

Symbolic Megaprojects: Historical Evidence of a Forgotten Dimension

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ABSTRACT

By combining an historical analysis of three megaprojects and an organizational theory approach based on the notion of symbolism-intensive organizations, this research attempts to shed light on how symbols are constructed, communicated, translated, and captured in megaprojects. We conclude that, when it comes to symbolic projects, a number of project features may not be mirrored in the outcome's observable traits. We propose a novel analysis dimension: the symbolism-intensive project; in other words, projects that are carried out aimed at delivering long-awaited needs, a supreme mission, annihilation of the past, or even the reification of heroes, or success.

KEYWORDS: megaprojects; symbolic projects; project sublimes; symbolism-intensive projects

INTRODUCTION

Megaprojects have become a subject of growing interest in project management research, not only in terms of theoretical advances but also due to the number of megaprojects from different sectors and applications currently executed around the world. According to Flyvbjerg (2014), a conservative estimate of the world's expenditures on megaprojects over the past ten years ranges from US\$6 to US\$9 trillion dollars per year, or about 8% of the global gross domestic product (GDP). Megaprojects include urban mobility, airports, healthcare systems, nuclear and hydropower plants, offshore oil and gas platforms, and major events such as the Olympic Games, among others.

Megaproject management deals with structures and processes of higher complexity compared with the management of smaller projects, which refer to stakeholder, risk, and technology management, project governance, as well as general systems and temporary organization theories. The seminal work of Flyvbjerg (2014) identifies four main elements or sublimes: political, technological, economic, and aesthetic. We propose a new construct so as to better understand megaprojects: the symbolism-intensive project. This article is based on the descriptions and analyses of three radical urban interventions, which occurred in downtown Rio de Janeiro, Brazil, each taking place approximately 50 years apart. Drawing on the definition of symbolism-intensive organizations (Wood Jr., 2000; Alvesson & Spicer, 2012), the symbolism-intensive project is presented as a novel analytic lens for the interpretation of the real beliefs and motivations surrounding megaprojects.

According to Wood Jr. (2000), the symbolism-intensive organization is an ideal type of organization, where the symbolic leadership becomes a managerial form and constitutes a phenomenon linked with theatricalization of the human experience and consolidation of the society as a spectacle.

Since its foundation in 1565, Rio de Janeiro's city center has suffered four major public interventions—in 1808, 1904–1908, 1959–1965, and 2012–2016, respectively. The first intervention started with the relocation of central Rio de Janeiro's residents in order to accommodate the Portuguese royal family and their court—numbering approximately 15,000 people—when they fled from Napoleon and the French troops' imminent invasion. As a result, in 1808 the prince-regent transferred the capital of the Kingdom of Portugal from Lisbon to Rio de Janeiro (Azevedo, 2010).

A century later, from 1904 to 1908, former mayor Pereira Passos sponsored a megaproject, which would mark the transformation of a dark, violent, and unhealthy Rio de Janeiro. The intervention, planned to create a "Parisian

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air" to the tropical capital, included the demolition of slums and the construction of large avenues and boulevards—an urban renovation that had previously occurred in European cities, including Paris, France; Vienna, Austria; Florence, Italy; and Berlin, Germany. The project's outcome also encompassed a mass vaccination of the population against smallpox (Del Brenna, 1985).

In 1960, the same region was chosen again, when the Brazilian federal government moved the country's capital from Rio de Janeiro to Brasília. The intervention, which was also planned to celebrate the city's 400th anniversary in 1965, involved a huge embankment of Guanabara Bay, where a new public park would be built, as well as an elevated highway, also known as Perimetral, which would shadow about five kilometers (approximately 3 miles) of Rio de Janeiro's harbor extension.

Recently, after hosting a number of international events, including the United Nations Conference on Environment and Development, in 1992; the 2007 Pan American Games; and the 2014 World Cup (the latter along with other Brazilian cities), Rio de Janeiro's mayor started a new megaproject completed in 2016, just in time for the Olympic Games. Called *Porto Maravilha* (in English, "Wonder Port"), the project comprised an area of approximately five million square meters. Perimetral, the elevated highway, was demolished and approximately eight kilometers of underground tunnels were built. The project also included the renovation of more than 120 kilometers of the drinking water network, the construction of 84 kilometers of a sewerage network, 37 kilometers of a drainage network, and 26 kilometers of a gas network. Furthermore, *Porto Maravilha* promised new urban standards in an area of approximately 70 kilometers, encompassing 650,000 square meters of sidewalks, 17 kilometers of bike paths, and 28 kilometers of technologically advanced light rail lines (Companhia de Desenvolvimento Urbano do Rio de Janeiro [CDURP], 2015).

In summary, for the past 200 years, central Rio de Janeiro has been radically changed four times—three of them as the results of megaprojects. In fact, not only did these megaprojects help transform some of the city's observable traits, but they also carried a number of symbolic meanings, best described by Flyvbjerg's (2014) aforementioned four sublimes that drive megaproject development. Comparing the three megaprojects described in this article—Central Avenue, Flamengo Embankment, and *Porto Maravilha*—will likely reveal continuities and similarities in the ways they are conceived, implemented, and delivered. For instance, the same tension between economic and aesthetic sublimes observed in the 1960s is still present today, since Brazil still lacks making huge investments in infrastructure (e.g., transportation and public services). In effect, the lighting solution in the Flamengo Embankment project was as controversial as the recent demolition of an expensive elevated highway just for aesthetic purposes, driven by the Olympics. Furthermore, a thorough examination might disclose other similarities in important project management-related issues, for example, the ways they are conceived, implemented, and delivered. Additionally, in this study we attempt to shed light on how symbols are constructed, communicated, translated, and captured by symbolic megaproject stakeholders.

Stumbling Upon Symbols in Megaprojects

Megaprojects—large-scale, complex, transformational ventures that not only take many years to develop but also impact millions of people—"are increasingly used as the preferred delivery model for goods and services across a range of businesses and sectors" (Flyvbjerg, 2014, p. 6). Warrack (1993) emphasizes the economic, social, and symbolic roles of megaprojects in modern society, which may explain why they are so attractive to decision makers. Sanderson (2012) mentions the main characteristics of a megaproject: it is a

high-budget project, delivers a substantial piece of physical infrastructure; the client is the government and, typically, there is a private main contractor who sometimes retains a stake in ownership after the project has been completed.

In this regard, Flyvbjerg (2014) describes the four sublimes that drive megaproject development, starting with the technological sublime, which refers to the state that engineers and technologists arrive at in pushing what is possible in first-of-anything types of projects, using high-technology solutions, some of which are not sufficiently matured or developed in the beginning of the project (Shenhar, 2001). The political sublime drives the decision-making process of megaproject execution, because politicians are attracted to the visionary approach and visibility that are created, which materializes symbols cherished by society and explains what the results will cause with the public and the media. The economic sublime refers to the frenzy of economic activities that ensue from every new megaproject, including contractors, workers in construction and transportation, trade unions, consultants, bankers, investors, landowners, and lawyers, among other stakeholders. Finally, the aesthetic sublime, which may go hand in hand with the political sublime, may be described as the breakthrough in architecture and design represented by the project outcome, which is also iconic, beautiful, and breathtaking, such as the projects described in this article.

Projects may be understood as examples of temporary organizations (Morris, 2013), although not all temporary organizations are projects. Projects emerge in all industry sectors for different purposes and for the satisfaction of various needs (Morgan, 2006) and therefore allow researchers to study them from an organizational theory perspective.

The studies on organizational symbolism started to gain relevance after the seminal work of Pondy, Frost, Morgan, and Dandridge (1983), who viewed organizations as collections of individuals

engaged in metaphorical transformations of reality. Morgan's (2006) work is filled with organizational symbolism metaphors. His framework allows for a better understanding of different organizational views. Alvesson (1991) introduces the discussion of organizational symbolism as a research field as well as its relation to an ideology of organizations. Stratti (1998, p. 1379) states that the symbolic approach "... emerges as a component of the vast organizational literature that deals with symbolism and culture in organization." Hence, symbolism can be either viewed as part of the organizational culture or linked to institutional theory, since organizational politics can be viewed as a legitimate symbol (Stratti, 1998); however, the research on symbolism as a managerial action is still scarce. Fiss and Zajac (2006) developed a symbolic management perspective on strategic change to predict and test the antecedents and consequences of how firms frame strategic change.

The symbolism-intensive organization (Wood Jr., 2000) is defined as a new ideal type in organization studies. According to Wood Jr. (2000), organizations become magical kingdoms, where the symbolic space is filled with symbol manipulation and rhetoric. Symbolism-intensive organizations are characterized by symbolic leadership as a predominant managerial style, where leaders and followers apply impression management techniques. By definition, impression management is a conscious or subconscious process in which people attempt to influence the perceptions of other people about a person, object, or event. They do so by regulating and controlling information in social interaction.

Moreover, the managerial innovation is treated as a dramaturgical event, and symbolic analysts are prevalent within the workforce. The emergence of symbolism-intensive organizations can be associated with the theatricalization of the contemporary human experience and consolidation of the society as a spectacle.

Based upon the notion of symbolism-intensive organizations, we propose the description of the symbolism-intensive project: it is a high-budget megaproject that deeply impacts its surroundings, is highly controversial, has a limited schedule, and proposes a radical change. Symbolism-intensive projects create an aura of redemption, in the sense that it creates a missionary culture that resonates in managerial practices. Such megaprojects make intensive use of rituals, for example, to celebrate the project itself as well as its outcome for stakeholders and society as a whole. Symbolism is particularly intensive during ceremonies, such as contract signings, the achievement of certain milestones, collective press interviews, and press releases, among others.

Symbolism-intensive projects also attempt to reorganize the past as a definitive solution, after which all problems from the past suddenly disappear. The account of successful similar enterprises is extensively used, both as risk mitigation and an incentive against the expected obstacles during project execution. Furthermore, these projects are usually managed by someone who acts as a super project manager, a hero who is supposed to overcome enormous barriers. Furthermore, the project manager and his or her team use a number of positive assumptions to reduce the project's difficulties and risks. Intensive symbolism is also based upon the popularization of project management and pop management clichés and terms (e.g., stakeholders, deliverables, milestones, project manager, megaproject, organizational culture, baseline, and project legacy). The pop management (a term coined by Wood Jr., 2000) literature comprises books and "fast consumption" magazines, produced by the business media. Business media is part of the management industry, along with consulting firms, business gurus, and business schools. Moreover, a discourse encouraging stakeholder participation in the project is constructed, including those stakeholders who do not support

the project. This participation discourse, however, usually does not translate into reality during project execution, since these parties propose very few changes.

Symbols have meanings beyond their inherent essence (Dandridge, Mitroff, & Joyce, 1980), thus symbolic actions are representational and demand interpretation (Hambrik & Lovelace, 2017). Moreover, symbolic actions—and symbolic projects for that matter—are usually depicted in beneficial terms (Gioia, Thomas, Clark, & Chittipeddi, 1994). Politicians and project managers alike are thrilled about the potential of symbolic projects to put them in the limelight. Nonetheless, some symbolic projects fall short of their expected outcomes and may even be counterproductive. In this case, they may be greeted with derision by society.

These symbolic projects can only be fully understood from historical, political, and sociological perspectives. The key questions are: *What was at stake?* And *why were these projects so important to governments?* In order to answer these questions, we must recall that symbols engage and direct people's cognitions (Gioia & Chittipeddi, 1991); they are clearly perceptible attention-getters (Werner & Cornelissen, 2014); they are devices for conveying the importance and urgency of needed change (Snell, 2002); and finally, symbols provide economic, image-laden reinforcement for associated strategic themes (Maitlis & Lawrence, 2007); in other words, they signal a strategic change (Gioia & Chittipeddi, 1991).

This study also draws on Üsdiken and Kieser's (2004) integrationist approach, which "calls for a focus on the intersection and the conjoining of historical analysis and the study of particular organizational forms and processes" (Üsdiken & Kieser, 2004, p. 322). Therefore, adopting the integrationist approach means recognizing that past projects act in the present and are useful for identifying and understanding current practices and behaviors. Recognizing that current megaprojects have been influenced by older projects, we resort to historical analysis not as

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a sort of existing organizational theory substitute. Rather, we attempt to better understand current megaprojects by combining both historical and organizational theory approaches.

According to Hofstede (2001), organizational symbols include words, gestures, pictures, and objects and are typically embedded in complex meanings, identified by those who share the same culture. Megaprojects are usually perceived as unchangeable with regard to both measurable and more abstract benefits, in accordance with the iron law of megaprojects (Flyvbjerg, 2014), in other words, cost overruns, benefit shortfalls, and other major concerns. Nonetheless, in line with Kieser (1994, p. 61), by reconstructing their development over time, we attempt to discover which features are actually the results or outcomes of older projects, which probably have been conducted differently. In this case, the past itself becomes a variable (Üsdiken & Kieser, 2004).

Furthermore, by combining an historical analysis with a novel organizational theory perspective, we are able to critically assess "ideas that are currently promulgated" (Üsdiken & Kieser, 2004, p. 323), thus adding to prior project management research.

Methodological Procedures

Rowlinson, Hassard, and Decker (2014) discussed three epistemological dualisms derived from historical theory to explain the relationship between history and organizational theory. The first dualism concerns explanation: While historians focus on narrative construction, organizational theorists subordinate narrative to analysis. The second dualism, or dualism of evidence, regards the use of verifiable documentary sources by historians, whereas organizational theorists prefer constructed data. In the third and final dualism, in other words, dualism of temporality, historians construct their own periodization, whereas organizational theorists treat time as constant for chronology.

These dualisms underpin their explication of four alternative research strategies for organizational history, namely: corporate history, analytically structured history, serial history, and ethnographic history. This article uses the analytically structured history as a research strategy to discuss historical subjects comprising many complex elements. Analytically structured history uses analytic constructs—in this study, project, outcome, and benefit—to search archival sources, enabling the construction of a narrative of structures and events that may not have been perceived as such by historical actors (Rowlinson, Hassard, & Decker, 2014). Also, we resorted to content analysis (Krippendorf, 2012) of the data collected, not only from historical books and papers, but also from newspaper accounts and project files.

It should be noted that, "although analytically structured history retains narrative as the main form of explanation, it is driven by concepts, events, and causation. [...] Analytically structured history may draw on secondary sources and narrative texts, but that is not the same as a reworking or an analysis of the narratives already contained within those sources" (Rowlinson, Hassard, & Decker, 2014, p. 264).

Rojas (2010, p. 1268) discusses three disadvantages of consulting organizational archives compared with collecting data in real time, for example, in interviews: (1) "organizations vary in what is saved and when it is saved"; (2) "archives tend to be rich in documents from leaders, but they have fewer materials about other actors"; and (3) "actors can selectively record what transpires in an organization. Meeting minutes, for example, may address only major points and omit important contextualizing discussions." The author also argues that such disadvantages should be offset by the addition of "newspaper accounts, interviews, memoirs, and other materials."

The same disadvantages regarding organizational archives apply to projects' archival sources; hence, data col-

lection comprised not only the projects' official archival sources but also previous academic research as well as newspaper and television accounts. In fact, we agree that documentary sources provide "an excellent means to test the accuracy of different images and perceptions of the organization and to compare espoused and actual values." (Dellheim, 1986, p. 20)

Central Avenue: Making the Transition from Rural to Urban Society

In 1808, fearing the imminent invasion of Lisbon by Napoleon's troops, the Portuguese court was transferred to Rio de Janeiro, making the colonial city the heart of the Portuguese empire, whose territoriality included colonies in Africa and Asia. Without any urbanization project, the city saw its population double in a year—with no proper structure and virtually no local production or skilled labor—since, for nearly 240 years, it had only been a colonial city based on natural resources extraction and the distribution of slaves coming from Africa (Azevedo, 2010; Benchimol, 1990). Although the presence of the royal family in the city was supposed to be temporary, the King of Portugal and his entourage remained in Rio de Janeiro for almost 14 years.

In 1822, Brazil declared its independence and established a monarchy, yet it was still an agrarian economy heavily dependent on slave labor. The new capital of the empire remained disorderly and dirty, avoided by many foreign ships fearing chronic diseases.

Yellow fever epidemics were recurrent—notably in 1870, 1873, and 1876—and the population crowded around the city center (Benchimol, 1990). At the time, European immigration had increased and foreign residents were estimated to be about one-third of the city's population. This population lived mostly in slums or multi-room houses, dark and dirty places lacking minimum sanitary conditions. Many of these houses were old colonial homes, whose descendants had moved to new

neighborhoods created along the waterfront toward the south side of the city. Then began, according to Benchimol (1990), the controversy surrounding the feasibility and advisability of removing a great proletarian mass from the center to the poorer part of the city, the so-called 'north side.'

In late nineteenth-century Rio de Janeiro, the successful transformation of European cities was discussed and exemplified as a positive project outcome. In 1875, the Brazilian Emperor opened an exhibition in Rio called "Public Improvements," following a set of urban planning and infrastructure ideas, concepts, and projects developed about one year earlier. Benchimol (1990) and Rocha (1995) describe and analyze the ideas and plans proposed by the Engineering Club and the City Improvements Committee from 1873 to 1902, which included widening of streets, sanitation, water distribution, and energy concessions. These plans were influenced by the Medical Commission, established by the federal government as a response to the yellow fever devastation in 1876, which accounted for 3,500 deaths (Benchimol, 1990). As a result, the Imperial Medical Academy encouraged a new mindset in the incipient Brazilian medical community. The Academy introduced the need for space ordering and planning, based on social medicine's new practices and ideas. It was the first disease prevention state policy based on spatial organization architecture, with a strong emphasis on public and private space cleaning. This new generation of doctors would develop these ideas, changing the population's habits and introducing mandatory vaccines at the turn of the century, which was met with strong objection from the general public.

The execution of the Central Avenue project, started in 1903, was the result of a combination of factors, which acted as project facilitators. In addition to the aforementioned elements, slavery abolition brought to the city a huge con-

tingent of Africans, former slaves who had left their farms in the countryside. Furthermore, European migratory waves followed, not only from Portugal, but also from Spain, Italy, Switzerland, and Germany. Finally, the imperial government outsourced infrastructure services: sanitation was delivered to a British company in 1862; an American organization was in charge of installing the first telephone in 1881; a Belgium company provided public gas lighting and gas delivery in 1886; and the Canadians were responsible for electricity at the turn of century. The sole exception was water supply, which remained state-owned, after having been the subject of a huge expansion project completed in 1880 (Benchimol, 1990).

In this scenario, the renovation of the city center, including its harbor extension, constituted the first megaproject to be carried out in Brazil, whose main symbol was the opening of Central Avenue, the postcard image that would add Rio de Janeiro to the list of civilized and modern cities. The republic was proclaimed in 1889 and 13 years later, in 1902, the president submitted a proposal to the Parliament that allowed a loan of 8.5 million British pounds (circa US\$41 million, which today is equivalent to approximately US\$1 billion) owed to British bankers, an amount that represented almost 50% of the 1903 federal budget (Rocha, 1995).

During the project's first year, intense effort was made to amend the legislation and therefore reduce the costs of land expropriations. The project itself was divided into three areas, each with its own staff and equipment, which would converge in the end. In 1906, the demolition of 1,681 houses was concluded, directly affecting 20,000 people (Rocha, 1995). Completed on time, the project fully remodeled the city center; renovated and organized the city's port; and led to the construction of landmark buildings, such as the Municipal Theater, the National Museum of Fine Arts, the National Library, and the Monroe Palace, home of the Federal Senate. "Rio

civilizes itself" was the rallying motto at the time (Vieira, 2015). Moreover, the project regulated urban life, and the authorities acted firmly against old habits and archaic traditions. For example, the everyday sales of milk and small animals earned by small producers, who simply drove their cows in procession every morning toward the old city center, was one of the first practices to be prohibited in downtown Rio de Janeiro, despite the resistance of sellers and the population in general.

The project manager was former mayor Pereira Passos, himself a civil engineer who had previously worked on some important railroad projects throughout Brazil for decades. Mr. Passos had also lived in Paris, France and Zurich, Switzerland, where he observed some railroad construction projects and furthered his knowledge on the subject. When the Central Avenue project started, he was 67 years old and would live for 11 more years until his death in 1914. At that age, he was closer to retirement than the other project managers mentioned herein; nonetheless, he envisioned a civilization far beyond that which a single urbanistic project could produce. He advocated in favor of education and his ideas were in line with the dominant medical policy at the time, which was based on mass vaccination and radically changing the poorer population's sanitation habits (Del Brenna, 1985). Passos' views were similar to those of Henry Ford's Ford Motor Company employees, which occurred years later in the United States, during the growth and heyday of mass production in his automotive business (Snow, 2013).

Flamengo Embankment: Rio Remains the Synthesis of Brazil

The genesis of this project dates back to 1952, when Santo Antonio Hill was torn down to open an avenue in downtown Rio de Janeiro. The resulting debris was then deposited in an area adjacent to what is now the Flamengo Embankment. This first part of the embankment

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would last until 1958 and did not resemble any park that would later be built. In fact, the project was designed so as to build high-speed lanes to connect the city's downtown to its southern neighborhoods (Jornal O Globo, 2013).

Nonetheless, in 1956, former Brazilian president Juscelino Kubitschek decided to move the country's capital from Rio de Janeiro to Brasília, a city specifically designed for this purpose. As a result, in 1960, Rio de Janeiro became a city-state, the sole representative of the state of Guanabara, a status that would last until 1975. Carlos Lacerda, launching his campaign to run for the state's first governor, stated: "We are not a decaying city, but a released city [...] a region without regionalism. They thought that by abandoning us they would move civilization west, but here is where they left it. Because we are the synthesis of Brazil, because we are Brazil's door to the world, and we are the very image the world makes of us" (Motta, 1997, p. 168). Rio de Janeiro's significant loss of status had a major impact on the city's politicians as well as its people (Motta, 2000).

Following his election, Lacerda presented his plan for the next five years, which included expanding the educational system, improving the water supply network, and organizing Rio de Janeiro's urban space. The newly formed city-state had peculiar financial support: both state and city taxation, federal debts with the state of Guanabara, and external loans. Lacerda's anticommunist policy contributed to his gaining access to loans granted by international agencies—to a great extent controlled by the United States—after the communist revolution in Cuba in 1959. The Flamengo Park was, in fact, built in combination with an elevated highway called Perimetral, which would be integrated with the embankment in order to connect the southern, central, and northern neighborhoods. Perimetral's construction was based on inner-city elevated expressways, a common trend in several post-World

War II U.S. cities. Some decades later, some of these American cities started a movement to substitute viaducts with tunnels, as illustrated by Boston's Big Dig project (Mohl, 2012; Tajima, 2003).

In addition, the idea of building a tropical park (much like Central Park in New York City) with 1.2 million square meters, not only encompassing recreational areas and over 11,000 trees of nearly 200 different species, but also presenting modern architectonic features, was particularly appealing to the governor. The project created the symbol of modernity Lacerda wanted to convey (Jornal O Globo, 2013; Instituto Lotta, 2016).

In 1961, after agreeing to a transformation of the original parkway project, Governor Lacerda created a work group by decree, which was to be presided by his friend Lotta Macedo Soares, to manage the project. The work group's responsibilities were: (1) guiding and projecting all architectonic, landscaping, and creative work to be executed by the department of urbanization and sanitation on the embankment; (2) overseeing the urbanization and landscaped composition on the waterfront; and (3) validating any work of art acquisition and location. Moreover, the work group could request, if necessary, Guanabara State's public employees or hire specialized services through formal recommendation to the department of urbanization and sanitation (Instituto Lotta, 2016).

Lotta, who had a major influence on the governor, envisioned a park in an easily accessible place, to be visited by people from different parts of the city for outdoor recreational activities. The project encompassed sports courts, playgrounds, aeromodelling and naval ship modeling areas, aquariums, arborescences, public restrooms (the first in Rio de Janeiro), as well as a public marina for those who wished to visit the park by sea. Furthermore, the project comprised an educational purpose, which would be fulfilled by a specific organization in charge of promoting and

overseeing educational activities within the park (Instituto Lotta, 2016).

In addition to innovation in gathering a number of activities in a unique scenario, the project resorted to a highly advanced lighting solution, which would allow for visitors attending nighttime park events to fully appreciate the beautiful setting. The solution was controversial and deemed an unnecessary luxury, even by members of the work group, since the 45-meter (approximately 147 feet) high light poles with six 1,000-watt mercury lamps, weighing 17 tons each, required technology unavailable in Brazil at the time (Instituto Lotta, 2016).

The project was still in progress, despite the park's official opening in October 1965. In fact, Lotta proposed the creation of a public organization, which would not only be responsible for promoting and overseeing educational activities within the park, but also for integrating the project and making sure it would eventually be completed (Instituto Lotta, 2016).

In 1965, Lacerda ran again for governor and lost, which made the creation of the organization all the more important for the continuation of the project. Despite objection from the state parliament, Lacerda founded the organization, Flamengo Park Foundation, which would be dissolved the following year by the new governor, Negrão de Lima. Lotta would also be replaced as the project manager (Motta, 2000; Instituto Lotta, 2016).

In 1979, Marcos Tamayo, Rio de Janeiro's mayor at the time, decided the project was successfully completed with the opening of a restaurant and a marina (Jornal O Globo, 1979). The original purpose of the marina, however, had been changed from giving the park's visitors another transportation option into a simple boathouse. In other words, although integrated into the same landscape, the park as a whole and the marina no longer shared the originally intended benefits (Jornal O Globo, 2013).

Furthermore, the concept of continuing education within the park was never achieved, which may be credited to the short-lived Flamengo Park Foundation (Instituto Lotta, 2016). On the other hand, the park was crossed by two high-speed six-lane highways, which led to the Perimetral elevated expressway, thus connecting the northern and southern parts of the city (*Jornal O Globo*, 2015).

Porto Maravilha: Revitalizing the Ultimate National Symbol

At the beginning of the twenty-first century, Rio de Janeiro's harbor extension was at the pinnacle of its decadence. With a huge abandoned area and closed warehouses, the port of Rio de Janeiro presented 70% of idle capacity. The region's main avenue, opened in 1907 as part of the projects undertaken by Passos, had become a simple car route, entirely shadowed by Perimetral, the elevated highway built in Lacerda's government. Furthermore, most buildings, which used to be homes to grain silos and flour companies, were vacant and so were large state-owned areas. To make matters worse, there had been no residential real estate launch in the last 100 years, thus contributing to a significant population decline. Barcelona's revitalization of the port area, motivated by the 1992 Olympic Games (Ferreira, 2010), is frequently mentioned in works by other authors.

Just like the Central Avenue project, discussions on the revitalization of the region and the search for resources for its fulfillment took several years. In addition to Rio de Janeiro's mayor's high political aspirations, the approval of Rio de Janeiro as a 2014 FIFA World Cup host city and as the 2016 Olympics host city played a pivotal role in the decision of finally revitalizing the ultimate national symbol. Thus, in 2009, the *Porto Maravilha* project started with the foundation of CDURP (Portuguese acronym for Port of Rio de Janeiro Urban Development Company), a public-private partnership in charge of coordinating

public and private stakeholders. For project implementation and public service operations and maintenance within the established area of special urbanistic interest, a concession was granted to another new company, called Porto Novo. CDURP was also responsible for project conception and financing. Although publicized as a single megaproject, technically, *Porto Maravilha* was actually a program, composed of a number of large projects. Its scope included (1) demolishing Perimetral; (2) building three underground tunnels to be used as expressways; (3) building an entirely new light rail network connecting the city center, including the city's largest inter-state bus terminal offering transportation to Santos Dumont domestic airport, which relied on a new catenary-less power system; (4) building a scenic promenade; (5) rebuilding the region's infrastructure (e.g., sanitation and water supply); (6) building the Museum of Tomorrow on the pier; and (7) building the Rio Museum of Art by retrofitting two old unused buildings (Companhia de Desenvolvimento Urbano do Rio de Janeiro [CDURP], 2015).

Porto Maravilha was financed through an innovative model for the region's urban requalification, based on additional construction potential bonds (these are government-issued bonds, which allow its owners—real estate companies—to build beyond legislation limits). Municipality legislation defines every type, size, and height of real estate; in other words, it determines what is called construction potential by area. In order to recover degraded regions, federal legislation allows the creation of urban consortium operations in which the municipality establishes specific rules for new buildings. In this case, larger properties may be built in exchange for financial compensation, in other words, the purchase of Certificates of Additional Construction Potential (CEPACS, the Portuguese acronym). Each certificate is equivalent to an area to be built measured in square meters; the resources must be used exclusively

to cover urban requalification expenses within the established area of special urbanistic interest. To stimulate housing construction in the port region, one CEPAC permits the construction of more square meters in residential than in commercial enterprises (Companhia de Desenvolvimento Urbano do Rio de Janeiro [CDURP], 2016).

According to CDURP (2016), the port region's residents are the stakeholders most directly affected by the *Porto Maravilha* project. For example, the renovation of drainage networks is expected to put an end to historical floods in a number of streets. During its execution, in the period spanning from 2013 to 2016, the project was responsible for the greatest traffic jams in the history of the city because of Perimetral's demolition. Also, CEPAC certificates did not sell as planned, thus leading the Brazilian government to buying them all. In fact, the Brazilian government expected a high demand after the conclusion of the project. Moreover, during execution, the project was severely criticized by the press, in light of its huge impact on the region, elevated costs, tight schedule, and potential risks.

A Megaproject Comparison

The cases described could be classified as megaprojects, according to Flyvbjerg (2014), Warrack (1993), and Sanderson (2012). The three projects were strongly motivated by a decolonizing view of Brazil and Rio de Janeiro. Through the materialization of symbols cherished by the city's society (e.g., its central role in Brazil, modernity, urbanity, and civility), the projects intended to provide Rio de Janeiro with hallmarks of a great city, which would allow it to be among such major cities as Paris, Vienna, Florence, Berlin, Barcelona, Boston, and New York. Furthermore, the envisioned outcomes would transcend merely observable traits. In fact, when it comes to symbolic projects, outcome analysis is not only observable but eminently cultural. Although the intended outcome was not totally achieved in the cases

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Sublimes	Central Avenue	Flamengo Embankment	Porto Maravilha
Political	<ul style="list-style-type: none"> First urban project in Brazil Based on similar projects in major European cities Shows the maturity of the new Brazilian republic government High-visibility project of becoming a South American postcard 	<ul style="list-style-type: none"> First project after the capital moved to Brasília High-visibility project Materialization of symbols cherished by Rio de Janeiro's society, e.g., the city's central role, modernity, and civility 	<ul style="list-style-type: none"> Based on similar interventions in other cities with degraded port areas, e.g., Barcelona High-visibility project with potential of being internationally recognized due to 2014 World Cup and 2016 Olympic Games
Aesthetic	<ul style="list-style-type: none"> European-oriented eclectic architectonic style Wide and clean streets Landmark buildings 	<ul style="list-style-type: none"> Modern architectonic, landscaping features, with artistic works in several locations Seamless integration into the city's natural beauty 	<ul style="list-style-type: none"> Substitution of elevated highway with tunnels Scenic promenade
Economic	<ul style="list-style-type: none"> The cost represented 50% of Brazil's 1903 budget Foreign debt owed to the United Kingdom 	<ul style="list-style-type: none"> Budget derived from federal compensation for moving the capital to Brasília Foreign debt owed to the United States 	<ul style="list-style-type: none"> Extensive use of public–private solution Unusual project financing, based on bonds related to construction in the area
Technological	<ul style="list-style-type: none"> Basic urban conditions, including electricity, telephone, gas, water and sewerage systems Streets and squares built adequately for public transportation 	<ul style="list-style-type: none"> First active recreational park in Brazil First public restrooms High-tech lighting solution, with the highest light poles in the country until then 	<ul style="list-style-type: none"> Catenary-less tramway New high-technology museums, e.g., Museum of Tomorrow

Table 1: A megaproject comparison.

studied, their symbolic, identity, and transformational roles lead one to believe that they were indeed successful. Table 1 summarizes the main aspects of each project, according to the four aspects proposed by Flyvbjerg (2014): the political, aesthetical, economic, and technological sublimes.

As far as the political sublime is concerned, substantive similarities stand out. Central Avenue was a symbol of a nascent urban society and represented the gentrification of the recently instituted Brazilian Republic Government. Half a century later, the Flamengo Embankment project and the construction of Perimetral were parts of the federal government's response to popular and political reactions against the construction of the new Brazilian capital, Brasília, and its most significant consequence: the loss of the former capital's real and symbolic power. The Brasília project was another megaproject of the time—the city was erected in four years. Finally, the *Porto Maravilha* project started during the most favorable time of Lula's presidency, when

good news abounded—skyrocketing oil prices to go along with pre-salt reservoir discoveries and Brazil's election to host the 2014 FIFA World Cup and the 2016 Olympic Games. Despite the political similarities, the project managers acted differently. Pereira Passos, who was Rio de Janeiro's mayor, was both the project sponsor and manager; moreover, he did not have the same political aspirations as his successors, illustrated by the fact that he is currently referred to as a mayor-engineer, more so than as a politician (Del Brenna, 1985). On the other hand, Carlos Lacerda during the 1960s and Eduardo Paes during the *Porto Maravilha* project both clearly linked their political careers with the projects' outcomes. The political symbolism of the three megaprojects encompassed the strategic decision to change the essence of downtown Rio de Janeiro.

The aesthetic sublime is also present in the symbolic nature of these cases, due to the evident influence of major cities from more developed countries over the projects' aesthetic features. Paris'

wide boulevards were Central Avenue's benchmarks, whereas North American cities inspired the construction of Perimetral. *Porto Maravilha* was influenced by megaprojects from both Barcelona and Boston. The projects attempted to convey symbols of development and civilization that would put Rio de Janeiro among the best modern places to live. Despite the influence of such cities over the projects' aesthetic traits, the evolving environment clearly had an effect on them.

With regard to the technological sublime, a similar change was noticed, ranging from elementary urban conditions to more aesthetically than technologically advanced features, and to a more state-of-the-art and technology-driven outcome, exemplified by a catenary-less tramway integrating other pivotal means of transport.

Finally, the most significant change pertains to the economic sublime. Both Central Avenue and the Flamengo Embankment were heavily dependent on public funds, whereas *Porto Maravilha* differs in the way it was

conceived, developed, and delivered, as demonstrated by: (1) CDURP, a public-private partnership responsible for mediating public and private stakeholders' interests as well as for project conception and financing; (2) unusual project financing based on tradeable bonds related to construction in the area, thus alleviating the city's budget; and (3) Porto Novo, a concession owner in charge of public service operations and maintenance within the established area of special urbanistic interest. Additionally, the three cases were paid for with federal funds. The Central Avenue initial budget was half the total 1904 national budget; the second project was part of the federal compensation for leaving the city; and the third project was as a consequence of the Olympic Games and political alignment.

Discussion

In addition to the four sublimes discussed in the previous section, we propose a new construct so as to better understand symbolic megaprojects: the symbolism-intensive project.

A symbolism-intensive project is characterized by its five most distinctive dimensions, described as follows. First, it may be depicted as a redemptive project, in the sense that it is intended to fulfill a number of long-awaited needs, thus deeply transforming the society where it is executed. The three cases discussed herein have been publicized as redemption projects, whose legacy would have a dramatic impact on the everyday lives of Rio de Janeiro's residents. "Rio Civilizes Itself," "A Central Park in Rio," and "Rio, the Olympic City" exemplify the vision these projects encompassed. So, this is the first common feature among the three cases. Bucci (2016) studied the redemptive leadership and wrote about why one should study redemption in management. The redemption project is the one that targets reconciliation with the future, the one that will offer a second or last chance to a complex or unattainable desire.

Second, it may be described as a missionary project in the sense that each stakeholder is expected to accomplish specific "missions" so as to earn the project's benefits. Volunteer work is a paramount example. For instance, the 2016 Olympic Games organizing committee planned to recruit 70,000 volunteers for the event held in Rio de Janeiro. Other stakeholders were also compelled to participate, albeit indirectly, in the project, as the majority of Rio de Janeiro's population were severely affected by the demolition of Perimetral and its consequences to the city's traffic pattern for more than three years. It could be said, therefore, that these stakeholders were invited to share their time—and occasionally their money—for the project to become a reality. The symbolic issue is very strong in this case, because external stakeholders are invited to take part as active promoters and project fans, so part of the project results could be responsibilities of the population and external stakeholders.

The third dimension of the symbolism-intensive project refers to one of the project's main purposes, namely, to annihilate the past and what it represents: an annihilator project. The Central Avenue project utterly demolished a 300-year-old city center, and one century later the *Porto Maravilha* project demolished the Perimetral elevated expressway, which connected the city center to the northern part of the city. Therefore, this dimension comprises symbols that relate to the reconstruction of spaces. The symbolism presented in this dimension has been used in business administration literature and practice for decades, and is based on the idea that the old managerial style should be replaced with a more dynamic, professional, client-oriented, and less costly approach.

The fourth dimension is about the genius of people who distinctively sponsor or manage the project. For instance, such a heroic project is illustrated by the Olympic Games, since former President Lula was responsible for the idea of bringing the Games to Brazil in 2009. The project manager may

also be perceived as a hero, not only because of his or her idea, but also in view of how the project was outstandingly executed, despite all the conflicts and pressures expected in a megaproject. Adapting Werner and Cornelissen's (2014) findings on institutional change, the project manager consciously plans and executes verbal associations with other ideas and cultural values, which suggest how solutions in a particular institutional field can be reconsidered and rethought. In other words, the symbolism-intensive megaproject manager is able to establish connections with other successful projects and translate it into his or her own reality.

Fifth, and finally, a symbolism-intensive project may be described as an illusory project, because its results and oft-publicized legacy, will fall short of what was promised. As transformative and influential as they may be, projects alone do not improve social systems, change cultural values and habits, and enhance educational standards to the extent they are believed. In short, symbolism-intensive projects create an illusion according to which it is possible to simply import new conduct codes and behaviors, just because they are common in other environments, such as more developed countries or cities. The gentrification process clearly occurred in these projects. No other project or effort was carried out to deal with the vast number of poor residents who had to leave their homes; so, these megaprojects were not the poverty reducers imagined by so many stakeholders. Table 2 summarizes our findings.

Conclusions

This research attempted to assess how symbols are constructed, communicated and translated, and captured in megaprojects. To allow for new project management-related insights, we resorted to a combination of historical analyses of three symbolic megaprojects from Rio de Janeiro and an organizational theory approach based on the notion of symbolism-intensive organizations.

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Dimension	Central Avenue	Flamengo Embankment	Porto Maravilha
Redemptive	In the beginning of the 20th century, it intends to insert the city into the civilized world	Again, the city needs to be aligned with the more developed countries, where expressways and viaducts had solved traffic issues caused by population increase and the automobile industry	The port area and the city are supposed to rise as if from the ashes, as exemplified by the case of Barcelona. A huge, decrepit part of the city is to be freed from an anachronistic viaduct
Missionary	Not only were the residents obliged to move from the city center, they were also urged to change their health and hygiene habits immediately	The project is a big effort to keep the now former capital of Brazil as one of the First World major cities	Everybody needed to give their share of sacrifice in order to be ready for the Olympic Games, as illustrated by long traffic jams caused by Perimetral's demolition
Annihilator	An enormous part of the city center was almost entirely demolished in one year. The population was forced to find new homes, far from the city center	A big part of the downtown promenade, renovated 50 years before, became shadowed by the Perimetral viaduct. Also, the architectonic styles of the buildings were considered anachronistic, most of which have been demolished since the 1940s	The demolition of Perimetral reinforced the necessity of the project, since it created a nightmare in the city's urban traffic. A high cost viaduct built only 50 years earlier was entirely demolished.
Heroic	Pereira Passos, an elderly man near retirement, was assigned the positions of both city mayor and project manager	Lacerda, the first state governor and the project's sponsor and primarily Lotta Macedo Soares, the woman who acted as the real project manager	Former president Lula and mayor Eduardo Paes always presented themselves as the "fathers" of the project
Illusory	As a result of building a beautiful new boulevard, the population's habits were supposed to radically change, and the people removed from the city center would buy new houses in the city	The project created an enormous abandoned area near the port, traffic problems continued to grow, and years later the expressway was not sufficient to handle the traffic.	Extremely tight schedule, insufficient budget, and questionable debt solution for financing the project budget. A strong gentrification process in the former decrepit areas

Table 2: A symbolism-intensive megaproject analysis.

Organizations may use projects to placate external stakeholders (Westphal & Zajac, 1998) as do governments with symbolic projects. We understand that the use of the adjective 'symbolic' goes beyond the concepts of words without action: thus symbolic projects embody a constructive imagery, as well as deception and guile. Indeed, the adjective 'symbolic' is meant as the materialization of constructive imagery. Symbolic projects are representational and, therefore, require interpretation. In their essence, symbols stand for aspirations, ideals, or concepts; thus, they need to be translated and apprehended by the audience. The projects discussed herein, sponsored by the Brazilian federal and local governments, reflected the collective pictorial image of a country that was being gentrified, developed, and, therefore, entering the crème de la crème of First World nations.

Indeed, the aforementioned projects confirm Gioia et al.'s (1994) assumption

about people's cognition engagement; Werner and Cornelissen' (2014) conception of attention-getters; the expressed strategic change vision (Gioia & Chittipeldi, 1991), and the urgency of a needed change, as stated by Maitlis and Lawrence (2007).

Given their culturally ingrained features, the examination of symbolic projects must transcend an objective, measurable, and observable outcome. As previously stated, certain project features may not be reflected in the outcome's merely observable traits. In fact, these projects' symbolic, identity, and transformational roles—which a thorough analysis should take into consideration—may lead one to believe that they were indeed successful, even when parts of them were never accomplished or even initiated.

In this article, the authors first propose a simple model summarizing the main characteristic of a symbolism-intensive project. Then, based on this

model, we outline a set of issues for further research related to megaproject management: How far it could be applied to other project and environmental dimensions, such as different cultures, different project outcomes, specific industry sectors, nongovernmental megaprojects, and even applying the framework to megaprojects carried out in different countries.

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