

World Expositions as Time Machines: Two Views of the Visual Construction of Time between Anthropology and Futurama

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International expositions as representative cultural phenomena which contributed to shape world history in the modern and contemporary age are currently approached from combined spatial points of view (in a geographical, material, and cultural sense). It is argued here that they may be better studied, and understood in the classroom, by also taking into account their temporal and historical dimensions. The symbolic and discursive structure and modules of exhibition-style events such as the "Great Expositions" during the nineteenth and twentieth centuries, particularly the living human expositions, have in fact been organized along temporal and historical coordinates as well as spatial ones.

The following two sections will explain the functioning of expos as "time-machines," putting forward a temporal perspective and analytical dimension that can contribute to the advancement and teaching of World History in an innovative way, also beyond the specific study and teaching object of world expos and fairs – which nonetheless remain among the most significant and fascinating phenomena of historical and historiographical globalization.

As the first part of this essay will argue, nineteenth and early-twentieth century expos and fairs visually represented the human ways of living, activities, products and achievements diversities in the historical past and future, hence presenting them in a temporal dimension. Elements of this temporal representation included the effort to reproduce ancient Greek or Roman temples and monuments, Oriental palaces, decorative details and typical settings such as *harems* and *cafés*, and, most of all, medieval streets, quarters, castles and whole villages, example not just of the pursuit of the picturesque, but of the intention to make possible the visual experience of temporality and a material, emotional and empathetic understanding of history.

Also the living ethno-expositions, through the physical presence of alien humans, put on stage historical temporality, offering to the gaze of Western observers the conflation of present savage societies and primitive or ancient societies, seen as the progenitors of contemporary societies, conveying the idea of a temporal gap – whether bridgeable or unbridgeable, depended on theories on the origins, characters and abilities of human varieties or 'races' – between a more or less primitive past and a present embodying progress and modernity: the provisional arrival point of a relentless process culminating in the scientific and technological wonders visible in other sections of the expositions. Therefore, living ethno-exhibitions cannot be fully understood without consider them as an essential part of the mechanisms, apparatuses, and discursive-performative structures

that have transformed, and to a certain degree still continue to transform at the present day, the great expositions into powerful time-machines.

As the second part of this essay will further suggest, the exposition can be deciphered, in this respect, as a time machine as well as a teaching device, with significant parallels with the development of modern museums in the hierarchical organization of displays according to evolutionary paradigms, and their educational function.

With 1889's Eiffel Tower, Alva Edison's pavilion of electric light, and the Hall of Machines, the *technological sublime* and the *thematization of the future* became central features of expositions: the time machine began to be set on a date yet to come, offering the visitor "an early encounter with tomorrow." Exhibitions increasingly worked as science-fictional devices. Expos, through their richness as material objects and *communicative circuits* – exploiting specific treatments of space, visual representations and stagings, and the cinematic dimension of theatrical performances and the movement of viewers – embodied a *sense of wonder* and produced in spectators' mechanisms of cognitive estrangement which prepared the ground for the emergence of science fiction as a codified and recognizable genre.

Expositions contributed to the emergence of science fiction through the elaboration and diffusion of an *ideologeme* of techno-scientific progress, projections of the future, and elaboration of a science-fictional mindset. Science fiction was soon contributing to the creation of an imagery connected to expositions as time machines, incorporating expositions in literature and film, as well as providing rhetoric instruments and tropes with which expositions were received, conceptualized, and commented on by the mass media.

Connections between science fiction across media and international expositions as "chrononautical spaces" can be critically assessed and presented in the class on the one side as forms of isomorphism derived from a shared set of roots in the cultural-historical context, and on the other, as a complex set of mutual influences, including the exploitation of science-fictional mechanisms by the different agencies involved in the design of expositions, as well as in their reception within the media as a way of representing techno-science and projecting identities.

I. Guido Abbattista, *Alien Humans on Display: Expositions as "Time Machines" and the Visual and Temporal Appropriation of Human Diversity*

The public exposition of living humans has been an established practice in the Western world – going back to at least classical antiquity – that truly exploded in the mid-nineteenth century. It was a widely diffused and enormously successful if controversial practice – gradually more controversial with the passing of time – throughout nineteenth and early-twentieth century Europe and North America: the last organized exposition of this kind was recorded at the Brussels 1958 universal exposition where, just on the eve of the Belgian Congo independence, a Congo village was erected and authentic Congolese people hosted in it, soon to be dismantled, however, and its guests repatriated, under the pressure of public and diplomatic protests. The frequency

of such displays increased from the mid-nineteenth century onward when they were absorbed and became a regular component of the great national, international and universal expositions taking place in growing numbers throughout Europe and North America. This was due to a combination of factors.

1.1. Displaying Human 'Otherness'

When we try to find out the reasons for the spectacular success of the several forms of exhibiting living human beings in public, we should at least consider the following elements belonging to a precise historical context, roughly coinciding with the decades from the mid-nineteenth century onward: 1st) the systematic development of, or scramble for colonial and imperial expansionism overseas, which was closely related to domestic patriotism and the nation-building processes in the major European nation-States; 2nd) the increase in number and the extraordinary success of the cultural artifacts of the great (national, international, universal, colonial and themed) expositions, which was perhaps the single most influential mass-communication medium in nineteenth- and early twentieth-century Europe, and one that in its turn encouraged an increasingly national and international mobility and tourism; 3rd) the growing impact of visual and performative culture due to the socially inclusive nature of mass spectacles and a rapidly developing specialized entrepreneurship; 4th) the success of the ethno-anthropological disciplines with their professional practitioners and their gradual emancipation from a philosophical basis and the medical sciences; and finally, 5th) the growing mastery that Western scientific thought extended over the natural, human, economic and cultural world and the achievement of the Baconian and Enlightenment project of encyclopedic understanding and scientific explanation that this involved. These factors, together with other well discernible causes in the era of globalizing mass-communication and spectacular society that followed, continued to encourage the exhibition of commodified alien human bodies and stir exoticizing and orientaling sensibilities throughout the twentieth century, when the exhibition of living alien humans as a cultural phenomenon did not entirely wane: its forms were just modified and adapted to new languages of communication, in fact the same we still experience today.² It is possible to speak of a transnational cultural history of such public human exhibitions that mirrors directly the colonial, imperialistic and missionary politics of the white, Christian West: a history revealing the dimensions of spectacularization and of standardization typical of the advanced capitalist and industrial societies going through identity-building and national integration processes. It would be erroneous, though, to think of the public display of living human beings only in terms of a typical capitalist, colonialist, imperialist exploitative practice, unless we are ready to assign these attributes to the European modern society since at least the late fifteenth century or even before. In fact, such a practice should not be related only to the great expositions and world fairs, on account of its ancient roots in the history of European social and cultural practices. It should be considered rather as a particular manifestation of a wider category of events for which some particular definitions have been suggested such as "embodiment of cultural encounters."³ I would rather adopt the less neutrally resonating expression of 'public othering of the human body'. In this sense, it cannot be considered

as belonging to a world that we have definitively left behind and which we can refer to in the past tense. Both a retrospective, historical gaze and a critical consideration of aspects of our contemporary culture could significantly enhance the definition and understanding of the 'public othering of the human body'.



Figure 1: "Les Gallas au Jardin Zoologique d'Acclimatation", postcard of the exhibition organized by Carl Hagenbeck in 1908, Paris.
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The human beings who were put on exhibition during the second half of the nineteenth and the first half of the twentieth century belonged to peoples from all parts of the non-European world. And all the regions of the globe, almost without exception, contributed with their representatives to the public display of non-Western cultures and races before Western onlookers: Africa – from Egypt to Madagascar and the Cape, from Sudan and the Horn to the Western regions, including the inner regions more recently explored – the Near East, North and South America and the Caribbean, the Northern Polar regions, Lapland, Australia, New Guinea and the Pacific Islands, India, and South-East Asia.

A precise quantitative estimate of the ethno-exhibitions and their protagonists is very hard to make. We are certainly talking about hundreds of expositive episodes, which could have involved a total of about 20–30 thousand people, gathered in groups comprising anywhere from 4–5 to even more than 100 members. The ethno-expositions occurred in the major European and North-American cities, especially those hosting the

great expositions, and also in provincial towns, with truly comprehensive coverage (from Norway to Italy, from Portugal and Spain to Russia), and essentially took place within one of two contexts. The first were the great expositions themselves, where they were an essential part of the global display of the Western-dominated cultural and economic world. The second were the ethnic theatrical performances occurring in specialized exhibition-halls, theaters, circuses and public arenas: the Egyptian Hall in Piccadilly, London, since 1812, Sadler's Wells Theatre and Astley's Amphitheater again in London, or the new urban public spaces devoted to popular entertainment such as parks and zoos: typically, Hyde Park in London, the Jardin d'Acclimatation or the *Jardin d'Agronomie Tropicale in Paris*, and the Hamburg, Berlin or Copenhagen zoos.⁴ The distinction between these two logistic contexts was not always clearly marked, for example when the second kind of shows happened inside reserved areas of the great expositions – as on the Champ de Mars at the 1889 Paris Universal exposition or the Midway Plaisance at the 1893 Chicago exposition – and as components of the "exhibitionary complex." In these pages the focus will be on two main aspects that emerged from research on nineteenth- and twentieth-century Italy⁵ and which the recent critical literature, as conspicuous as it undoubtedly is, has not always clearly stressed.

The first point to be underlined is the motivational and phenomenological complexity of performances that are impossible to interpret in the light of a single paradigm. The second point is the fact that the symbolic and discursive structure and modules of these exhibitionary events have been organized along both spatial (in a geographical and cultural sense) and, at the same time, *temporal* and *historical* coordinates. I will develop the first point by carrying out a short critical reading of the "human zoos" paradigm;⁶ and the second by adopting a definitional and interpretive approach that I propose for describing the great expositions in general, and the living human expositions in particular, as "time-machines." By adopting this concept I suggest a juxtaposition between the expositions, as multi-functional and multi-symbolical scenic and performative devices, and such fictional machines as the "time ship" by Enrique Gaspar (1887) or the imaginary vehicle in H.G. Wells, *The Time Machine* (1895), devised to make feasible a fantastic "chrononautical journey," in Gaspar's definition, that is a fictional journey through the fourth dimension, or a 'travel in time'. The expositions, from this standpoint, can be seen as 'time machines' in the sense of their rendering accessible to the mass fruition of a public of mobile onlookers and bystanders a whole variety of human ways of living, activities, products and achievements not just by displaying their geographical and ethnographic assortments, but by visually representing their diversities in the historical past and hence presenting them in their proper temporal dimension.

1.2. The Many Ways of Dehumanizing Human Beings

The historiographical current driven by the French research group working on the "human zoos" – as the title goes of a well-known collection of international essays thrice re-published and augmented – has certainly made important contributions for conveying a greater attention to and producing a better understanding of the ethno-exhibitions. The important Quai Branly 2011 exhibition on the "Invention of the

Savage" in Paris has resulted also from the initiative of this research team.⁷ Studies, exhibitions, shows, and educational and social-communication actions promoted by this group, especially in France, have certainly enhanced our understanding of some cultural phenomena deeply embedded in and reflective of basic aspects of contemporary Western society and culture, such as racism, the reification of individuals, the representation and display of the body and sexuality, its visual and performative dimensions, and the material, cultural and discursive appropriation of the natural and human world. From this standpoint, for example, it has become possible to clearly distinguish between modern living ethno-exhibitions and earlier forms of public and private display of human monsters and freaks, with the latter focusing on exceptionality, while the former were based instead on the search for and display of what was typical and representative of so-called 'pure' racial types according to paradigms postulating the existence of objectively different human races. However, it should be observed that the concept of the 'human zoo' – which is in fact descriptive, if also obviously provocative – has come to assume a paradigmatic character, perhaps even beyond his proponents' intentions; and that this paradigmatic character has overshadowed the multiplicity of exhibitionary types that we can observe in the living ethno-exhibitions.

It is certainly true that many ethno-exhibitions occurred inside animal zoos, in ways not at all unlike those used for displaying savage beasts and with the undeniable effect of animalizing the human beings on display. The 'public othering of the human body' through the visual (re)presentations of human aliens involved a double form of violence. The first – which can be documented by an extremely rich arsenal of prints, photographs and even videos⁸ – derived from the exhibited persons being subject to the sway of the visitors' inquisitive, piercing and often sexually-motivated gaze. The second was a purely physical one and consisted in exhibitionary instances characterized by forms of material constraint, duress and deprivation. These instances offered clear examples of brutality, with human beings kept in unacceptable living conditions and climatic, sanitary, hygienic and dietary conditions which frequently caused disease and death.

Many other instances, however, while still commodifying, de-humanizing and racializing alien human beings, occurred in different qualitative conditions with respect to some fundamental provisions in matters of accommodation, hygiene, freedom of movement, and even rewards, contractual wages, repatriation agreements: and these depended on the particular objectives of each exposition and the years of their occurrence, with the later ones generally more attentive to the exhibited subjects' conditions.

Several types of living ethno-exhibitions certainly aimed to show impressive, repulsive or frightening savage, primitive forms of human life, displayed in all their supposed brutality and intended as evidence of racial inferiority, emphasized by nakedness, bestial gestures and behaviors, rude performances, and physical appearances suggesting radical otherness. In many other cases, different objectives inspired different exhibitionary languages. This was the case with the so-called 'colonial' and 'missionary' villages, where the core-message was either the civilizing project of the colonial power or the salvific message of missionary work. In both cases the alien human condition was displayed in such a way as to suggest its potential for progress or actual achievement in terms of advancement toward more civilized forms of life, of which the basic pre-

conditions were elementary education, especially Christian education, and instruction in practical skills, as documented by live artisanal practices and the exhibition of handcrafted products. Similarly, when north-African or Asiatic peoples belonging to ancient and sophisticated cultures were the ones on display, the discourse on otherness did not employ primitivist or racialist undertones, but addressed rather the sensibility of Western onlookers to the picturesque and the orientalist fascination. Moreover, it would be unrealistic or simplistic to imagine that the exhibition of alien humans was based on physical coercion. While enslavement, even for exhibiting purposes, was a common practice at the origins of European expansion in the late-fifteenth and early-sixteenth century, in the nineteenth century the recruitment and overseas transfers happened usually on the basis of contractual agreements through local mediators and – at least formally – the voluntary acceptance on the part of the ethnic groups, which sometimes designated freely those who should leave and take part in the expositions. Undeniably, frauds occurred, promises were disregarded, the duration and actual conditions of the stays in Europe were unilaterally modified, basic needs and healthcare were neglected, and frequently the real situation was not too distant from that of true captives. Episodes of protest, revolt and self-inflicted acts of violence and even suicide can attest to deeply distressing conditions.⁹ Still, the exhibited subjects had not been enslaved, properly speaking, and were more often than not people under contract and often capable of negotiation, especially in the cases of ethnic theatre *troupes*.

It would be mistaken, moreover, to think that the living ethno-exhibitions were based on a univocal relationship between onlookers and exhibited subjects, observers and observed, active *voyeurs* and passive victims of visual appropriation. The careful reading of often surprising evidence reveals quite a different and unexpected reality, involving much more complex relationships and the conscious agency of exhibited peoples capable of organized interaction and re-appropriation of subjectivity, even in deciding the actual circumstances of the shows or the living conditions in the expositions' areas, in the circuses or in the cities of the *tournées*. To properly understand the ethno-exhibitions, they must be dealt with as complex forms of intercultural experiences, very rich in terms of unexpected effects of the interaction between programmatic intentions – what kind of messages the exhibitors and managers intended to convey and which rules they tried to impose to the exhibited subjects – and actual results as far as the expectations, behaviors, reactions of the exhibited subjects were concerned. Historical research on the sources should try to let emerge as active subjects those who were considered as mere objects to be passively exposed, and the actual behaviors instead of what was expected on the basis of stereotyped presuppositions.¹⁰

1.3. Variations in Place and Forms, Variations in Time

The second aspect of the living ethno-exhibitions which I would like to underline specifically regards the human displays that occurred inside the great expositions, and not ethnic theatre, the animal zoos or the circuses. The exotic human shows which accompanied all the great expositions from the mid-nineteenth century until after WWII (with the last major episode being the Congolese village at the 1958 exposition in Brussels, dramatically enough on the eve of colonial Congo's independence) have been

an integral part of the expositions' spatial-temporal discursive structure that makes them what I call "time-machines." The great expositions did not limit themselves to representing different cultural and ethno-anthropological realities in their more or less approximately re-created geographical settings. Not only did they offer the public the opportunity for a "tour du monde en un jour" (a tour of the world in one day)¹¹ – according to one of the most common metaphors used in nineteenth-century guides and comments and still frequently repeated in present-day commentaries. Not only they compressed this way several varieties of human cultural forms into a reduced, controllable space that anybody could visit in one or two days' walk and provided a brilliant though fictitious solution for those not in condition to perform Jules Verne's *Tour du monde en 80 jours* (1873)¹² and for whom it was still true that "no one Man can possibly view the whole Earth in a Life-Time," in the words of the eighteenth-century cartographer Herman Moll's remark¹³. They also proposed a problematization of historical time.

A fundamental aspect of the great nineteenth and early twentieth-century expositions was the effort to reproduce, under the superintendence of famous architects and art historians, ancient Greek or Roman temples and monuments, Oriental palaces, decorative details and typical settings such as *harems* and *cafés*, and, most of all, medieval streets, quarters, castles and whole villages. Of the latter kind were the "Vieux Paris" by Albert Robida at the Paris 1900 exposition, the medieval London at the London Health Exposition in 1884, the "Alte Berlin" at the 1896 Berlin Trade Exhibition, the "Borgo Medievale" in Turin in 1884, the "Oud Antwerp" at the Anvers exposition in 1894, the "Poble espanyol" at the Barcelona 1929 exposition, the several re-editions of the "Rue du Caïre" planned in 1889 by Alphonse Delort de Gléon and realized by Jules Bourgoïn,¹⁴ with the live reenactment of scenes of daily life, with real or pretended natives, animals and entertainments. This was an example not just of the pursuit of the picturesque, but in fact of the intention to make possible the visual experience of temporality and a material, emotional and empathetic understanding of history. The recreation of typical edifices, isolated or as part of often very rich and complex villages or of large ethnographic exhibitions of a systematic character – the Alpine villages or the regional variants of rural or provincial dwellings as representative aspects of a national legacy – was another way of guiding the expositions' visitors through an intense personal, emotional experience of a sociological and cultural diversity located in distant spaces and times and discernible in its spatial and temporal characters: those recreations depicted a peripheral world not just in geographical terms, but also as implicitly put on comparison to the more developed, modern, civilized forms of human habitat made possible by the development of the industrialized, urbanized nation-States.¹⁵ Other remarkable examples of the mechanism of historicizing human experience at work in the expositions can be summarily recalled here. To this kind of exhibitionary discourse belonged the thematic gallery on the "Histoire du Travail" (History of Work) conceived by Frédéric Le Play (1806–1882) with the amateur archaeologist Jacques Boucher de Perthes (1788–1868) for the 1867 Paris universal exposition, much expanded later by the diorama of the "History of Work" and the constructions of the "History of Human Dwelling" exhibits – the latter indebted to the great architect and champion of the French Gothic revival Viollet-Le-Duc (1814–1879), with his *Histoire de l'habitation humaine* (1875) and carried out by Charles

Garnier (1825–1898)¹⁶ – at the Paris 1889 universal exposition; or the same architectural structure of representative buildings expressly planned for the expositions and reproducing different historical styles, all combined in original, new eclectic forms, as in the case of the *Grand Palais* at the Paris 1900 universal exposition.



Figure 2: "Native village" of indigenes from the Assab Bay, and medieval burg on the background, at the 1884 Turin exhibition, coeval photo by Giovan Battista Maggi.
Credit and permission status: private collection.

In the living ethno-expositions, through the physical presence of alien humans, it was historical temporality itself that was put on stage, offering to the gaze of Western observers of all social classes what the many Enlightenment observers and authors maintained was occurring before the eyes of the European traveller in the New World or Africa: that is to say, the conflation of present savage societies and primitive or ancient societies, seen as the progenitors of contemporary societies. The published reports of European travelers overseas and the often marvelous illustrations accompanying them – Johann Theodor De Bry's astonishing series of engraved illustrations on America in 1588–1590 are an exceptional case in point – had given those who remained in Europe the opportunity to know anthropological and cultural varieties but also to observe elements to be used for conceptualizing the historical evolution of human society.¹⁷ The

modern living ethno-expositions performed the same function on a domestic, affordable, easily reachable stage and with the incredible persuasive power of the physical presence and the living performance. For the widely accessible social benefit of common, even uneducated, visitors, they materially reproduced forms of human existence that anybody could understand as situated far away in space but also in time. They showed how the relationship between human societies and historical time was a multiple one and through them it was relatively easy to grasp that historical time proceeded at different paces, proposing challenging questions whether or not it advanced on a single line of development. Those specimens of 'other' societies could either belong to earlier stages of a uniform and unidirectional chronological scale of progress, or be placed along another, separate, different, maybe incommensurable scale of historical time. In both cases the living ethno-exhibitions conveyed the idea of a temporal gap – whether bridgeable or unbridgeable, depended on theories on the origins, characters and abilities of human varieties or 'races' – between a more or less primitive past and a present embodying progress and modernity: the provisional arrival point of a relentless process culminating in the scientific and technological wonders visible in other sections of the expositions, logically connected in an extraordinary review of human achievements in history.

We can see that the expositions in their own concept aimed to represent not only human typological variety and diversity, but also human life in its historical temporality through more than just a sort of history of human evolution, of whose stages the ethno-exhibitions can be interpreted as representing as living examples. The whole world in all its epochs and manifestations – societies, individual nations, peoples and cultures – was represented along a temporal scale through the reconstruction of parts of old cities, quarters, buildings, streets, urban or rural settings, forms of production, of dwellings, of dressing, of feeding, artistic and artisan-based performances arranged in chronological sequences sparking a visual appreciation of temporality and, at a higher level, helping to build historical traditions and canons on a national basis: a temporality pitched back toward our origins and the most ancient historical forms, while at the same time launched toward the present and the future, heralded by the wondrous conquests of science and technology. We cannot fully understand the living ethno-exhibitions if we do not consider them as an essential part of the mechanisms, apparatuses, and discursive-performative structures that have transformed, and to a certain degree still continue to transform at the present day, the great expositions into powerful “time-machines.”

II. Giulia Iannuzzi, *The Time Machine Within: Expositions as Science-Fictional Devices, and Science-Fictional Representations of Expositions*

The idea of modernity and projections of progress, the centrality of techno-science in the human decoding paradigms of reality, the new dynamics of globalization and new technologically-mediated international connections, the dominant position of the Western capitalist powers all over the world: the emergence of science fiction as a genre was deeply rooted in the same cultural milieu which also expressed itself with those complex cultural devices known as international expositions. It should come as no

surprise, however, that the intersections between the vast (and diverse) fields nowadays constituted by science fiction studies and the study of international expositions are still quite limited, given the potential areas of dialogue and overlapping: as is often the case, it is hard to establish communication between consolidated fields of study, if for no other reason than the over-importance placed on compartmentalizing and making distinctions in academic curricula and organizations.

In this respect, a reading of world exhibitions and fairs as time machines presents us with an exceptional key to understanding exhibitions as science-fictional devices, and also with an opportunity to take stock of the few (but significant) contributions that have been published on the topic, mostly in recent years.

Along with relatively recent trends in science fiction studies such as increasing interconnections with postcolonial studies, interest shown in non-Anglophone cultural areas, and concerns with the globalization processes,¹⁸ a long-lasting work on the part of individual science fiction scholars with the useful tools provided by cultural history and the history of ideas has provided an interdisciplinary humus indispensable to the study of complex cultural artifacts such as expos and world's fairs.¹⁹

We shall address the contribution that science fiction studies can bring to the study of international exhibitions as time machines, outlining past and present scholarship and discussing some of its potential developments, paying specific attention (to use Guido Abbattista's term) to 'the public othering of the human body.' We shall also look at the connections between how expos and fairs function as science-fictional devices and how they are represented in science fiction, closing a conceptual circle with a discussion on how the estrangement mechanisms at work in expos undergo meaningful doubling in their depictions in science fiction literature, cinema, and visual arts.

II.1. Spatiotemporal Compression and Estranged Gazes

At the level of conceptual architecture, by considering how both science fiction narratives and expositions work as artifacts, suggesting precise strategies for their users to experience and decode, it can be argued that a similar principle of *cognitive estrangement*²⁰ is at work, both in science fiction and in international expositions and world's fairs, rendering the international exposition in many ways a *science-fictional* object *per se*, in which – as Roger Luckhurst aptly pointed out – "long before the famous Futurama of 1939 New York, . . . large populations experienced deliberate and sustained disadjustment in time within a bounded zone, an early sense of immersion in the 'science-fictional'."²¹

Following fruitful analysis such as Bruce Franklin's seminal study of 1939 New York *The World of Tomorrow*,²² a study of expositions as science-fictional devices should take into account their complexity as material objects and actual *communicative circuits* – as spaces where the cultural agencies implied in their design and building, the sensorial experience, the decoding protocols employed by the visitors, and the (though unexpected, present and significant nonetheless) view of exhibited people all come together, rendering the time machine a descendant of Sartre's spinning top.²³

Taking into account a fourth dimensional approach, significant aspects requiring in-depth analysis so as to understand expositions as time machines are the treatment of

space, both in terms of the expo's collocation in a pre-existing topography and of the spatial design and organization within the expo; the functioning of visual representations and stagings, and the cinematic dimension – including theatrical performances as well as the movement of viewers along specific visitor routes and/or mechanically produced movement (e.g. railway tracks in twentieth-century expos). The effect of all these aspects combined together produced those mechanisms of cognitive estrangement with which expositions had, since the nineteenth century, been preparing for the appearance of science fiction as a codified and recognizable genre in the English-speaking world, materially embodying that "sense of wonder" and promoting "the kind of mindset about technology and the future that gave rise to s[cience] f[iction] literature."²⁴

It can also be argued – following on what Guido Abbattista is suggesting here – that within those same mechanisms of spatiotemporal organization we can find the instruments of an ideological hierarchization that affected humans as much as the geographical world, economical activities, and science. In early science fiction we also find at work (in a diverse, often problematizing, range of ways) the scientific mindset provided by anthropology and ethnology, evolutionary theory and social Darwinism, which shaped the colonial "trope of the savage as a remnant of the past"²⁵ and the conceptualization and staging of different humans communities not only as "typical" of different geographical proveniences, but also as representative of different stages of the same evolutionary process. When staged at the expo "the living ethno-exhibitions conveyed the idea of a temporal gap [...] between a more or less primitive past and a present embodying progress and modernity;"²⁶ a manifestation and sometimes a *dislocation* of the same *colonial gaze* to be found in those early science fiction works that represented the present of Western society into "the determinate past of something yet to come"²⁷ along the same temporal process.

Luckhurst's fine analysis of World's Fairs as laboratories for a global space-time, concentrating on an early period between London 1851 and New York 1939, suggests that it was principally the *space-time compression* experienced by the viewer, that made fairs "profoundly disorienting zones . . . that produced riotous passages of cultural juxtaposition."²⁸ In fact, the expo spatial dimension – from its staging and architecture, to its topographical characteristic and urban collocation – presents itself as a "dense, materialized" texture.²⁹ The compression of spatial coordinates offers a synthetic visualization of global powers and connections. For example, Great Exhibition of London in 1851 (the Crystal Palace display, as well as George Wyld's Great Globe in Leicester Square) can be read as a stage on which the entire world was represented in its economical-driven interconnections within the core of the British empire (such depictions naturally influenced coeval narratives; the visit to the Globe provided for example an imaginary repertoire employed also in literary tours of the world, producing significant circularities between installation, staging, performance and narration).³⁰ The international exhibition offered a vision of the globe as a function of British centrality in the processing of raw materials and resources from the colonies, with a spatial dynamic that would perhaps reach its peak and be fully and explicitly thematized in the British Empire Exhibition at Wembley in 1924–1925.³¹

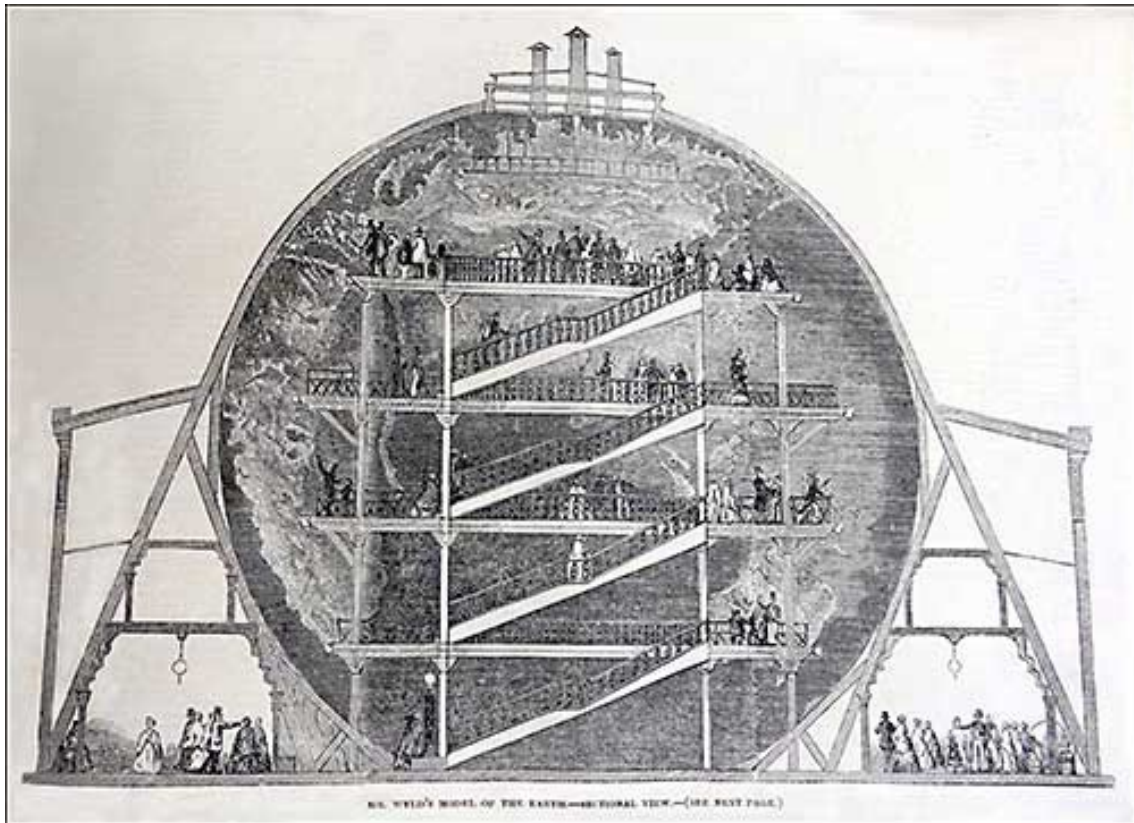


Figure 3: George Wyld's Great Globe in Leicester square, London, 1851, sectional view, plate from *Illustrated London News* (1851).
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The compression that takes place as regards the temporal dimension works similarly to the spatial one and is interwoven with it. As Guido Abbattista pointed out,³² the temporal and historical dimension is critical to the understanding of the exposition's symbolic and discursive staging mechanisms as regards living human exhibitions – the racialized others, as well as, more in general, cultural identities embodied in architecture, technologies, and commodities exhibited in other parts of the fairs. The expos' spectacularization of racial differences originates from an *ideologeme*³³ of *progress*: physical pathways through the expo's immersive site create cognitive itineraries, through which the visitor can understand not only synchronic hierarchical relationships but also diachronic ones: the evolutionary lines that lead from "primitive," "savage" to "civilized," from "archaic" to "modern" – as regards the anthropological dimension of the human individual, as well as the collective one of society – lines that will continue to the more complex, and techno-scientifically advanced civilization of the future.

It is in the colonial and imperial exploitation of ideas of progress and evolution that one can find an important point of contact between early science fiction and expositions. As John Rieder observed: "the key element linking colonial ideology to science fiction's fascination for new technology is the new technology's scarcity. The thrill of technological breakthrough is not that it benefits everyone but that it produces a singular

drastic difference between those who possess the new invention or power source and those who do not."³⁴

The exposition can be understood, in this respect, as a time machine as well as a "teaching device,"³⁵ with significant parallels with the development of modern museums, hierarchical organization of displays according to evolutionary paradigms, and their educational function.

II.2. Early Encounters with the Future, Spectacularization, and Hypercinematic Experiences

It is with Paris 1889 that the "the world's fair ethos shifted . . . toward a more overt temporalization that tilted towards the future"³⁶ and world fairs started to focus "on change, progress, science, technology, and the future that s[cience] f[iction] ultimately codified in literature and film."³⁷ With 1889's Eiffel Tower, Alva Edison's pavilion of electric light, and the Hall of Machines, the technological sublime³⁸ and the thematization of the future became the central features of expositions: the time machine began to be set on a date yet to come, offering the visitor "an early encounter with tomorrow."³⁹ It was in the United States, from Chicago 1893 on to Buffalo 1901, Chicago 1933, Seattle 1962 that World Fairs were established as realms of projections of the future, with central roles conferred to science and technology in the realization of *change as progress*, and to their architectures and attractions the one of spaces of utopian extrapolation.

Paris 1889 saw also the first appearance of a fun-fair run alongside the official site: together, the Rue du Caire and a circular switchback railway roller-coaster (the first one had been designed by LaMarcus Adna Thompson and built in Coney Island in 1884) represented fascinating new ways of engaging the spectator's view. The simultaneous appearance of these two entertainments points to the significant relationship between the staging of human otherness – in terms of gender as much as of ethnicity and race – and the representation of a future of techno-science-driven advancement, a familiar ideological matrix that positioned the white western male viewer at the apex of an evolutionary narration in which his techno-scientific mastery of reality was the key to progress: spectacularization and disadjustment were the mechanisms at work in both cases, albeit in different ways. The "pornographic gaze" invited by the consumption of belly dancing was a natural by-product of the eroticism which "supercharge[d] the ideological display of free trade and colonial expansion,"⁴⁰ and can be seen as another variation of the primal colonial gaze. At the New York 1939 World Fair, it is by no coincidence that the Crystal Gazing Palace, a *Sexorama* in which a systems of mirrors multiplied the topless dancers, was designed by that very same Norman Bel Geddes usually remembered as the creator of the General Motors Futurama display.⁴¹

The mechanical rides hosted in the amusement section of expositions and fairs from Paris 1889 onwards also introduced a new kind of cinematic dimension, changing both staging techniques and viewer experience. The Buffalo 1901 Pan-American Exhibition featured the dark ride *A Trip to the Moon* (the namesake of Coney Island's Luna Park) designed by Frederick Thompson. Between mechanical inventiveness (it was the first electrically-powered dark ride) and cinematic *mise en scène* (with a series of moving canvas backdrops to create the effect of clouds passing and the Earth disappearing into

the distance, lighting and sound effects, and 200 actors involved), the attraction was an early example of the immersive experience in the estrangement of science fiction movies and theatre spectacles.⁴² According to Brooks Landon, the effect of rides such as *A Trip to the Moon* – within the fair as a whole, or in the first amusement parks that would later become a more permanent home for these attractions, was to "liberate visitors from urban norms and from purely utilitarian concepts of technology," involving the same "suspension of disbelief, conceptually gerrymandered between rhetorics of realism and rhetorics of fantasy given 'realistic' appearance by appeals to science and technology"⁴³ that science fiction narratives require, and provided a new kind of "hypercinematic experience."

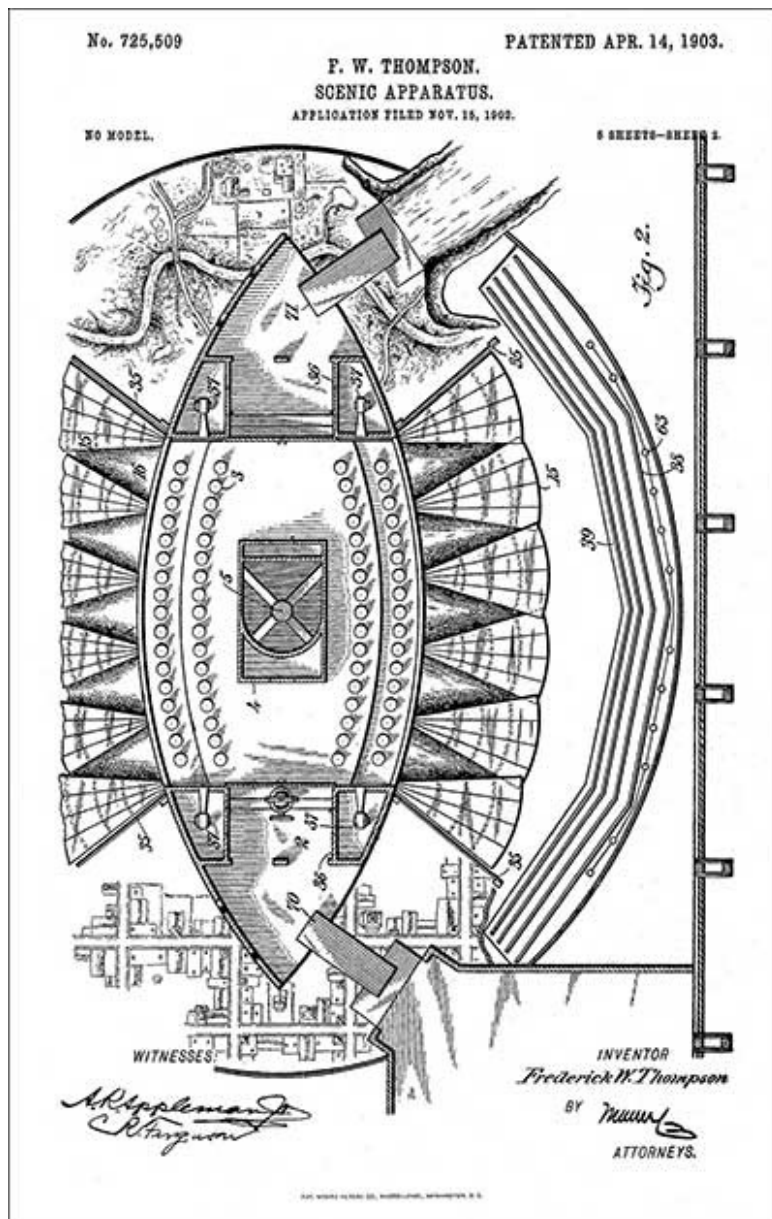


Figure 4: Frederic W. Thompson's *A Trip to the Moon* patent scheme, 1903.
Credit and permission status: no known restriction for scholarly use.

"I have seen the future" was the expression visitors to the General Motors Highways and Horizons exhibit at the 1939–1940 New York World's Fair wore on the pin they were presented with after stepping out of the Futurama. Five million people saw the ride-like feature of the exhibit, which covered 35,000 square feet and was made up of 408 separate sections. The souvenir booklet advertised the ride as follows: "A magic Aladdin-like flight through time and space is Norman Bel Geddes's conception of the many wonders that may develop in the not-too-distant future . . . this world of tomorrow is a world of beauty."⁴⁴ GM's Futurama II at the New York 1964 World's Fair played on the same spirit (and rhetoric): a technical description of the exhibit in GM's journal explained that "Futurama II is based on the concept of a large scale diorama and the means of transporting people to view it Visitors to the Futurama II will board a ride for a journey into the future."⁴⁵ Among the science-fictional scenarios depicted were futuristic settlements and productive activities on the Moon, in Antarctica, and under water; there was a utopian future city; and there were automatized plantations in the desert.

Disney's Tomorrowland would reproduce the same characteristics of hypercinematic experience and develop its retro-futurism as "a movie that could be walked into," which not only chose intensely narrative topics, but copied "the proairetic and hermeneutic structures of narrative" combining simulation and transportation, and the kinetic sensation of the physical movement with the comforting paradigm provided by a strong narrative logic.⁴⁶

II.3. The Science-Fictional Repertoire: Doubling the Chrononautical Journey

At the beginning of the twentieth century, science fiction had begun to be codified as a recognizable genre and publishing label, a process in which North American pulp magazines played a key role (and which would lead to the appearance of the neologism *scienti-fiction* in 1926, *science-fiction* from 1929). It should come as no surprise to learn that the first World Science Fiction Convention was held in New York in 1939, in a date and venue especially chosen by the promoters to coincide with the New York World's Fair. The obvious parallelism between the projections of the future staged at the exposition and those found in the science fiction literature of that period, lie in their both functioning as time machines, while Bruce Franklin's comparison between the 1939 volume of *Astounding Science-Fiction* and *The World of Tomorrow* showed how "uncritical enthusiasm for technological progress is far more integral to the futuristic visions found in something not usually considered to be S[cience] F[iction], the verbal and model worlds projected by the large corporations" at the fair⁴⁷ than to the literary fictions to be found in the volume of fiction, where future scenarios featured exploration and colonization of other planets and technological breakthroughs, but such things rarely resulted in significant change in society.

According to Henry Jenkins, "the 1939 World's Fair represents the moment when science fiction really entered American consciousness, after several decades of taking shape on the fringes . . . and became a tool through which average Americans made sense of their everyday experience. At the same time, it represented a moment where

corporations could deploy the images and themes of science fiction as well as utopian and futurist design, as a vehicle for promoting a particular model of consumerism which would profoundly shape the post-war era."⁴⁸

While expositions contributed to the emergence of science fiction as a genre through the elaboration and diffusion of an ideologeme of techno-scientific progress, projections of the future, and elaboration of a science-fictional mindset, thus preparing a mass public for a new aesthetic suspension of disbelief,⁴⁹ science fiction was soon contributing to the creation of an imagery connected to expositions as time machines, incorporating expositions in literature and film, as well as providing rhetoric instruments and tropes with which expositions were received, conceptualized, and commented on by the mass media.

As for reception studies, an impressive amount of documentation on expositions is available for further study, documents that used a science-fictional repertoire when writing about their subject: works of visual art, ephemera, texts from newspapers and magazines, television and radio programs, and cine-reels, all of which made use of science-fictional elements to leave testimonies of expositions experienced as time machines by contemporary viewers.⁵⁰

Expositions in science fiction have been a source of inspiration in many ways. Works written during the late nineteenth century incorporated expositions as elements of the story, as well as bringing to life in fiction the futures projected by formal exhibits of techno-scientific discoveries. An early narrative by one of the pioneers of science fiction, *Le vingtième siècle* by Albert Robida (1893) is set in 1952, and gives imaginary account of future society constructed around the inventions presented at the Paris 1881 Exposition Internationale d'Électricité. Robida's "Jadis chez aujourd'hui" ("The Long-Ago is With Us Today" published in *Le petit français illustré* between 10 May and 14 June 1890) presents a time-travel fantasy featuring a scientist who resuscitates Molière and other literary figures in order to show them the Paris 1889 Exposition Universelle (which they find boring!).⁵¹ In such projections of a future Paris we recognize the extrapolative prosecution of Robida's "Vieux Paris" (the chrononautical stratification of which was science-fictionally embodied in an editorial operation such as the 1900 *La Gazette du Vieux Paris*, with Jules Verne among the featured authors).

One can trace the fascination for expositions all the way to recent times and across a vast range of different representations and implications: from a classic juvenile adventure, such as Robert Silverberg's *World's Fair 1992* (1983), that starts at the Seville 1992 Exposición Universal and ends on Pluto, to the refined epistemological reflections on nineteenth century scientific theories in Thomas Pynchon's *Against the Day* (2006), set between the 1893 Chicago World's Columbian Exposition and the post-World War I period.⁵²

The visual and architectural dimension of the exposition has proved an extraordinary reservoir of powerful images: the architectural legacy of the New York 1964 World's Fair, for example, has enjoyed resounding success on the big screen, with landmarks such the Unisphere and New York State's pavilion observation towers becoming the inspiration for many science-fictional landscapes, and being used and re-used science-fictionally in blockbusters such as *Men in Black* (1997), *Iron Man 2* (2010), and *Captain America: The First Avenger* (2011); while the recent Disney film *Tomorrowland* (2015, dir. Brad Bird) skillfully juxtaposed one-dimensional staging,

three-dimensional hypercinematic experience and a fourth-dimensional chronotopic jump (testifying the resilience of golden retro-futurism imagery alongside dreams of a technocratic utopia).



Figure 5: Albert Robida, illustration from *Le Vingtième siècle: La vie Électrique* (Paris: Librairie Illustrée, 1893). Courtesy of Gallica, Bibliothèque Nationale de France. Credit and permission status: free for scholarly use.

Perhaps indicative of an increasing centrality of new media, also in terms of the artistic recreation of genre repertoires and the capacity to exploit cognitive estrangement as a means of engaging the audience in critical operations, one of the most convincing fictional fairs in recent years appeared in a first-person shooter video game: the floating Columbia in *BioShock Infinite* (2013, developed by Irrational Games), an aesthetically lavish science-fictional recreation of Chicago 1893, in which racist theories and the (hostile) public othering of the human body take centre stage both in the setting and in the gameplay.⁵³

Luckhurst has described how the first ever time machine in science fiction, which was in Enrique Gaspar's *The Time Ship: A Chrononautical Journey* (1887), is "launched in the text with great fanfare at the 1878 Paris World Exposition. The device names what the exhibition site itself performs."⁵⁴ With these remarks, we can now close what emerged as a cultural and semiotic circle, pointing to the dual nature of the connection between science fiction across media and international expositions as "chrononautical spaces:"⁵⁵ on the one side, an isomorphism derived from the existence of a common matrix, a shared set of roots in the cultural-historical context; and on the other, a complex set of mutual influences. Future research will continue to investigate just how international expositions as time machines fed into the science-fictional mindset, how science-fictional tropes and estrangement mechanisms were exploited in international expositions, by the different agencies involved in the design of expositions, as well as in their reception within the media as a way of representing techno-science and projecting identities.

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Notes

¹ Hartmut Berghoff, et al., eds., *The Making of Modern Tourism: The Cultural History of the British Experience, 1600–2000* (Basingstoke-New York: Palgrave Macmillan, 2002) and in this collection see in particular Alexander C. T. Geppert, "True Copies: Time and Space Travels at British Imperial Exhibitions, 1880–1930," 223–248. See also Eric Zuelow, *A History of Modern Tourism* (Basingstoke-New York: Palgrave Macmillan, 2015), especially 92–95 and 115.

² See Guido Abbattista, "Humans on Display: Reflecting on National Identity and the Enduring Practice of Living Human Exhibitions," in Abbattista, ed., *Moving Bodies, Displaying Nations National Cultures: Race and Gender in World Expositions Nineteenth to Twenty-first Century* (Trieste: Edizioni Università di Trieste, 2014), 241–271.

³ Sebastian Jobs and Gesa Mackenthun, eds., *Embodiments of Cultural Encounters* (Münster-New York-München-Berlin: Waxmann, 2011).

⁴ Barbara Chase-Riboud, *Hottentot Venus: A Novel* (New York: Anchor Books, 2007), 90–91; Richard D. Altick, *The Shows of London* (Cambridge: Harvard University Press, 1978), 235; Jean-Michel Bergougnou, Rémi Clignet, and Philippe David, *'Villages noirs' et autres visiteurs africains et malgaches en France et en Europe: 1870–1940* (Paris: Éditions Karthala, 2001), 52 ff.; Nigel Rothfels, *Savages and Beasts: The Birth of the Modern Zoo* (Baltimore: The Johns Hopkins University Press, 2002); Rikke Andreassen, *Human Exhibitions: Race, Gender and Sexuality in Ethnic Displays* (Burlington, VT: Ashgate Publishing, 2015), 6 (this is "a re-written, updated and translated version of the Danish book *Menneskeudstilling. Fremvisninger af*

eksotiske mennesker i Zoologisk Have og Tivoli, Tiderne Skifter, 2011": a book dealing essentially with the forgotten chapter of "the Danish human exhibitions").

⁵ Guido Abbattista, *Umanità in mostra: Esposizioni etniche e invenzioni esotiche in Italia (1880–1940)* (Trieste: Edizioni Università di Trieste, 2013) and Abbattista, "Torino 1884: Africani in mostra," *Contemporanea* 7, no. 3 (August 2004): 369–410.

⁶ Other recent relevant publications from which I much benefited are the collection of essays *Early African Entertainments Abroad* (Madison: University of Wisconsin Press, 2014), by Bernth Lindfors the author of the seminal study *Africans on Stage*, 1999; Catherine Hodeir, "Les exhibitions humaines dans les expositions universelles: entre catégorisation scientifique et exotisme? World's Columbian Exposition, Chicago, 1893," in Nicolas Bancel, Thomas David, Dominic Thomas, sous la direction de, *L'invention de la race: Des représentations scientifiques aux exhibitions populaires* (Paris: Éditions La Découverte, 2014), 247–259; Luis A. Sanchez-Gomez, "Human Zoos or Ethnic Shows? Essence and contingency in Living Ethnological Exhibitions," in *Culture & History Digital Journal* 2, no. 2 (2013), December 31, 2015, doi: <http://dx.doi.org/10.3989/chdj.2013.022>; and, by the same author, *Dominación, fe y espectáculo: Las exposiciones misionales y coloniales en la era del imperialismo moderno (1851–1958)* (Madrid: Consejo Superior de Investigaciones Científicas, 2013).

⁷ Nicolas Bancel et al., sous la direction de, *Zoos humains: De la Vénus Hottentotte aux reality shows* (Paris: Éditions La Découverte, 2002); the second revised edition of this collection Pascal Blanchard et al., sous la direction de, *Zoos humains et exhibitions coloniales: 150 ans d'inventions de l'Autre* (Paris: Éditions La Découverte, 2011); and the catalogue of the exposition at the Musée du Quai Branly Lilian Thuram et al., sous la direction de, *Exhibitions. L'invention du sauvage* (Arles: Actes Sud, 2011).

⁸ The catalogue of the 2011 Quai Branly exhibition quoted in the previous footnote contains a very rich documentation in this regard. For an example of a video, see *L'exposition Coloniale Kanak de Paris (1931)*, a film by Alexandre Rosada, 2011, accessed November, 13, 2015 <https://www.youtube.com/watch?v=4DJRcSEkftI>. A previous, remarkable example is the 1998 film by Zola Maseko, *The Life and Times of Sarah Baartman*, on the Hottentot Venus's story.

⁹ See for example Joël Dauphiné, *Canaques de la Nouvelle-Calédonie à Paris en 1931: De la case au zoo* (Paris: Éditions L'Harmattan, 1998), and the sympathetic, moving narrative reconstruction by Didier Daeninckx, *Cannibale* (Paris: Editions Verdier, 1998).

¹⁰ Telling in detail the story of the Africans from the Assab Bay, an Italian colony on the Eastern African coast of the Red Sea, taken to Turin and exhibited at the 1884 Italian General Exposition is revealing of the unpredictable and even comical implications of the two-months stay in Italy of those so-called African savages; at the same time, thanks to a focused reading of such sources as the newspapers, magazines, specialized periodical press, scientific reports and official correspondences, it offers valuable insights into the Italian public opinion's reactions, emotions and feelings concerning anthropological 'otherness,' affording a better understanding of the delicate and ambiguous question of racism in that particular context. On this see my "Torino 1884: Africani in mostra."

¹¹ Henry Houssaye, *Voyage autour du monde à l'Exposition universelle* (Paris: A. Quantin, 1878); Hix, *Le tour du monde en pousse-pousse: revue humoristique de l'Exposition* (Paris, 1889); *Le tour du monde en un jour: exposition coloniale internationale, Paris, 1931: album de 15 vues* (Paris: Braun et Cie, 1931).

¹² Jules Verne, *Around the World in Eighty Days*, trans. George M. Towle (London: Sampson Low, Marston, Low & Searle, 1874).

¹³ Herman Moll (circa 1654–1732), *The Compleat Geographer; Or the Chorography and Topography of All the Known Parts of the Earth* (London: printed for Awnsham and John Churchill, 1709), see "Advertisement."

¹⁴ Delort de Gléon, *L'Architecture arabe des khalifes d'Égypte à l'Exposition universelle de Paris en 1889: la rue du Caire* (Paris: E. Plon, Nourrit et Cie, 1889).

¹⁵ Luigi Gaido, Silke Haps, Alessandro Pastore, *I villaggi alpini: Le identità alle grandi esposizioni* (Torino: Museo Nazionale della Montagna, 2011). One of the most relevant examples of ethnographic exhibitions aiming at reproducing live and real size typical regional forms of life, dress, dwelling and work was at the 1911 exposition in Rome, where groups of people coming from the different Italian provinces were gathered in what turned to be a true living ethno-exhibition.

¹⁶ See Eugène-Emmanuel Viollet-le-Duc, *Histoire de l'habitation humaine depuis les temps préhistoriques jusqu'à nos jours: texte et dessins par Viollet le Duc* (Paris: J. Hetzel, 1875); see also *L'architecture à l'Exposition universelle de 1889: Principales constructions du Champ-de-Mars de l'Esplanade des Invalides* (Paris: E. Bigot, 1889) and Frantz Jourdain, *Constructions élevées au Champ de Mars par M. Ch. Garnier, architecte . . . pour servir à l'histoire de l'habitation humaine* (Paris: Librairie centrale des beaux-arts, 1889). Garnier later co-authored with Auguste Ammann *L'Habitation humaine* (Paris: La librairie moderne, 1892).

¹⁷ One particularly telling and valuable early-modern example of picturing and illustrating the New World is Theodor de Bry, *America* (1590), on which see now Michael Gaudio, *Engraving the Savage: The New World and Techniques of Civilization* (Minneapolis: The University of Minnesota Press, 2008).

¹⁸ Of particular note are the special issues appearing in *Science Fiction Studies*, without doubt one of the most important scholarly journals in the international field (examples include special issues on global science fiction (1999–2000), science fiction and globalization (2012), and Japanese (2002), Latin America (2007), Chinese (2013) and Italian (2015) science fiction); the recent launch of a collection especially devoted to *World Science Fiction Studies* by the academic publisher Peter Lang; the growth of the international section of the academic program within World conventions, and an increased trend on the part of Clute, Langford and Nicholls' *Science Fiction Encyclopedia* toward a global perspective, with the inclusion of numerous entries on non-English speaking countries and authors: John Clute, David Langford, Peter Nicholls, eds., *The Encyclopedia of Science Fiction*, <<http://www.sf-encyclopedia.com>>. Some examples of scholarly studies will be given later.

¹⁹ E.g. Istvan Csicsery-Ronay Jr., *The Seven Beauties of Science Fiction* (Middletown: Wesleyan University Press, 2008); Roger Luckhurst, *Science Fiction* (Cambridge: Polity Press, 2005). There is a noticeable trend toward an increasing presence of cultural history methodologies among the companions on the subject, if we compare the generous space still devoted to literary narratives and theories in *The Cambridge Companion to Science Fiction* (eds. Edward James, Farah Mendelsohn, Cambridge-New York: Cambridge University Press, 2003) with the much stronger presence of audio-visual media in *The Routledge Companion to Science Fiction* (eds. Mark Bould et al., London-New York: Routledge, 2009), and the integration of a vast range of old and new media, arts and cultures in *The Oxford Handbook of Science Fiction* (ed. Rob Latham, New York: Oxford University Press: 2014).

²⁰ Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven-London: Yale University Press, 1978). Commenting a 1988 formulation of Suvin's definition of science fiction as "a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment, and . . . it is distinguished by the narrative dominance or hegemony of a fictional 'novum' (novelty, innovation) validated by cognitive logic," Patrick Parrinder explained "estrangement, in the formal sense of an 'imaginative framework alternative to the author's empirical environment' . . . but the term itself derives from the Russian formalists' concept of

ostranenie and Brecht's *Verfremdung*. The interaction of estrangement and *cognition* suggests the Gernsbackian idea of fiction with a scientific explanation (scientifiction, science fiction), but Suvin opts for the term 'cognition' because of its wider reference, roughly equivalent to German *Wissenschaft*, French *science* and Russian *nauka*. Finally, the *novum* is what H.G. Wells in a much-cited essay called the 'fantastic element' or 'the strange property or the strange world.' Suvin's use of the Latin term, however, both invokes and reinterprets the utopian theorizing of the Marxist philosopher Ernst Bloch." Patrick Parrinder, "Revisiting Suvin's Poetics of Science Fiction," in Parrinder, ed., *Learning from Other Worlds: Estrangement, Cognition, and the Politics of Science Fiction and Utopia* (Durham: Duke University Press, 2001), 36–50, see 37.

²¹ Roger Luckhurst, "Laboratories for Global Space-Time: Science-Fictionality and the World's Fairs, 1851–1939," *Science Fiction Studies* 39:3, no. 118 (November 2012): 385–400, 400.

²² Bruce H. Franklin, "America as Science Fiction: 1939," *Science Fiction Studies* 9:1, no. 26 (March 1982): 38–50.

²³ Apart from Abbattista's contribution mentioned above, for an historiographical assessment of current studies, see his "Concepts and Categories in the History of World Expositions: Introductory Remarks," in Abbattista, ed., *Moving Bodies, Displaying Nations: National Cultures, Race and Gender in World Expositions Nineteenth to Twenty-First Century* (Trieste: Edizioni Università di Trieste, 2014), 7–20; and Abbattista, *Umanità in mostra: Esposizioni etniche e invenzioni esotiche in Italia (1880–1940)* (Trieste: Edizioni Università di Trieste, 2014), esp. 32–36.

²⁴ Landon, "SF Tourism," in *The Routledge Companion to Science Fiction*, 32–41, 33; Leonie Cooper, "Theme Parks," *The Oxford Handbook of Science Fiction*, 291–301, esp. 293–294; Angela Ndalianis, "Science Fiction Worlds: Tomorrow's World that We Shall Build Today," *Science Fiction Experiences* (Washington: New Academia, 2011), 109–136, esp. 116–120.

²⁵ John Rieder, *Colonialism and the Emergence of Science Fiction* (Middleton: Wesleyan University Press, 2008), 5.

²⁶ Guido Abbattista, see above.

²⁷ Frederic Jameson, "Progress versus Utopia; or, Can We Imagine the Future?" (1982), *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso, 2005), 288.

²⁸ Luckhurst, "Laboratories for Global Space-Time," 385.

²⁹ Alexander C. T. Geppert, "True Copies: Time and Space Travels at British Imperial Exhibitions, 1880–1930," in Hartmut Berghoff et al., eds., *The Making of Modern Tourism: The Cultural History of the British Experience, 1600–2000* (Basingstoke-New York: Palgrave Macmillan, 2002), 223–248, 224.

³⁰ Bernard Lightman, "Spectacle in Leicester Square: James Wyld's Great Globe, 1851–61," in Joe Kember, John Plunkett, Jill A. Sullivan, eds., *Popular Exhibitions, Science and Showmanship, 1840–1910* (London-Brookfield: Pickering & Chatto, 2012), 19–40, see esp. 33–36. Emblematic for the two-way exchange between entertainment practices and scientific typical language and rhetorics are the *Notes to Accompany Mr. Wyld's Model of the Earth, Leicester Square* (London: Blackburn & Burt, 1851).

³¹ Geppert, "True Copies," 226.

³² Abbattista, see above.

³³ A concept employed by Jameson who, retrieving the term from Bakhtin and Kristeva, defined it as "the smallest intelligible unit of the essentially antagonistic collective discourses of social classes . . . an amphibious formation, whose essential structural characteristic may be described as its possibility to manifest itself either as a pseudoidea – a conceptual or belief system, an abstract value, an opinion or prejudice – or as a protonarrative, a kind of ultimate

class fantasy about the 'collective characters' which are the classes in opposition." Frederic Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (Ithaca: Cornell University Press, 1982), 82, 87.

³⁴ Rieder, *Colonialism and the Emergence of Science Fiction*, 32.

³⁵ Umberto Eco, "A Theory of Expositions," in Eco, *Travels in Hyperreality: Essays* (San Diego: Harcourt Brace, 1986), 303 and *passim*. Cf. Tony Bennett, *The Birth of the Museum: History, Theory, Politics* (London-New York: Routledge, 1995).

³⁶ Luckhurst, "Laboratories for Global Space-Time," 392.

³⁷ Landon, "SF Tourism," 32.

³⁸ On the idea of the technological sublime e.g. David E. Nye, *American Technological Sublime* (Cambridge: MIT Press, 1994), cf. Csicsery-Ronay Jr., *The Seven Beauties*, esp. 146 and ff.

³⁹ Arnold Lewis, *An Early Encounter with Tomorrow: Europeans, Chicago's Loop, and the World's Columbian Exposition* (Urbana: University of Illinois Press, 1997).

⁴⁰ Luckhurst, "Laboratories for Global Space-Time," 392.

⁴¹ Robert W. Rydell, *World of Fairs: The Century-of-Progress Expositions* (Chicago: University of Chicago Press, 1993), esp. 141–142 and *passim*.

⁴² Jeffrey Stanton, "Coney Island – Thompson & Dundy," *Coney Island History Site*, 23 April 1998, accessed December, 16, 2015, <http://www.westland.net/coneyisland/articles/thompson&dundy.htm>.

⁴³ Landon, "SF Tourism," 36. On New York 1939 science-fictional and cinematic character see J. P. Telotte, "'I Have Seen the Future': The New York World Fair as Science Fiction," *A Distant Technology: Science Fiction Film and the Machine Age* (Hanover: Wesleyan University Press, 1999), 162–182.

⁴⁴ Qtd. in Lindsay Turley, "'I have seen the future': Norman Bel Geddes and the General Motors Futurama," *MCNY Blog: New York Stories*, Museum of the City of New York, 26 November 2013, accessed May, 5, 2015, <http://blog.mcny.org/2013/11/26/i-have-seen-the-future-norman-bel-geddes-and-the-general-motors-futurama/>.

⁴⁵ Robert F. Smith and Lova Khoram, "A Design Summary of the GM Futurama II Ride at the 1964–65 New York World's Fair," *General Motors Engineering Journal* 11, no. 2 (Second Quarter 1964), available online in Bill Joung, *New York's World Fair 1964/1965*, accessed May, 5 2015, <http://www.nywf64.com/gm08.html>.

⁴⁶ Scott Bukatman, "There's Always Tomorrowland: Disney and the Hypercinematic Experience," *The MIT Press* 57 (Summer 1991): 55–78, 61 (the first sentence quotes Thomas Hine, *Populuxe*, New York: Knopf, 1986, 151); cf. Landon, "SF Tourism," 36–37; Cooper, "Theme Parks."

⁴⁷ Franklin, "America as Science Fiction: 1939," 40. On the choice of New York 1939 for the first World Convention and on the Fair as/and science fiction see also Sherryl Vint, *Science Fiction: A Guide for the Perplexed* (London-New York: Bloomsbury, 2014), 94, 95.

⁴⁸ Henry Jenkins, "Utopia, Technology, and... Pickles," *World's Fair: Enter the World of Tomorrow*, Biblion-The Boundless Library, New York Public Library, n.d., accessed May, 5, 2015, <http://exhibitions.nypl.org/biblion/worldsfair/beacon-idealism-building-democracy/essay/essay-jenkins-democracy-qa>. See also Franklin, "America as Science Fiction: 1939" for an in-depth analysis of the agency assumed by corporations in 1939 and the role of spectators.

⁴⁹ The role of other physical locations such as American dime museums in the development of science-fictional audience protocols (see Landon, "SF Tourism," 37–38) would be a promising field of inquiry here, also as regards exhibitions of human beings, as in natural oddities, freaks, automata, and wax figures.

⁵⁰ Existing studies on other aspects of the expositions reception provide useful methodological examples, e.g.: Leonardo Buonomo, "Showing the World: Chicago's Columbian Exposition in American Writing," in Abbattista, *Moving Bodies*, 21–38; Verity Hunt, "Narrativizing 'The World's Show': The Great Exhibition, Panoramic Views and Print Supplements," in Kember, Plunkett, and Sullivan, *Popular Exhibitions*, 115–132.

⁵¹ Cf. John Clute et al., "Robida, Albert," in John Clute, Peter Nicholls, David Langford, eds., *The Encyclopedia of Science Fiction*, 2 April 2015, accessed May, 1, 2015, http://www.sf-encyclopedia.com/entry/robida_albert.

⁵² Justin St. Clair, "Borrowed Time: Thomas Pynchon's *Against the Day* and the Victorian Fourth Dimension," *Science Fiction Studies* 38:1, no. 113 (March 2011): 46–66.

⁵³ Jeremy Hsu, "How Scientific Racism at the Chicago's World's Fair Shaped 'BioShock Infinite'," *Motherboard*, 19 April 2013, accessed December, 17, 2015, <http://motherboard.vice.com/blog/how-scientific-racism-at-the-chicagos-worlds-fair-shaped-bioshock-infinite>. Cf. Robert W. Rydell, *All the World's a Fair: Visions of Empire at American International Expositions, 1876–1916* (Chicago: University of Chicago Press, 1984), 38–71.

⁵⁴ Luckhurst, "Laboratories for Global Space-Time," 386.

⁵⁵ *Ibid.*

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