become a rallying point for scores of English intellectuals who saw the Fun Palace as a vast social experiment in new ways of building, thinking, and being. People as diverse as Buckminster Fuller, orchestral conductor Yehudi Menuhin and Member of Parliament Tony Benn volunteered their services to the project.

Price and Littlewood found a site for the Fun Palace in East London, at Mill Meads, on the banks of the Lea River. However, after years of planning, just as construction was set to begin, mid-level bureaucrats in the local Newham planning office halted the project, and the Fun Palace was never completed.[2] Though unbuilt, the Fun Palace was widely admired and imitated, especially by the young architecture students who formed the core of the avant-garde Archigram group. They were drawn to Price, who in turn acted as a guru to the fledgling group, offering them advice, counsel, and introducing them to the ideas of Buckminster Fuller. However, unlike Archigram's science fiction–inspired fantasy designs, or those of Constant, the Fun Palace was a real project, carefully designed and very nearly built.[3] Although the Fun Palace would serve as a model of high-tech formalism for the 1976 Centre Pompidou in Paris, it was also very different from that project. The explicitly "mechanical" imagery of the Fun Palace was not an aesthetic treatment but the bare bones structural armature on which its interactive and fluid program could play out (Figure 2). The Fun Palace was primarily there to respond to the changing needs and desires of individuals, not to house prepackaged exhibits and events for a generalized public.

An unspecified program and indeterminate form, such as Price envisioned for the Fun Palace, are antithetical to normative architectural practice, which requires specificity of program and physical configuration. However, Price insisted that since no one could know in advance the constantly shifting needs and desires of the users (and indeed, the future direction of British society), the Fun Palace had to be continuously adaptable to a fluid program. Moreover, any attempt to define a specific program would foreclose on unforeseen developments and possibilities. He felt that conventional practices of architecture and planning were overdetermined and resulted in "the safe solution and the dull practitioner," by forcing architects into the trap of trying to "get it right the first time."[4] Far from avoiding uncertainty in design, Price claimed that his own creativity was "generated and sustained through a delight in the unknown."[5] His design for the Fun Palace would acknowledge the inevitability of change, chance, and indeterminacy by incorporating uncertainties as integral to a continuously evolving process modeled after self-regulating organic processes and computer codes.

Price was not alone in his interests in change and indeterminacy. During the 1950s and 1960s, chance and improvisation played an increasingly important role in music and art. John Cage's randomized music and Alan Kaprow's unscripted and improvisational "Happenings" were already well known in Britain. Yet, London-based artists were also developing their own art and performance based on chance. As early as in 1959, artist Gustav Metzger issued his *Manifesto of Auto-Destructive Art*,[6] and invited London gallery visitors (Cedric Price among them) to watch his acid-paintings self-destruct, morphing from rectangles of stretched nylon into shapeless masses of goo on the floor. In the early 1960s, London-based artist Roy Ascott abandoned static easel painting in favor of interactive and chance-based art. Decades before computer-based art, Ascott began to merge the avant-garde trends of Pop Art, Fluxus, and Happenings with cybernetics

2. The Fun Palace, drawing of the Lea River Valley Scheme. Cedric Price Archives, Canadian Centre for Architecture, Montreal.



and nascent information technology to create artworks that would interact with and respond to the presence of gallery-goers.[7] Cedric Price knew both artists and invited Ascott to join the Fun Palace design team.

In addition, any apparent affinity between the Fun Palace concepts of creative leisure and the creative strategies of the Situationist International would hardly be accidental, since both grew from common ideological and artistic roots. Moreover, both Price and Littlewood were close friends with Scottish poet and Situationist Alexander Trocchi, from whom they learned of the Situationist strategies of creatively aimless urban wanderings (the dérive) and the insertion of random events into ordinary situations (détournement). In his 1962 ''Invisible Insurrection of a Million Minds,'' Trocchi described a ''spontaneous university'' that closely resembles the Fun Palace idea.[8] Despite the obvious similarities between Trocchi's ''spontaneous university'' and the Fun Palace (even to the riverside location) and to Price's later Potteries Thinkbelt project, it is not clear to what extent Trocchi, Price, and Littlewood may have influenced each other. Price disavowed any inspiration from Trocchi, and planning for the Fun Palace was already well under way by the time of their first meeting.[9]

While these contemporary discourses on indeterminacy and the applications of chance in art fired Price's imagination, as an architect his concern was solving the difficult task of finding a practical means of integrating improvisation into architecture and specifically into the design of the Fun Palace. Rather than rely on mechanical and determined design methodologies, Price derived the architectural paradigms of the Fun Palace from the emergent fields of information technology, cybernetics, and game theory, which are, in essence, means of modeling and systematizing chance and indeterminacy.

As such, the Fun Palace marks a significant displacement of modern architecture from a Platonic metaphysics of unchanging ideality, abstract space, and purity, to a Heraclitean view of a world in constant flux.[10] While the great social and scientific preoccupation of the eighteenth and nineteenth centuries had been the perfection of a causal and deterministic model of a mechanistic world, twentieth-century science experienced a shift toward information and indeterminate systems theories. Indeed, we might consider science in the twentieth century as the site of sustained challenges to the Newtonian paradigm of determinism and positivism and the subsequent rise to prominence of probability, relativity, complexity, and the theoretical models of Heisenberg, Planck, and quantum mechanics. New paradigms arose out of research in cybernetics and game theory on the behavior of unstable and indeterminate systems. Price was the first architect to recognize novel applications of these theories for a new kind of adaptive virtual architecture that would regulate and control how the Fun Palace could adapt its form to the ever-changing and unpredictable program.

The potential offered by the kinds of electronic and cybernetic control systems that Price had learned of through lectures at London's Institute of Contemporary Art particularly intrigued him as a means to achieve the programmatic variability he envisioned for the Fun Palace.[11] Norbert Wiener's pioneering efforts in particular had established the foundations of the new theory of the behavior of unstable systems known as cybernetics, named after the Greek word ''cyber,'' meaning ''rudder'' or ''to steer.'' Wiener's cybernetic system could continuously adjust itself in response to unpredictable conditions by anticipating future behavioral patterns on the basis of feedback information from prior actions.[12] Cybernetics does not claim precise prediction of the future but ''merely the distribution of possible futures of a system.''[13]

Although cybernetics is commonly associated with computers and information technology, Wiener understood it as a model of the natural processes that 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 the metabolic feedback systems, which 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 goal. The performative objectives of cybernetics are in reality fluid criteria and are as subject to modification as is the system itself.

While cybernetics regulated the short-term behavior of day-to-day activities in the Fun Palace, game theory provided a means of anticipating and planning long-term performative strategies.[14] Game theory, first developed by John von Neumann in the 1920s, further refines the predictive process. It does not merely respond to changing conditions and suggest short-term course corrections as does cybernetics but actually indicates long-term strategies and modifications to the performative guidelines of complex systems, which appear to be governed by chance. Game theory therefore transcends the temporal limitations of cybernetics. In accounting for the indeterminate and synergistic interaction of factors, game theory models the dynamic behavior of complex social and economic systems. Game theory and cybernetics are not mutually exclusive and can function in parallel within a highly indeterminate system.

A ''virtual architecture'' like the Fun Palace would have no singular program but could reprogram and reconfigure itself to accommodate an endless variety of functions. By providing methodologies for coping with indeterminate systems evolving in time, cybernetics and game theory established the groundwork for information and computer technologies as well as for the virtual architecture of the Fun Palace. Neumann's mathematical theory of games also provided the basis for the logical algorithmic codes of the modern electronic computer, which we now know as the computer program. As early as in 1927, Alan Turing suggested that alterations of the sequence of Neumann's operating codes would create a virtual machine that could emulate the behavior of many different devices.[15] A virtual machine is a device that can behave variously as a typewriter, a drafting board, or whatever other ''virtual'' functions software engineers can dream up for it. Virtual architecture would be similarly flexible and capable of emulating the behavior of different buildings.

In addition to its roots in information theories, Price's interest in the temporal also bears closely on the work of Henri Bergson, whose theory of duration reconciles time and indeterminacy with the realities of the modern age. Although Price never directly referred to Bergson either in his writings or in his conversation (and in fact, he had a deep mistrust of things French), since Price thought of architecture in terms of events in time rather than objects in space, and embraced indeterminacy as a core design principle, Bergson's theories of duration and time provide a valuable tool for understanding Price's work.[16] To appreciate the Fun Palace fully, we might profitably think of it in Bergsonian terms as a temporal event rather than as a formal object.

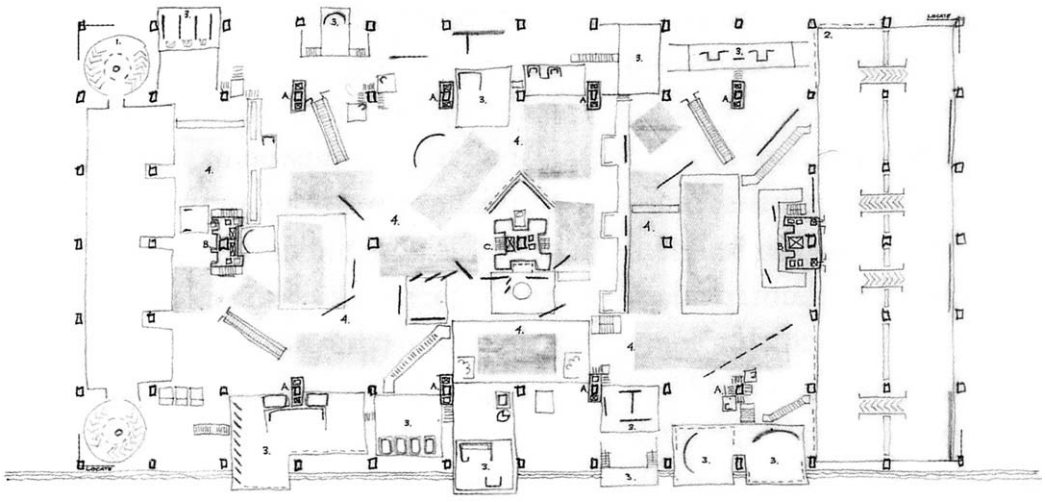
To Bergson, reality was not discrete objects and isolated matter but an endless and seamless process of becoming. He conceived of being as time and duration, continuous flux and infinite succession without distinct states. To both Bergson and Price, time was always of the essence. Bergson's emphasis on clarifying the distinction between time and space (state problems and solve them in terms of time rather than of space) corresponds to Price's own design methodology.[17] The architect typically stated problems in terms of performativity, in terms of events rather than of objects. He regarded events not as static snapshots but as a continuous evolution of phenomena unfolding in time.

Price's approach represents a figure-ground reversal of normative architectural practice, which seeks solutions primarily through built form. For example, the conventional problem of the ''house'' may confound ''dwelling'' as enclosure or spatial artifact with ''dwelling'' as human temporal activity. As an architect, Price sought to differentiate spaces and events, as he did in his famous aphorism that ''the best advice to a client who wants to build a house is to leave his wife.''[18] This deceivingly simple and irreverent quip reveals an important key to understanding Price and his work. To Price, the ambiguous proposition ''house'' conceals within it multiple overlapping concepts, which confuse the physicality of dwelling (as space) with the temporality of dwelling as the ongoing interpersonal relations of matrimony and family life (events in time). Architecture is not marriage counseling, and although a client might fervently hope that a new house will save a bad marriage, a building might not be enough to alter the relationship. Price often argued that architecture is not always the appropriate solution to every problem and that the architect must take care to understand the difference between spaces and events, and not confuse the two. In this respect, Price's understanding of architecture would appear to fulfill Heidegger's concept of architecture as the site of human activity and meaning rather than as structure or enclosure.[19]

For the Fun Palace, Price began by restating Joan Littlewood's brief as a problem of a temporal architecture, which would permit multiple events and whose spaces would readily adapt to change. Rather than seek the answer within a formal repertoire of objects and spaces, he considered the problem in temporal terms and sought the solution within the restated problem itself. The Fun Palace would then simply be an entity whose essence was events in continual flux, which adapted itself spatially to accommodate multiple and indeterminate uses (Figure 3).

Price was quick to realize the importance to such an endeavor of cybernetics, game theory, and computer technologies. However, he was also modest enough to recognize the limits of his own knowledge and 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. From its simple beginnings as an idea developed by Price and Littlewood, the Fun Palace evolved enormous complexity through countless interactions and contributions by many structural, cybernetics, and

3. Cedric Price, preliminary sketch of the Fun Palace floor plan, showing areas of variable activity. Cedric Price Archives, Canadian Centre for Architecture, Montreal.



programming experts. By 1966, the project had become so collaborative an effort that its very authorship is indeterminate.

It developed as a network of multiple events, a space of oscillation between incongruous activities simultaneously played out like some Dada performance, or more likely, like one of Kaprow's Happenings or Metzger's ''autodestructive art'' installations. Spaces would be endlessly variable in size, shape, lighting, and accessibility. The first drawings presented the puzzling spectacle of a three-dimensional matrix, with bits and pieces stuck into it here and there. The contemporary literature described it as a shipyard or scaffold of constant activity that would never reach completion because the ultimate plan, program, and goal were never finite and always changing (Figure 4).

In a gesture of anarchy, there was to be no administrative hierarchy to dictate the program, form, or use of the spaces. The program would be ad hoc, determined by the users, and like a swarm or meteorological system, its behavior would be unstable, indeterminate, and unknowable in advance. Yet, even without a specific program or objective, the Fun Palace could self-regulate, adapt its form to programmatic change, and alter its physical configuration in anticipation of probable patterns of use. Price's aspiration was that the Fun Palace would be a virtual architecture that could learn, anticipate, and adapt to changing conditions and needs. Of course, ''learning'' in this case would have amounted to the algorithmic extrapolation of data, rather than the cognitive behavior of an intelligent being, and Price would have claimed only responsiveness for the Fun Palace, not ''intelligence''.

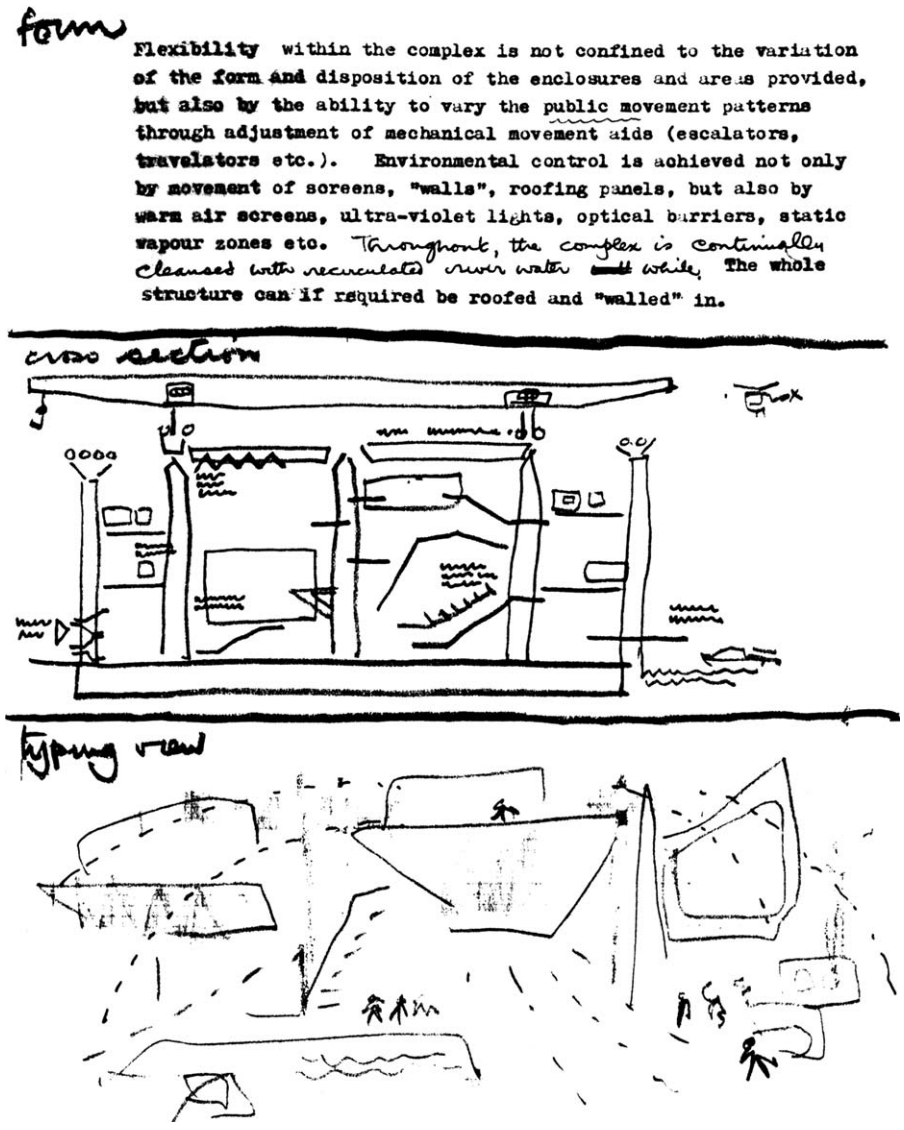
In the spring of 1963, Littlewood first learned of Gordon Pask, the ''doyen of Romantic Cyberneticians,'' who had made a name for himself as head of the British cybernetics foundation, Systems Research Ltd.[20] She and Price each wrote to Pask to ask if he would contribute his expertise in the still new field of cybernetics to the project.[21] It turned out that Pask had been a long-time fan of Littlewood's theater 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]

Like Wiener, Pask defined the central theme of cybernetics as the study of the ways in which complex biological, social, or mechanical systems organize themselves, regulate themselves, reproduce themselves, evolve, and learn.[23] More specifically, Pask regarded cybernetics as an ongoing, two-way ''conversation'' between the members of those systems.[24] To Pask, cybernetics held particular promise for architecture and design, which he saw as essentially systems design.[25] 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.''[26] Pask believed that through cybernetic design, the architect could assume the role of social controller, and he gradually redirected the focus of the Fun Palace toward cybernetics and social control. Price's notes reflect the beginning of this trend:

> Man must learn. He enjoys living in a world that gives him enough to learn about without becoming utterly unintelligible in its variety. But his world is individually specified and because even the individual is in a flux of adaptation it is evanescent. So, for some purposes, the environment that a man enjoys must be automatically tailored to suit his changing attitudes just as, in a convention, we continually modify the common language of our discourse.[27]

Indeed, Pask's contributions of 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 programs of the Fun Palace. Price's unbridled optimism for science and technology may seem ill informed and charmingly naive today; yet, at the time, many people firmly believed in the endless possibilities that science and technology promised for humanity, and he eagerly welcomed Pask to the Fun Palace team.

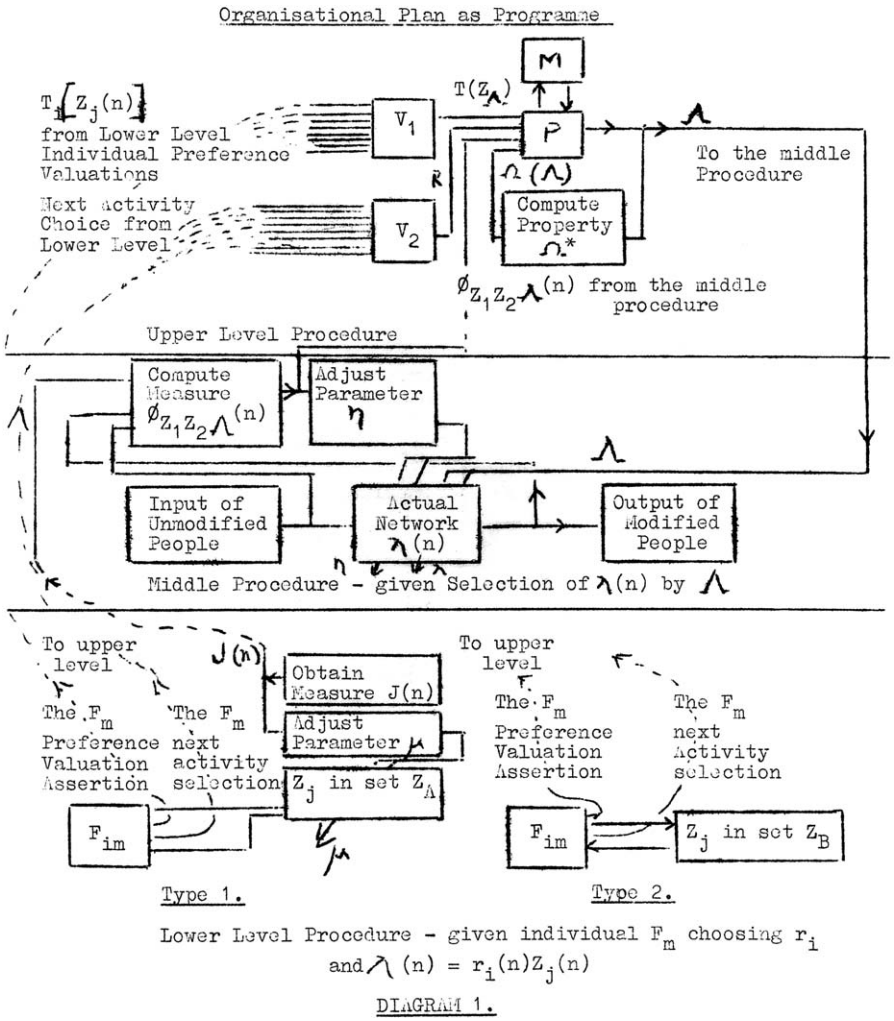
4. Cedric Price, Fun Palace notes and drawings. Cedric Price Archives, Canadian Centre for Architecture, Montreal.



By 1964, the many Fun Palace consultants had formed individual committees to complete planning for the project. Each committee was responsible for developing a specific aspect of the project, such as structure, programming, sociology, and cybernetics. Pask agreed to head the Fun Palace Cybernetics committee, which became the most powerful of the consultant groups. He compiled his initial thoughts on the project in a manuscript entitled, ''Proposals for a Cybernetic Theatre,'' in which he defined theater as the transfer of information and meta-information, involving ''feedback'' from audience and interaction between audience and actors.[28] The Cybernetics committee comprised various experts in relevant fields of cybernetics, sociology, and psychology, as well as unspecialized people who might contribute new ideas.[29] Other scientists joined Pask on the committee, including Lord Ritchie Calder and Professor Joseph Rotblat, who had consulted with Littlewood on the 1946 theater workshop production of the play, *Uranium 235*.[30] The roster also included Ascott, historian Asa Briggs, artist Reg Butler, psychologist John Clark, Members of Parliament Ian Mikardo and Tom Driberg, Pask's partner Robin McKinnon-Wood, and sociologist Michael Young.[31]

Pask established the general goals of the Cybernetics committee as the development of ''new forms of environment capable of adapting to meet the possibly changeful needs of a human population and capable also of encouraging human participation in various activities.''[32] A diagram produced by the committee described the Fun Palace as a systematic flowchart (Figure 5). Electronic sensors and response terminals would gather and assign a prioritized value to raw data on the interests and activity preferences of individual users. A state of the art IBM 360-30 computer would then compile the data 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 computer would then reallocate moveable walls and walkways to adapt the form and layout of the Fun Palace to changes in use. Price hoped that the Fun Palace would be able to ''learn'' behavioral patterns and ''plan'' for future activities by processing accumulated data on use according to algorithms derived from cybernetics principles and game theory strategies. In theory, at least, the Fun Palace would be capable of anticipating unpredictable phenomena because instead of a determined program, it relied on probability to

5. Cybernetic diagram of the Fun Palace program by Gordon Pask. Cedric Price Archives, Canadian Centre for Architecture, Montreal.



adjust its program to accommodate changing trends and events.

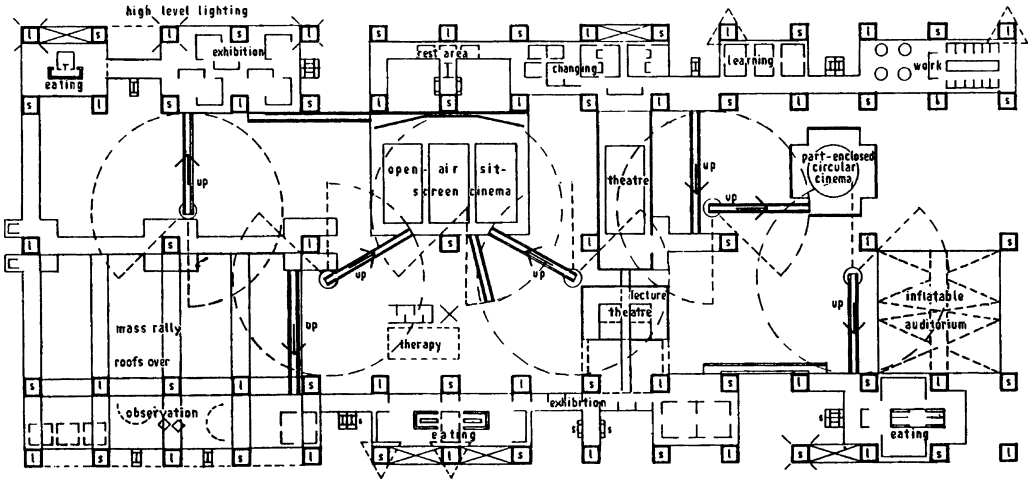
The program of the Fun Palace was therefore not the conventional sort of diagram of architectural spaces but much closer to what we understand as the computer program: an array of algorithmic functions and logical gateways that control temporal events and processes in a virtual device. The three-dimensional structure of the Fun Palace was the operative space-time matrix of a virtual architecture (Figure 6).

The Cybernetics committee was particularly productive and met frequently to formulate plans and ideas. The committee discussed methods of identity shifting and role playing. Ascott proposed an ''identity bar,'' which would dispense paper clothing, enabling people to try on different and unfamiliar social personae or even gender roles, citing the need to provide ''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.''[33]

The culmination of cybernetics and game theory in the Fun Palace was the Pillar of Information, which Ascott designed for the Fun Palace's main entry. This was an electronic kiosk that could search, display, and track information of all sorts.[34] His system was among the earliest proposals for public access to computers in order to store and retrieve information from a vast database. In addition, the system would keep a memory of all previous inquiries. As one person sought information from the pillar, it would record a trace of the transaction, and the system would suggest multiple knowledge pathways to subsequent users. Ascott envisioned that this would give users insight into the interests and queries of other Fun Palace attendees. Based on patterns of user interaction, the Pillar of Information would gradually develop an increasingly complex network of cognitive associations and slippages as a kind of nonhierarchical information matrix, both allowing and provoking further inquiry beyond the user's initial query.[35] The resultant web of information and free association to be produced by the Pillar not only anticipates the Internet by some three decades but also recalls the rhizomatic theories of knowledge developed in the 1970s by Gilles Deleuze and Félix Guattari.[36] To Deleuze and Guattari, knowledge does not stand like a hierarchical monument of linear associations but spreads like an omni-directional, rhizome linking disparate ideas.[37]

As the concept of the Fun Palace gradually shifted from theater toward cybernetics, the planners placed more importance on quantification and mathematical models based on statistics, psychology, and sociology. In a 1964 memorandum, Pask

6. The Fun Palace floor plan, final version, showing moveable walkways and escalators. Cedric Price Archives, Canadian Centre for Architecture, Montreal.



enumerated the specific areas requiring mathematical models:

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.[38]

Pask concluded 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 organization should play in relation to the leisure of an automated society.[39]

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 behavior 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:

> 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.[40]

The idea that the Fun Palace would essentially be a vast social control system was clear in the aforementioned diagram produced by Pask's Cybernetics subcommittee, which reduced Fun Palace activities to a systematic flowchart that treated human beings as if they were data. This diagram described three procedural stages for the control of human subject: data collection, compilation, and feedback and modification of spaces and activities within the Fun Palace. The feedback cycle would function by comparing people coming in (unmodified people) to people leaving (modified people).

Today, the idea of ''unmodified'' and ''modified'' people would make us draw back in horror. Yet, in the 1960s, the prevailing and naive faith in the endless benefits of science and technology was so strong that the Orwellian implications of ''modified people'' went largely unnoticed. Price, Littlewood, and Pask saw the ''social control'' aspect of the Fun Palace as a positive and constructive contribution to society, and cybernetics gradually became the dominant organizational model for the Fun Palace as the project developed. However, the rhetoric of social control and cybernetic behavior modification (initiated by Pask) may have scared off those on the left who might otherwise have supported the Fun Palace because of its challenge to institutional culture.

The programmatic fluidity and formal indeterminacy of the Fun Palace is an architectural analogue to the transformations experienced throughout postwar British society. Unbuilt, it remains as a relic of the spirit 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. Yet, the unbridled and naive optimism of the time may also have blinded Price and Littlewood to the more

7. Cedric Price, The Interaction Centre, 1976. This community center in the north of London incorporated many of the interchangeable and interactive features of the Fun Palace. It was demolished in 2003. Photo by the author.

sinister aspects of cybernetics and systems theories, for the objectification of people as information quanta held serious political implications. The most egregious example of the sinister aspects of cybernetics was the case of Stafford Beer. A one-time member of the Fun Palace Cybernetics committee, Beer moved to Chile in the 1970s to serve the Allende government as a consultant on the application of cybernetics and systems theories as means of social and political control.[41]

To their credit, 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 overt forces of social control within one-dimensional society, the ludic aspect of the Fun Palace was an attempt to realize Marcuse's vision of social emancipation through play and nonalienated labor.

When I began research on his early work, Price good-naturedly accused me of architectural necrophilia. Certainly, the lesson of the Fun Palace has much to offer architects, even today; but to Price, the project was temporally finite. He 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. He had established ten-year life for the project, after which time he deemed that it would be socially irrelevant and obsolete. For the same reason, Price opposed preservation of his 1976 Interaction Centre (a much reduced version of the unbuilt Fun Palace), which was recently demolished, despite efforts to have the structure listed as an historic building[42] (Figure 7).

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. As in all his projects, his motivation for the Fun Palace was primarily social, and in this respect, it was in keeping with the spirit of the 1960s: the emancipation and empowerment of the individual. It is evident both from the keen interest of architects at the time and the recent resurgence in interest in Price, that his approach, which drew from a myriad of contemporary discourses, situated architecture centrally within the most socially relevant position of the time, and represents a turning point for architecture. Price redefined architecture, not as enclosure, symbol, or monument but as the convergence of site and human event. Shortly before his death, Price told me: ''The Fun Palace wasn't about technology. It was about people.''[43]

Notes

1. Joan Littlewood, ''A Laboratory of Fun,'' *The New Scientist* 38 (May 14, 1964): 432–433.
2. Officials in the Newham Planning Office claimed that the Mill Meads site was needed for construction of a storm water retention system, and could not be used for the Fun Palace or any other building. (GLC reply to Fun Palace Appeal for Mill Meads, December 7, 1965, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.) The retention system was never built, and the site is currently part of the proposed 2012 London Olympics campus. The Olympic Aquatics Centre will be built on the old Fun Palace site.
3. While Archigram's ''walking'' and ''plug-in'' cities, or Constant's ''New Babylon,'' present an appealing vision of architecture, neither Constant nor the members of Archigram had any realistic hope or even thought of actually building their speculative projects. The structure and systems of the Fun Palace, on the other hand, were carefully designed by structural engineer Frank Newby along with a host of engineers and scientists who had donated their time to the project, and test borings had been taken for the foundations.
4. Cedric Price, *Works* II (London: Architectural Association, 1984), p. 54.
5. Ibid.
6. Gustav Metzger, *Manifesto of Auto-Destructive Art* (self-published, 1959), Fun Palace document folio MS 1995:0188:526, Cedric Price Archive, Canadian Centre for Architecture, Montreal.
7. Roy Ascott, interview by the author, New York City, February 26, 2000.
8. Alexander Trocchi, ''Invisible Insurrection of a Million Minds,'' in Allan Campbell and Tim Niel, eds., *A Life in Pieces: Reflections on Alexander Trocchi* (Edinburgh: Rebel Inc., 1997), pp. 164–76.
9. Despite Price's insistent disavowal of influence or inspiration for the Fun Palace, projects like Constant's ''New Babylon'' and Trocchi's ''Project Sigma'' and ''Invisible Insurrection of A Million Minds'' almost certainly helped to clarify the aims of the Fun Palace to both Price and Littlewood. In the fall of 1964, Price and Trocchi met on several

occasions to discuss ways to co-operate on the Fun Palace. Trocchi was enthusiastic about the project and wanted to include an article on the Fun Palace in his Situationist newsletter, *The Moving Times*. He also planned to print images of the Fun Palace on the next batch of Project Sigma Christmas cards. (Price and Trocchi, meeting notes, October 24, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives, Canadian Centre for Architecture, Montreal).

10. It is worth recalling that just as the modern movement emerged in response to the chaos of the First World War, so did Plato seek order amid the chaos of the Peloponnesian war, carving out a space of metaphysical certainty in the mid of chaos, an island of purity in a sea of corruption, a way of arresting flux and change.

11. Price has acknowledged the influence of the ICA as a major source of information about cybernetics. See Mary Lou Lobsinger, ''Cybernetic Theory and the Architecture of the Performance: Cedric Price's Fun Palace,'' in Sarah Goldhagan and Réjean Legault, eds., *Anxious Modernisms* (Cambridge, MA: MIT Press, 2000), p. 138, f. 79. In her essay, Lobsinger observes the shifting focus of the Fun Palace from theater to cybernetics.

12. Wiener developed mathematical methods that enabled the analyst to model the evolution and transformation of complex indeterminate systems, both mechanical and living. Like John von Neumann (the ''father'' of the computer), Wiener observed cybernetic principles at work within organic processes and living systems. So, the subtitle of his 1948 book *Cybernetics* is ''Control and Communication in the Animal and the Machine,'' and the fifth chapter is entitled, ''Computing Machines and the Nervous System.'' Wiener observed numerous parallels between neural function and the operations of complex electrical switching devices. Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948), p. 36.

13. Ibid., p. 110. Although Wiener did not theorize the science of cybernetics until the 1940s, early proto-cybernetic feedback principles were introduced much earlier. The classic early example of feedback is James Watt's steam engine governor, which kept the engine at a constant speed, despite variations of steam pressure. The cybernetic interrelation between process and product offered a flexibility not possible in the determinate machines of the traditional mechanical system of the First Machine Age. Whereas machines of the First Machine Age are characterized by determined function and task specificity, the information-controlled machines of the cybernetic Second Machine Age are adaptable, error correcting, and less task specific. The function of a cybernetic machine can be altered simply by varying the information fed back to the independent parts rather than by changing out the entire machine. In strictly economic terms, cybernetic ''virtual'' machines require less capital investment, since one machine may be adapted to perform the tasks previously accomplished by several dedicated machines.

14. I am indebted to Robin Middleton for his insights into the role of game theory in the Fun Palace.

15. John von Neumann, *The Computer and the Brain* (New Haven, CT: Yale University Press, 1958), p. 70.

16. To Bergson and to Price, life processes are essentially creative, not aimed at a particular goal or *telos* but at an unceasing source of novelty without ultimate objective. Bergson suggests as much in *Time and Free Will: An Essay on the Immediate Data of Consciousness*, and *Mind-Energy: Lectures and Essays*, trans. H. Wilden Carr (New York: H. Holt, 1920), and Price expresses this repeatedly throughout his writings, but particularly in ''Life Conditioning,'' *AD* (October, 1966): 483–494.

17. Cited in Gilles Deleuze, *Bergsonism* (New York: Zone Books, 1988), p. 31. See also Henri Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness*, trans. F.L. Pogson (New York: Macmillan, 1912) and *Mind-Energy: Lectures and Essays*, trans. H. Wilden Carr (New York: H. Holt, 1920).

18. Cedric Price, ''Life Conditioning,'' *AD* (October, 1966): 483–94. Price had the courage of his convictions, and successfully petitioned the RIBA for the right to advise a client not to build, if he deemed that building was inappropriate to the problem at hand. (Mary Banham, interview with the author, transcribed tape recording, London, January 21, 1999).

19. See Martin Heidegger, ''Building, Dwelling, Thinking,'' in *Basic Writings*, ed. David Krell (San Francisco, CA: Harper, 1993), pp. 343–64.

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 nonprofit research organization that worked with the U.S. 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 nonstop 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 Joan Littlewood, *Joan's Book: Joan Littlewood's Peculiar History as She Tells It* (London: Minerva, 1995), p. 637.

21. Price to Gordon Pask, June 9, 1963, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

22. Littlewood, *Joan's Book*, p. 703.

23. Gordon Pask, *An Approach to Cybernetics* (New York: Harper Brothers, 1961), p. 11.

24. I am indebted to Dr. Andrew Pickering of the Department of Sociology at the University of Illinois at Urbana-Champaign, for his insight into Pask's concept of cybernetics as ''conversation'' (Conversation with the author, Vancouver, April, 2005).

25. Gordon Pask, ''The Architectural Relevance of Cybernetics,'' *Architectural Design* 39 (September 1969): 494.

26. Gordon Pask, ''Proposals for a Cybernetic Theatre'' (unpublished manuscript), folio 3.11, Joan Littlewood Manuscript Collection; Michael Barker Collection, University of Texas, Austin. It is telling that in this essay, Pask cites the Fun Palace as an example of effective cybernetic design.

27. Price, ''Notes on Cybernetic Aspects'' (late 1963?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

28. Pask, ''Proposals for a Cybernetic Theatre.''

29. Consultants list, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

30. Consultants list, Fun Palace document folio DR1995:0188:526, Cedric Price Archives. Lord Ritchie Calder was a scientist, a journalist, and a 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. 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.

31. Consultants list, Fun Palace document folio DR1995:0188:526, Cedric Price Archives. 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 Michael Young, ''Is Your Child in the Unlucky Generation?'' *Where?* 10 (Autumn 1962): 3–5.

32. Fun Palace Cybernetics Committee, meeting notes (1964?), Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

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

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

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

36. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia (Mille Plateaux)* (Minneapolis, MN: University of Minnesota Press, 1987).

37. ''Thought is not arborescent, and the brain is not a rooted or ramified matter. What are wrongly called 'dendrites' do not assure the connection of neurons in a continuous fabric. The discontinuity between cells, the role of the axons, the functioning of the synapse, the existence of synaptic microfissures, the leap each message makes across these fissures, make the brain a multiplicity immersed in its place of consistency or neuroglia, a whole uncertain, probabilistic system (the uncertain nervous system).'' Deleuze and Guattari, *A Thousand Plateaus* p. 15.

38. Fun Palace Cybernetics Committee, report, 1964, Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

39. Ibid.

40. Littlewood to Gordon Pask, February 26, 1964. Fun Palace document folio DR1995:0188:526, Cedric Price Archives.

41. I am indebted to Dr. Andrew Pickering for this information about Stafford Beer's career after the Fun Palace (Conversation with the author, Vancouver, April 2005).

42. Cedric Price, telephone conversation with the author, March 2003.

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