Irresistible Transparence:
Eiffel and Pompidou, Again[1]

ANNETTE FIERRO
University of Pennsylvania

> Away with sourpusses, the wailing Willies, the sobersides, the brow furrowers, the eternally serious, the sweet-sour ones, the forever important!...
>
> Hurray three times hurray for our kingdom without force! Hurray for the transparent, the clear! Hurray for purity! Hurray for crystal! Hurray and again hurray for the fluid, the graceful, the angular, the sparkling, the flashing, the light—hurray for everlasting architecture!
>
> – Bruno Taut, *Down with Seriousism!* (1920)

> Between the earth and the sky runs the library's esplanade, open to all, a broad public space in which people can meet and mingle, of a kind that is all too rare in the new quarters of modern cities.
>
> – François Mitterand
> on the *Bibliothéque nationale de France* (1995).[2]

This past year the public was presented with the opening of the Bibliothéque nationale de France, an event which put to rest many tumultuous years of debate on the architecture of the building. The towers of glass proposed by Dominique Perrault, inspired by the desire to symbolize the accessibility of knowledge held previously closed—and therefore elitist—to the general public, were guided in this prime directive by François Mitterand himself. This symbolic undertaking, however noble in intention, encountered a series of often heated national and international confrontations, based primarily in the dumbfoundingly obvious problems offered by proposing to house the rare literary archives of France under glass.

The project, the last of Mitterand's Grand Projets, was only one of several which seemed directed by the material and structural possibilities of glass, other notable projects include Nouvel's Institute du Monde Arabe, as well as the Grand Pyramid at the Louvre, the Museum of Science and Industry at La Villette, and the Parc André Citroen—the latter of all of these projects all influenced substantially by the British engineers Rice Francis Ritchie and Associates. Considering the recent exhibition at the Museum of Modern Art, "Light Construction," where themes of translucency pervaded an international gathering of architectural work, this resurgence of investigations into glass seems now wedded to the central material redefinition of the current age. Yet in France the use of glass has invaded even further into a genuinely commonplace vernacular, evidenced by a number of commissions of different scales and degrees of civic significance which have been completed by a variety of lesser-known French architects—Frances Deslangier, Haumont and Rattier, Brunet and Saunier, Philippe Gazeau, and many others. This last year the pervasive presence of transparency in specifically Parisian architecture was noted in a large exhibition sponsored by the Pavilion de l'Arsenal titled *"Paris sous Verre: La Ville et ses Reflects"* ["Paris under Glass: The City and its Reflections"].[3] France, it seems, is besieged by Mitterand's obsession with *"la transparence,"* at scales varying from private residences to the most exalted forms of civic monuments.

This essay, while depending on this contemporary flourishing of transparency to lend a sense of *imperative relevancy,* attempts to locate, in the most celebrated icons of popular French architecture — the Eiffel Tower and the Centre Pompidou —, the significant origins of the present usage of modern transparency in a monumentalized urban realm. These two monuments represent a specific usage which echoes into the present: an employment of transparency at an elephantine scale, along with an overt, expressionistic use of advancing technology, presumably to signify and provoke accessibility by a large and diverse general public.

Paris, at the turn of the century, was embroiled in the social and historical paradigmatic shift caused by the effects of rapidly introduced industrialization. For architecture, the introduction of iron construction in this period was revolutionary in terms which were spatial, representational, and as well technological, particularly in the implications of the radical change in methods and scales of productions. As evidenced in the World Expositions of 1855, 1867, 1878, 1889, and finally 1900, the "City of Light, " or as the social critic Walter Benjamin once tellingly revised to "the Look-

ing-Glass City," was particularly compelled by new technologies around themes of light (electric as well as those afforded by constructional transparency).[4] These enormous expositions in "the heavenly city" were disposed to displaying phantasmagorias of developing technologies at a spectacular level, offering the general public glimpses of utopias yet to come.[5]

The significance of the Eiffel Tower in this period of technological history of iron building is well-known. Designed to surpass all previous heights of man-made structures and attain the "1000 foot mark," a height mystified by popular engineering lore, Gustave Eiffel conceived the monument primarily from an understanding of lateral deformation to be encountered from wind loading — which at heights never attempted before had never been directly observed. This attempt at studying the forces of the wind represented his first foray into the vertical dimension; earlier experiments for several decades prior had concentrated in the effects of wind in long-span bridges. Coupled with this interest in the effects of wind, the contemporary enthusiasm in the possibilities of iron construction established the parameters in engineering the structure. Eiffel brilliantly realized that iron construction offered an opportunity to configure the primary components of the structure — built-up wrought-iron lattice trusses — to allow the wind simply to pass through, rather than countering the lateral demands with immutable mass. Also significant in the tower's design were Eiffel's development for a formula for elastic modulus as well as several additional lateral reinforcement devices in the structure itself — namely the use of stiffeners in the piers and the intermediate roof decks. Eiffel's calculations were eventually proven highly accurate; the top of the structure deflects less than three inches during strong winds. This homage to the natural forces of movement was reflected in several other devices developed in the building process. In the massive foundations, Eiffel employed pneumatic caissons to allow for the continual leveling of the four different foundation structures, since water levels and soil conditions varied greatly with respect to the distance to the Seine encountered over the enormous footprint of the structure. Indeed inventions for adjustment were found throughout the structure under construction; Eiffel also employed pistons inside the shoes at the connections between the foundation and the primary columns and sand-filled weights at the top of the supporting wooden pylons to constantly adjust the height and angle of the four piers, under construction separately, to come together exactly — at a tolerance of 1/10 of a millimeter — at the level of the first platform. The raising of construction materials to unprecedented heights was accomplished by Eiffel's design of "creeper cranes" which utilized the tracks later to accommodate the famous diagonally moving elevators. During construction, the tower was not only a technological metaphor for the age of the machine but was itself a self-gauging machine, an enormous apparatus constantly adjusting itself in minute movements.

Mounted for the World Exposition of 1889, the tower's future on the site of the Champs-des-Mars was uncertain. The

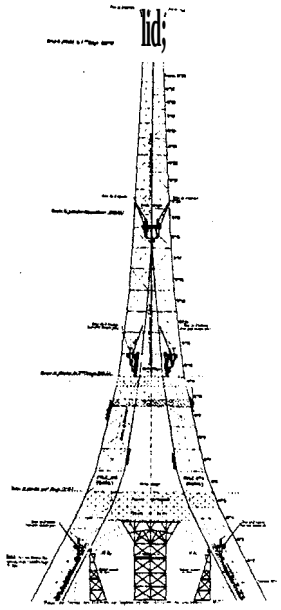

Fig. 1. Diagram of Eiffel's system of mobile cranes.

18,038 pieces, all drawn exactly by Eiffel and his associates, were pre-fabricated with all 2.5 million rivet holes pre-drilled precisely for final erection on site. Of that number of rivets, two-thirds were placed in the shop, substantially decreasing assembly time required on the site. This constructional system was ideal not simply for the hurried schedule of erection, but equally significant for the prospect of dismantling, which seemed a likely consequence at the time, given the tremendous early protest accompanying the tower's initial construction. The import of the use of mass-assemblage was not either confined to the ranks of engineer society. Walter Benjamin's lost *Passagen-Werk* [The Arcades Project], regarded by most historians as a definitive revision to "philosophical history," was based and organized on observations of material culture existing in Paris in the early part of the twentieth century. The structure of the text, an amassing and categorizing of commonplace elements, seemed to be conceived by Benjamin as an analogical structure hinging on a close observation of the tower's "extremely small, extremely effective forms."[6] Wrought-iron assemblage, as interpreted by Benjamin, became *montage,* the guiding formal principle with which Benjamin's work characterizes modernist space — a space which is essentially kinetic in perception.

Given the tremendous scale as well as the iconographic duration which the the tower has come to possess, the first *madness* of the tower is located in this accommodation to impermanence, a subservience to forces of transiency at all scales of construction and levels of conception. This ambivalence of the tower as simultaneously inert and active continues even to be perceived visually in the constructed elements themselves. To accommodate the changing curvature required for the lateral thrust, each of the twenty-eight different trussing panels vary in dimension from top to bottom. As the

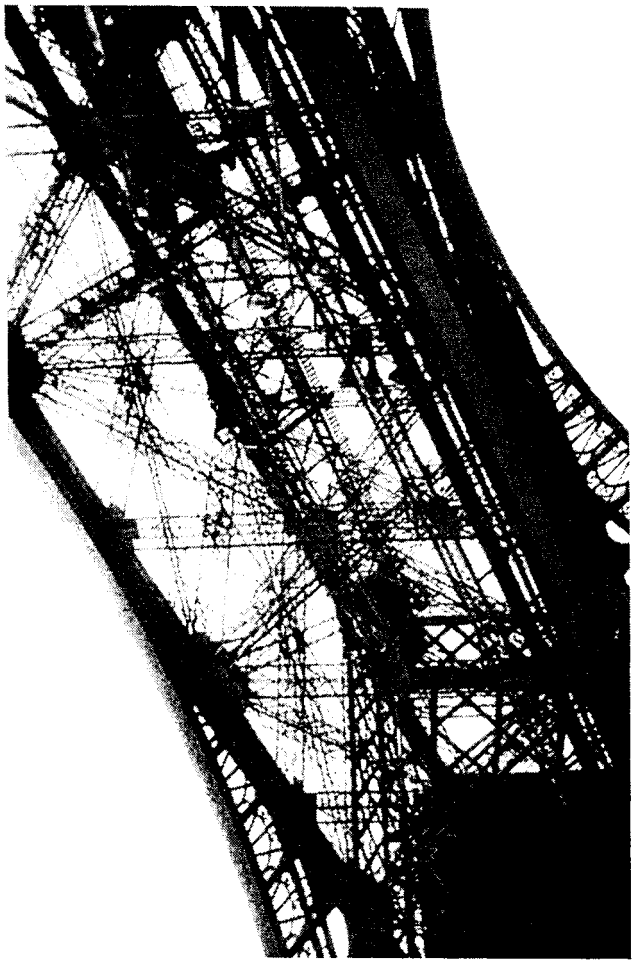

Fig. 2. Eiffel Tower, Southeast pier.

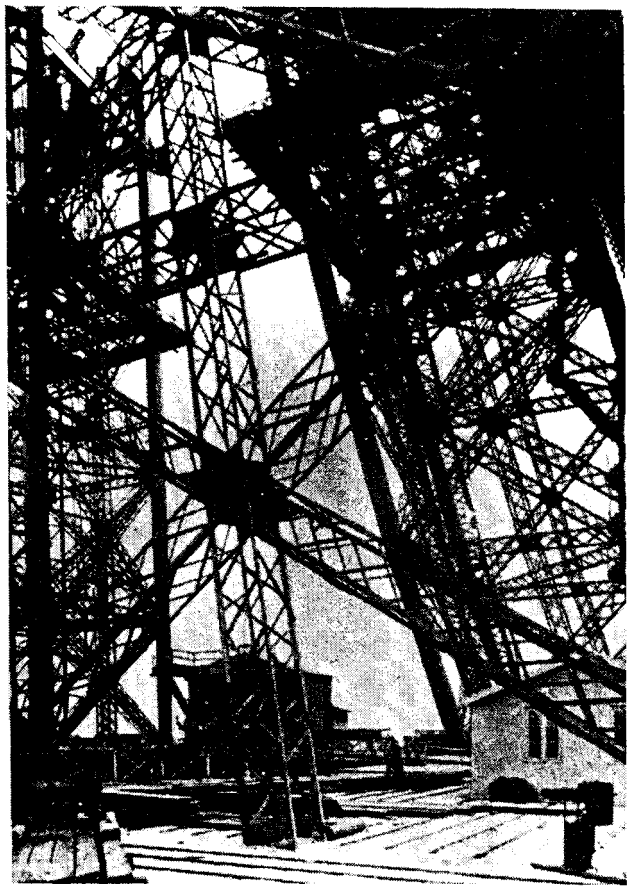

Fig. 3. Inside the Eiffel Tower circa 1888.

three-dimensional parallelograms are viewed from an oblique angle underneath, the sides of the box trusses are never viewed as coincident. The resulting optical effect renders the trusses, viewed from both near and far, as always slightly out of focus. Though Eiffel provided through statics and materials that the tower would move minimally, it nonetheless *appears* to move constantly.

Roland Barthes' famous essay on the Eiffel Tower offers yet a few more incisive observations which might be extended to the public aspirations of the Mitterand monuments: "the incitation of mass societal imagination."' In this essay, Barthes outlines the multiplicity of perceptual and intelligible functions that the tower enacts on visitors and consequently to their perception of the city of Paris. In his description of the delicious paradox of the Tower, he elaborates on the dual existence of the Tower as both object to be seen in the landscape and that which in turns allows the city to be seen and re-seen. This particular inversion has another consequence found in the spatiality of the monument.

The comprehension of the tower occurs only partially when viewed from a distance; the ultimate effect of the structure is understood only as one approaches and passes underneath into the enormous bowel of purely feminine anatomical space: the phallus regenderized. Eiffel marvelled that the age of iron comprised fundamentally the advent of intelligence over the muddled quantification available in masonry construction. According to Barthes' essay this force of intelligence is perceived as the structure is engaged experientially. He notes that the participation of the visitor is manipulated continuously at both intellectual and sensible levels, beginning in a mystification provided by the sheer scale of the monument (and a nostalgic appreciation of the previous era's commitment to the technological wonder) and proceeding to a rational engagement with the tower's construction, as the revelation of the making of the transparent structure makes itself immediately apparent. Yet this duality of engagement might be seen to proceed yet further toward a *re-mystification,* a sense of a displaced existence among the fractured, projected spaces — intended to be fully inhabited by visitors — unfolding across the filigree of thousands of plates and angles making the irregular interstices of the structure. Here the spatial invention enacted by Eiffel, most likely unwittingly, is nevertheless truly profound. As Gideon implies, it is this fragmented space, along with the intervening "continuously changing snippets of landscape," which distinguishes the tower from all earlier benchmarks of iron construction — the great exposition halls—where the internal spaces, though seemingly infinite in scale, were nonetheless

contained, and perceived, within a unitary figure.[8] Thus as the constructional method is marked by a process of assemblage — or montage — so is the resulting interior space.

The psychological vacillation between mystical wonder and scientific rationality, enacted at exaggerated scale, thus comprise a signature for the transparent monument. Yet this odd moment within the comprehension of the tower also coincides precisely with the appearance of a strange intimacy — the "little worlds" [of vendors and restaurants] of Barthes — as the form of the monument disintegrates into a giant structure to house a series of small carnivals. The final embodiment of the tower must be finally understood through its accommodation to the more quotidian activities of eating, drinking, and strolling for which the culture of the city is renowned. Again the return to Benjamin's ideas is noteworthy, whose conception of fractured modernist space relied as well on a temporal perception which was ambulatory in nature. In this way, the populace becomes welded—literally — toiconic transparency by being able to enter and, most importantly, to move within the enormous structure, perhaps with the sense of distraction of the true flâneur. The commonplace nature of this occupation — an essential facet — bears resemblance to Victor Hugo's account of life within the bounds of Notre Dame — within the tracery of the building's structure the stage is set for the actions of its shadowy inhabitants, whose turbulent emotions are nonetheless inscribed within the common acts of daily life.

Madness indeed ensues as the configuration of the transparent space and structure is reduced to that of *surface,* a metaphorical *surface* composed of a continuously redefined states of indeterminacy: a static structure in constant motion, an inert obelisk housing intimate carnivals, a finite landmark composed of a series of infinite fractured spaces, an object seen in the landscape serving to view and re-situate the landscape, and finally, a technological feat paradoxically sheltering the commonplace nonetheless while anesthesizing with the force of a phantasmagoric dream.[9]

Understood politically, these various descriptions have tremendous import, illuminated precisely by Benjamin's ideas in the *Passagen-Werk.* For Benjamin, the bourgeois world of capitalist fin-de-siecle Paris was entranced in such a dream state, one compelled by a consumption of luxury goods which had only been accelerated by the effects of industrializedmass-production. Benjamin'sexhaustivequest within existing material culture was for the revelatory effect suggested by Scheerbart's writings on crystalline utopias. He theorizedd that this effectt would simultaneously provide a ventilation of bourgeois attitudes and a breaking of a historical continuum of domination which was reified by the linearity of technological progress. Indeed, Benjamin's ideas imply that the mysticism and euphoria provoked by the traumatic physical evocation of tower would be indicative not of democracy, but of totalitarianism — and in the end, the expositions themselves remain highly problematic as spectacular devices heralding the advent of essentially a consumerist society.[10] Yet the paradoxes within this particular analysis abound.

Fig. 4. Life in the tower. From Clair Renè's film ***Paris*** *qui Dort,* 1921.

It is often forgotten that the tower was built to commemorate the centennial of the French Revolution and to symbolize its aspirations. "Coating the tower withiridescent paint caused it to scintillate in the sunlight and to emanate a rosy glow in its gas and electrically lit nocturnal illumination, making more explicit the analogy between the man-made, manufactured structure and the concept of society as a product of mutual interest among individually minded people."[11] The intent of the tower, it seems, was indeed to dematerialize, not simply into aromantic atmospheric state, but into a collective hallucination both symbolizing and enacting microcosmically a democratic liberal society. For the organization of the labor on the structure's construction, Eiffel proposed a working model representing the ideals of the Third Republic — as extended from the French Revolution — to cultivate a society composed of an extended community of egalitarian producers. Utilizing new systems of legalized unions, throughout construction wages were set through negotiations and independent cooperative contracts. New techniques of construction were taught and shared between hundreds of contractors and subcontractors employed throughout France. This new organization was intended by the Third Republic to signify to the French people the rewards of labor and allow them vicarious involvement in a symbolization of community-building process. According to Edouard Lockroy, then Minister of Commerce, Public Education and Fine Arts, even the individual plates and rivets were themselves meant to function symbolically, first as the work of the laborers on the

tower's construction and then the larger society itself: an assemblage of individuals.'? The wedding of the overt technological character of the tower was to complement the themes of the Exposition. Against a background of disharmonant social change based in the anxieties provoked by new technologies, the exposition was intended to mediate the trauma of their rapid introduction through educating the general public. Of special note were the exhibits of new domestic technologies displayed prominently in the Galerie des Machines at the opposite end of the Champs-des-Mars. The symbol of the tower was to serve thus as a benevolent marker grounding the unsettling technological changes wrought in daily life itself.

Debatable still, however, is whether many these intentions of the tower's construction, symbolic or otherwise, were essentially empty as they compared to the ensuing rampage of consumerist culture in the twentieth century. As Benjamin himself realized, the transparency of iron construction was inescapably mystifying; in the end, turning toward an alliance with the products of *volumetric transparency* manifested through the "objective" surface of solid white walls (Le Corbusier and Gropius).[13] Yet certainly the Exposition and the Eiffel Tower itself were a tremendous public successes. The continued national and international visitation and proliferation of images of the Eiffel Tower is evidence enoughan enduring status in international iconography. These significant claims to public endearment and the evolution, traced above, of a "commonplace occupation" seems to provide certain impetus toward granting the monument — and this type of iconic transparency — the status of anti-elitist success. The lingering question is represented by a dialectic which is posed not between enchantment and rationality, but between enchantment, replete with lulling effects on the masses, and the resulting ameliorative nature of event. This same opposition is one which is rephrased, and perhaps amplified, ninety years later across the Seine in the Marais.

When Renzo Piano and Richard Rogers began designing the competition entry for the Centre Pompidou, their goal was one of blatantly challenging the fixed monumentality of the cultural institution toward the "institutionalized spontaneity" proposed by the 1968 revolution, idealized in the Situationists' protest against the "elitism" of the then recent Charles de Gaulle airport and the commercial development at La Defense. The response of the two young unknown architects and their engineering team, Ove Arup and Associates, underscored an inclination which was essentially political: "The image of culture is static and elitist; our problem is to make it live to both entertain and inform, not only for tourists and specialists, but for those who live in the neighborhood, a neighborhood in crisis."[14] This agenda of humane benevolence advocated the elimination of aesthetic qualities in favor of functionalist and technological imperatives — a practice seen as paramount in purging elitist culture for societal good. Widely regarded as an "unrepentant positivist homage to the modernist proposals of the 1920's," the original concept had, however, another side.[15] The portion of the competition entry devoted to planning the institution stressed the inclusion of non-programmed areas, emphasizing the potential of these to break open activity outside the confines of the institution and therefore the instiution itself; the competition entry's plaza elevation is notably dominated by the rendering of people as well as the dispersal of information systems onto the architecturalelements — buryingreferencesto Oscar Nitschke's 1932-35 *Maison de la Publicitè*. "The center is a public event; thus the greater the public involvement, the greater the success."[16] This emphatic conception of "event," very similar to that recently theorized, was embedded within the initial proposal of the building."

Echoing the intention for the building's use, the seminal concept in the design of the building as structure and space was that of "perpetual change," intended as the deployment of systems for movement of people throughout the building (and cars in the subterranean levels), but was marked equally by a consistent implementation of material and structural systems capable of literal movement — or in some cases at least facile replacement. Although an early proposal for repositionable floor structures was later abandoned, the first attention to this concept came in the changeable nature of the exhibition spaces themselves. As exemplified in the great exposition buildings, and given ideological impetus by Jean Prouvb's *Maison* du *Peuple* of 1935 in suburban Clichy, the form of the building was generated from perceived necessities of flexible space. This first condition suggested that the building be conceived as an empty box, an enormous cage whose internal volume would only be filled with programmed spaces to sixty percent capacity, allowing for later filling or redispersal of space within it as desired, and encouraging the remainder of the space, particularly the ground floor and terrace levels above, to be left completely open to appropriation by the public. In search of the quintessential conceptual diagram, Piano and Rogers pushed all structure and mechanical systems to the exterior of the building.

In 1928, Gideon wrote of the Parisian department stores' demands: "Greatest possible freedom for circulation, clear layout, Greatest possible influx of light. Glass and iron thus became the constituent materials."[18] This sentiment was reiterated fifty years later in the choice, and subsequent defense of the cost, of lightweight industrial materials, specifically those of prefabricated steel and glass, as accommodating not only pragmatic demands but epitomizing the material sensibility with which they sought to endow their building. "Let's think of ideas that will give the design the same *espirit* of the Eiffel Tower and the Gare de Lyon."[19] The "espirit" of technology echoes the desire to enchant, to inspire the imagination. Piano and Rogers, with their British engineering collaborators — particularly with Peter Rice at this office — imagined a steel technology not of the nineteenth century, but the most advanced technology available in the 1970's. This technology was found in the use of large-scale stainless steel castings, which had been recently utilized in Frei Otto's Munich Stadium. There were, however, definite structural limitations to be resolved in using such a provoca-

tive system; the resulting material was weak in tensile stress. "Espirit," however, won the debate; the limitation was countered by the altering the metallurgical properties of the stainless steel during casting by centrifugally spinning the members and then subjecting them to a highly controlled cooling process. The resulting tensile properties of the stainless steel improved, though still prevented any use of welding on site at many of the connections between members, especially in locations of tension. The joint would be marked prototypically by aprocess of mechanical assembly. Interestingly, this property endowed the steel structure to be conceived as the only irreplaceable system of the building. All other systems, particularly mechanical and electrical systems, were to be replaced as these technologies advanced over time.

"All members of the team had movement in mind: it goes with change."[20] This sentiment was never more inventively realized than in the design of the structural systems themselves. After several design phases, the primary system was finalized as stainless steel columns and enormous Warren-truss girders spanning the full width of the building (approximately sixty feet), both of which were tubularin cross section and filled with circulating water to accommodate fire protection. The primary system was capable of significant internal displacement; no expansion joints were necessary anywhere in the main body of the building. To reduce the bending moment in the trusses, the team designed a cantilevered rocker-arm beam—a "gerberette" [after engineer Heinrich Gerber]—along the flank of the building facing the infamous public open plaza, which was to transfer the dead load of the building partially at an interior column line and partially into tensile force at the two faces of the buildings' long flanks. At these perimeters, high-tensile steel vertical members pulled the ends of the gerberette down, transmitting the load into the ground (not the building's foundation). This dynamic zone of interchange of structural forces is coincident with the full activation of the social life of the building—both through programmed and "unprogrammed" means. Located here are all of the building's elements of public circulation, as visitors and general public move between the various facilities of the building: galleries, a public library, bookshops, a cinemathèque, and public terraces and restaurants at the uppermost level. The visitor ascends to this top level of the building by means of a deliberately slow escalator, which as it crosses the horizontal datum of the five-story Parisian

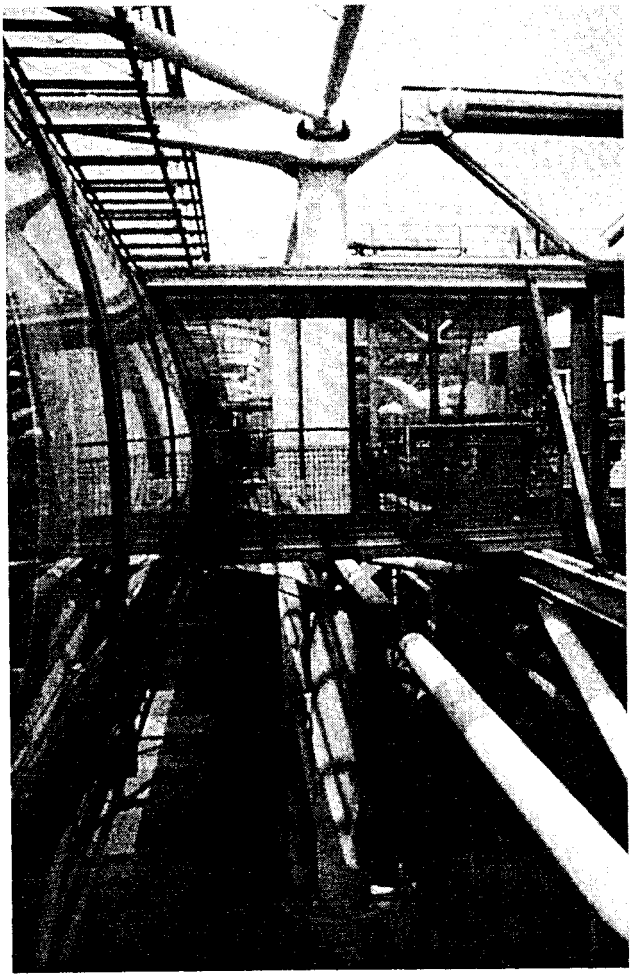

Fig. 5. Centre Pompidou, top level. Circulation elements around a gerberette member.

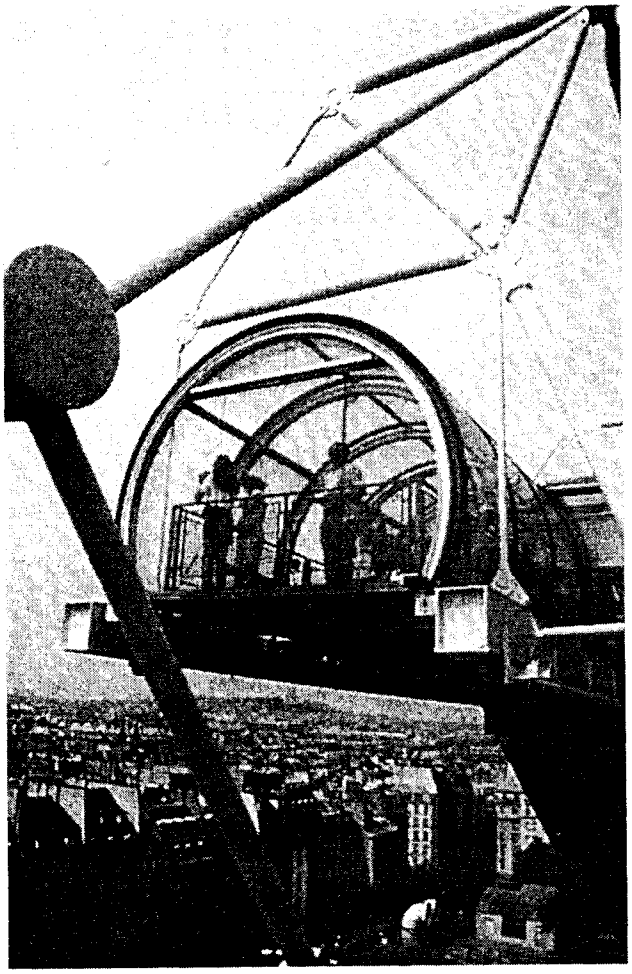

Fig. 6. Centre Pompidou. At heaven's gate: the top of the escalator.

rooftops provides an engagement with the city's fabric and landmarks, a harkening back to the effect of transgressing the horizontal datum at the first level of the Eiffel Tower. The original competition specified that this elevator, as well as the open ground floor, would be free of entry fee and entirely accessible to French public and tourist visitor alike. The social fabric of the city, diverse and confrontational in the original conception of the architects, would be pulled from the open plaza upward along the vertical flank of the building and would be provided with the final prize of Parisian existence — admittance to the spatial realm above the roof tops.

It is unfortunately outside the scope of this study to elaborate much further into the design of the secondary, tertiary, and connective systems of the structure, although there are many points to be drawn from a lengthier examination. There do, however, remain a few exceptional remarks. The visibility of all technological systems was a clearly motivation in the design of most of the systems. Likewise, mechanical assemblage served throughout the building at all points of connections, serving to keep separate pieces and methods of attachment discernable to the most uninformed eye. Clearly Ove Arup's agenda included a didactic element: intelligibility governed as a rule in the design of systems and joints at all levels of hierarchy in the building's systems. The infamous color-coding of the technical systems on the exterior is thus only one of many symptoms of this intention. Also noteworthy is the design of final system of detailed accessories found in the glass and steel enclosure system at the plaza flank of the building. Here Piano and Rogers designed a double set of symmetrical steel angles which projected inward from the mullion system. Any number of accessories might be fitted in-between the two angles, which served as supporting brackets. While the angles were used extensively for attaching radiant heating elements and electric switching devices, Piano and Rogers also designed a full range of customized accessories for the most mundane of the visitors needs. This final layer of equipment proves evidence of the initial concept — taken to the final level of detail — that of accommodating for the acts of human occupation.

When compared with the Eiffel Tower, themes established in the first discussion are consistently literalized in the Centre Pompidou. Piano and Rogers are driven by instilling forces of spontaneity and temporality, translatedactively into the building's programming, but most importantly in this argument, in the form of the building and its technological systems. As in the tower, this temporality was one which was to be fully intelligible, or "transparent," utilizing extremely advanced technologies of the day at an exaggerated public scale to provoke a mystical "espirit" of technology. The nature of commonplace event, which served to illustrate the final embodiment the Eiffel Tower's existence, in the Centre Pompidou became an active motivation of the architects. Like the Eiffel Tower, the nature of this event was one of which was realized through ambulatory movement inside the bounds of an enormous structure, which had significant bodily analogies itself.

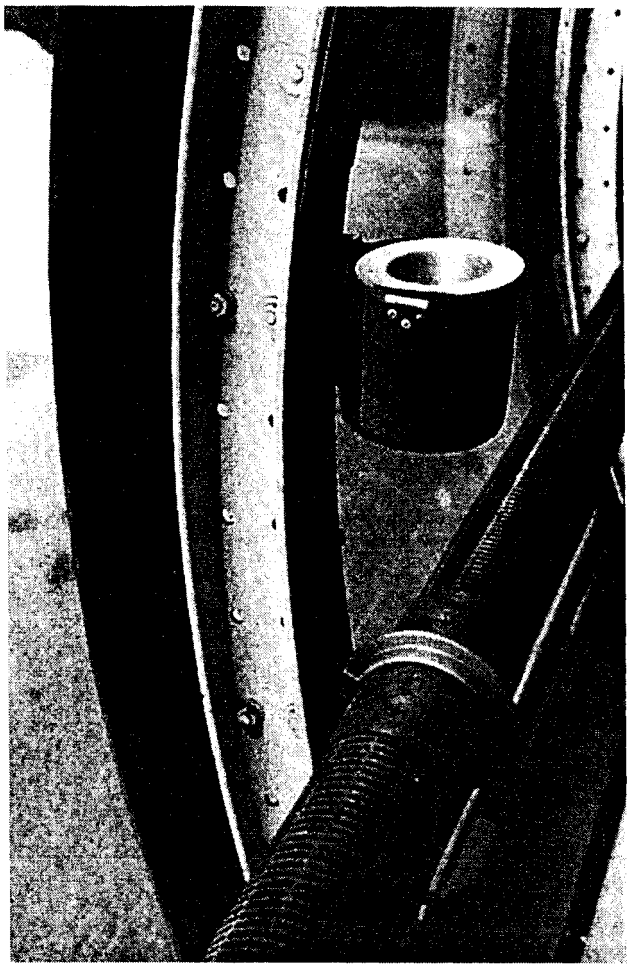

Fig. 7. Centre Pompidou. Ashtray.

Like the Eiffel Tower, the final reference in the space was outward, through ascension, toward the city of Paris. Unlike the Eiffel Tower, however, the Centre Pompidou provided a much fuller developed engagement with the pattern of the city's urban structure, primarily through the public plaza, but also through the subterranean traffic system as well as through simple means of the general orientation of the building along the Rue du Renard. Symptomatic of this engagement of the general public is the Pompidou's traditionally free access to significant spaces within the structure, which has resulted in liberating the building from the prospect of becoming a wholly touristed space, as hasunfortunately befallen the Eiffel Tower.

The technological hyperbolization of the museum was infamously criticized for its lack of contextual relation to the city. Yet the social context of the city not only admitted the Pompidou into its popular milieu but has become obsessed with the institution and its the plaza, the Pompidou admits five times the originally anticipated visitation. This enamoration speaks neither of intellectual nor aesthetic appreciation of the building's form and systems but of aconflation of description broached by nthis form of iconic transparency. The public has responded unabashedly to the invitation of-

fered by the building, occupying in teeming masses all spaces and crevices that the building has to offer — embraced by tourist, homeless, student and intellectual alike.

Despite its overt technological nature, the physicality of the building — its mythic reverie — has been subsumed by the sense of collective experience of the immediate moment. Even the sense of qualified interiority of the Eiffel Tower has posed has disintegrated entirely: the Centre Pompidou might be regarded as having either entirely no void space at its central or as replete void, replete *surface,* a building composed entirely of event. The original competition jury anticipated not only the phenomenal public success of the building but also its ultimate description:

> But one does not know many buildings resembling this one: not a tower or a skyscraper, but seen from afar, an immense screen, and closer, a mirror offering a constantly changing play of images and reflections.[21]

As a somewhat tragic postscript, the institution has now been rendered close to the state of actual artifact, in danger of physical destruction by the unabated consummation of the public. This month (January 1998) the Pompidou is scheduled to be closed for extensive and badly needed renovations, which will remedy climatization systems, fluid distribution, escalators and elevators, and will generally add and redisperse gallery space (simultaneously eliminating administrative space to some other location). The colors on the exterior elements have already been refurbished with vastly advanced paint technologies. The Centre Pompidou, as building, is finally in the active state of change anticipated twenty years ago. Most disturbing, however, is the administration's intention to seal the public plaza and infamous escalator from free public accessibility, thus controlling and sanitizing occupational habits. This action does more than endanger the central concept of the Pompidou. Does the chaos that erupted in these two institutions, particularly in the Pompidou, signal a new and different sense of monumentality? Gianni Vattimo wrote recently of an idea of "irresistible plurality" as the essential characteristic of a postmodern "transparent" society which has liberated differences and dialects:

> ... in demonstrating that being does not necessarily coincide with what is stable, fixed and permanent, but has instead to do with event, with consensus, dialogue and interpretation, are trying to show us how to take the experience of oscillation in the post-modern world as an opportunity of a new way of being (finally, perhaps) human.?'

If Parisian transparency developed through these two structures has broached this sentiment, it is a significant revelation indeed. Within these two technological monuments, unexpectedly has emerged a form of human activation which is egalitarian in its obsession to occupy, to indulge, and in which to participate. Given the rhetoric of the current Mitterand Grands Projets toward providing accessibility, both symbolic and literal, these two buildings offer the ultimate referent and criteria against which to judge the successes of contemporary attempts.

NOTES

[1] This paper was developed from a portion of "Accessible to All: Dominique Perrault's Bibliotheque nationale de France," (1997 ACSA International Conference: Building as Politics). A culmination of the points suggested in this study of the Eiffel Tower is found in this study of the library project.

[2] From an interview with François Mitterand in *Bibliothe'que nationale de France 1989/1995.* Edtd. by Michel Jacques with Gaelle Lauriot-dit-Prévost. (Paris: Artemis and arc en reve centre d'architecture, 1995), p. 48.

[3] See the catalogue of the same title by Bernard Marrey with Jacques Ferrier, Editions du Pavillon de l'Arsenal, Picard Editeur, January-May 1997.

[4] The quintessential evolution of iron construction in the World Expositions is to be found, of course, in Sigfried Gideon's *Building in France, Building in Iron, Building in Ferro-Concrete* (1928). See the recent re-publication by the Getty Center Publication Programs, 1995, Intro. by Sokratis Georgiadis, pp. 120-145.

[5] Susan Buck-Morris, *The Dialectics of Seeing: Walter Benjamin and the Arcades Project.* (Cambridge: MIT Press, 1991). p. 81-86.

[6] Buck-Moms. *Dialectics,* p. 74.

[7] Roland Barthes, "The Eiffel Tower," reprinted from *The Eiffel Tower and Other Mythologies,* (Farrar, Strauss and Giroux, Inc., 1979) to *The Barthes Reader.* (New York: Noonday Press, 1990).

[8] Gideon. *Building in France.* p. 91.

[9] This concept borrows decidedly from Giles Deleuzes's writing on *unlimited becoming* and *surface:* "In Plato, however, this something is never hidden, driven back, pushed deeply into the depth of the body, or drowned in the ocean. Everything now returns to the surface, This is the result of the Stoic operation: the unlimited returns. Becoming mad, becoming unlimited is no longer a ground which rumbles. It climbs to the surface of things and become impassive." *The Logic of Sense,* (New York: Columbia University Press, 1990), p. 7. My reading of Deleuze's investigation into the "sense" of the object underlying its material definition relies on his use as well of the concept of "event," that description of objects which include relational attribute or on-going processes of change. Since it is impossible, however, to paraphrase Deleuze definitively, see Chapters 1-4 especially of this writing.

[10] See Deborah Silverman's essay: "The 1889 Exposition: The Crisis of Bourgeois Individualism," *Oppositions 10,* Spring 1977. (New York: Institute for Architecture and Urban Studies)

[11] Miriam R. Levin, *When the Eiffel Tower was New: French Visions of Progress at the Centennial of the Revolution* (University of Massachusetts Press/Mount Holyoke College Art Museum, 1989), p. 25. In this catalogue accompanying an exhibition of popular images at the time of the original opening of the Eiffel Tower, Levin traces the symbolic language of the tower and its construction. The signification of the tower is traced carefully in this study primarily through a reading of Edward Lockroy's preface in Emil Monod's *L'Exposition universelle de 1889: grand ouvrage illustré, historique, encyclope'dique, descriptif,* 3 vols., Paris 1890. My description of the tower's organization of labor structures and their implications is indebted to her account.

[12] Levin. *When the Eiffel Tower...,* p. 23.

[13] See the argument put forth by Detlef Martin's "The Enticing and Threatening Face of Prehistory: Walter Benjamin and the Utopia of Glass." *Assemblage 29:* 6-23 1996, MIT Press.

[14] Cited in Nathan Silver's *The Making of the Beauborg: A*

Building Biography of the Centre Pompidou (Paris: MIT Press, 1994), p. 24. Silver's recent revisitation of the Beauborg and its construction described the events of making the building in a far more comprehensive examination than this brief account can ever attempt. To this book and its finding, my description is thoroughly indebted.

[15] Alan Colquhoun, This comment cited Claude Mollard in *Centre Pompidou,* (Rizzoli 1979).

[16] Cited from a lecture text by Piano and Rogers (defending programming decisions), Silver. *The Making of the Beauborg,* p. 104.

[17] "Within thedramatic sense that pervades much of the [our] work, cinematic devices replace conventional description. Architecture becomes the discourse of events as much as the discourse of spaces." Bernard Tschumi, "Space and Events," reprinted in *Architecture and Disjunction* (MIT Press, 1994), p. 149. It is worthy of note that Tschumi himself was a young architect involved in the Paris student revolution of 1968, and so shares a cultural legacy and generational affinity with Piano and Rogers.

[18] Gideon, *Building in France,* p. 117.

[19] Silver, *The Making of the Beauborg,* pp. 29-30.

[20] Silver, *The Making of the Beauborg,* p. 30.

[21] Cited from the jury report of the Ministeries of National Education and Cultural Affairs, Silver, *The Making of the Beauborg,* p. 45.

[22] GianniVattimo, *The Transparent Society.* Transl. by David Webb. (The Johns Hopkins University Press 1992), p. 11.

PHOTOGRAPHY CREDIT

Fig. 1: Courtesy of Houghton Mifflin Company Boston. Printed in Joseph Harriss, *The Tallest Tower: Eiffel and the Belle Epoque,* 1975, p. 65.

Fig. 3+4: Courtesy of the Ministére de la Culture, de la Communication, des Grands Travaux et du Bicentenaire. Reprinted from *Musée d'Orsay: Catalogue sommaire illustré du fonds Eiffel,* Éfitions de la Réunion des musées nationaux, Paris, 1989