

'Dance of Agency': Conceptualising Architecture as Posthuman Through an Assessment of La Sagrada Família

Abstract

Rather than diminishing design to a mechanical process governed by utility, efficiency and economy, this paper conceptualises the architecture of the Basilica of La Sagrada Família in Barcelona as posthuman. The Cathedral's social, cultural and psychological implications will be considered in this paper. La Sagrada Família is an "unfinished cathedral" in Catalonia built by the architect Antoni Gaudí in 1882. It receives over 3 million visitors a year. Considering La Sagrada Família under the posthumanist lens enables it to be intertwined with the environment and technology. Posthumanism involves delegating particular acts of human agency into technological devices. Using Kenneth Frampton's concept of architecture dealing with the tension between its 'representational' and its 'ontological' dimensions, this article highlights how posthumanism can enable new design methods to be integrated with the Cathedral's original ideas, casting a reassessment of existing theories of design. This article also considers other theories of design and architecture. These are Andrew Pickering's concept of the 'mangle,' Jonathan Hale's rematerialisation theory, Steve Tomasula's concept of human scale in architecture, and Francesca Ferrando's theory of philosophical posthumanism. The paper explores the process of bringing the original architectural idea of La Sagrada Família to expression in material reality. It analyses how the construction of increasingly sophisticated technological devices is a kind of collision and interaction between human goals, material resistance and future sustainability. Finally, the article demonstrates how the 'dance of agency'—an ongoing, open-ended and temporally structured operation involving a dialectic of resistance and accommodation—can be carried out using the posthumanist theory of future sustainability in order to transform La Sagrada Família into a shared, plural, hopeful architecture that is embodied and entangled.

"Stone by stone/ for seventy-five years/ the cathedral
rose/ not gothic and stern/ but human, natural./ The
towers/ where earth strives/ for heaven/ wind like
growing vines,/ an earthy home/ where animals/ and
creatures/ of all species/ have replaced/ the frowning
saints.

This man,/ this cathedral,/ unfinished,/ bridge the
centuries./ The Sacred Family/ a place of worship/
of holy nature./ It is the image/ central to his life/ the
one event,/ incomplete,/ that framed his existence/
since the day he swept/ the atelier/ of the stone
cutters/ at age seven."

(Sidy 2001)

Introduction

The construction of La Sagrada Família is a dynamic and continuous process, where Gaudí's design and vision are defined and shaped by his successors, the design plan is determined, and the geometrical relationships of the architecture get constantly reconfigured. Approaches like digital fabrication and prototyping are now employed as part of architectural construction methods, while simulation models are being used for pre-construction analysis. One hundred years on from the church's original design, these tools are helping to ensure that construction can be carried out in a manner as close as possible to Gaudí's original design.

If we accept Katherine Hayles' definition of the posthuman, then it is "an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction" (1999, 3). This definition offers an apt description of the architecture of La Sagrada Família, whose boundaries are constantly pushed and often permeated, and which is being constructed and reconstructed at the same time. This church in Barcelona has now transformed into a material as well as a literal body—and is an embodiment of instabilities that are generated by Gaudí's influence, imitation of his design and manipulations and reconstructions. La Sagrada Família can also be described as a posthuman information narrative where the patterns are the ones that capture our attention and inform our interpretation of the church as well as Gaudí's vision.



Figure 1. Sagrada Família. Photo taken by the author, 2022.

This paper aims to develop an updated understanding of how technology is integrated with Gaudí's constructed piece of architecture in Barcelona, known as La Sagrada Família, a UNESCO cultural heritage site (Figure 1). Mark Burry, the Executive Architect and Researcher at La Sagrada Família, and Jordi Faulí, the basilica's current architect, are exploring digital technologies to give form to Gaudí's idea. Using digital technologies to finish Gaudí's original plan for the church results in the development of new design processes. This essay is structured into four parts, beginning with why Sagrada Família can be analysed as posthuman. The second part of the essay focuses on theorising posthuman architecture. This is followed by an exploration of Andrew Pickering's concept of 'dance of agency' in the context of La Sagrada Família. The final section of the essay analyses how Gaudí's design for the cathedral has been integrated with digital fabrication techniques in order to complete construction. This paper uses a mixed method approach, employing simulation, logical argumentation and a qualitative assessment of La Sagrada Família to investigate the theory and practice of posthuman architecture, from design processes through to digital fabrication.

Contemporary designers and architects are constantly developing an awareness of both internal and external environments while designing new buildings. Careful consideration of the less tangible impacts of religion, society and culture on architecture is an important part of the design process. Henri Lefebvre refers to the 'production of space' (1991) that is carried out by equal participation of the internal environment with the external surroundings. This paper aims to make a contribution in this specific context and show how La Sagrada Família represents an integration of internal and external environment in its design approaches. Currently, computational design approaches are used to make prototypes of the cathedral and examine how these can be used for construction. The integration of theory and practice in this context initiates a digital dialogue. Architectural design often goes beyond the designer's control when there is a resistance to material reality or a 'dance of agency.' Andrew Pickering's concept of the 'dance of agency' is applied in the present analysis of La Sagrada Família, where the internal and the external factors together provide resistance to Gaudí and the designers' intentions. The new generative methods of design have originated from computer technology and cybernetics. Expanding this thread, this paper theorises posthuman architecture as a concept involving architecture, design and technology with the internal and external environment, including human and non-human agency.

This paper reads La Sagrada Família as posthuman, specifically in Francesca Ferrando's terms of philosophical posthumanism. Posthuman is understood as an agency that works in assemblage between humans, the non-human and technology. Material and immaterial forces are also considered

where a new existential situation is developed that is closely intertwined with the environment and society at large (Figure 2). La Sagrada Família is analysed as a posthuman architecture that demonstrates a prevalence of artificial intelligence and reconsiders the architecture, design, ontology and epistemology of the church. This approach is adopted in the present article in coming to an understanding of posthuman architecture's key design concepts, the lines of divergence it presents between traditional and computational approaches, and its challenges and possibilities. At the same time, this paper looks at the way La Sagrada Família reconsiders the history and culture of Catalonia, the development of technology, climate change, the interaction of humans with nature and culture, and environmental sustainability.



Figure 2. Sagrada Família. Photo taken by the author, 2022.

Looking Through a Posthumanist Lens

The application of cybernetics became more prominent during World War II. Norbert Wiener defines cybernetics as the science of control and communication. According to Katherine Hayles, cybernetics was always structured around a narrative of digitisation, which later gave rise to transhumanism and, more recently, posthumanism. Wiener's whole idea was to elevate machines and technology to the level of a sentient form of nature with vast stores of information. Wiener noted that cybernetics resulted in the conversion of humans into a "disembodied process of information." La Sagrada Família can be considered in these terms as a disembodied piece of information. Let's try to understand this in simple terms. Gaudí's original designs were first transformed by Mark Burry into computational design, for which complex codes were written. Once appropriate medium-specific features of

certain digital technologies were fixed, then the search for a new design process was mobilised. For this, a database was created, which was also connected to existing databases. From it, data were retrieved and interpreted in different ways. The information emerging from this was disembodied and newly formed again and again. Using computational methods, designers and architects gave attention to the complexity of the design and also considered the historical and the cultural context. Architecture is a spatial practice now combined with visual traditions, such as graphics and design, which are again interlinked with curatorial practices at tourist destinations. For instance, an interactive audio experience is now integrated with the tour of La Sagrada Família. While purchasing tickets, visitors are given the option of choosing an audio-guided tour of the cathedral. Arrangements can also be made to view specific architectural masterpieces within the cathedral using miniature modelling, which not only enhances the viewing experience but also provides visitors with more information about the intricacies of the architecture (Figure 3). Using a well-laid-out and tested design process simplifies design automation while speeding up the process of converting ideas and Gaudí's design into a material shape and form.

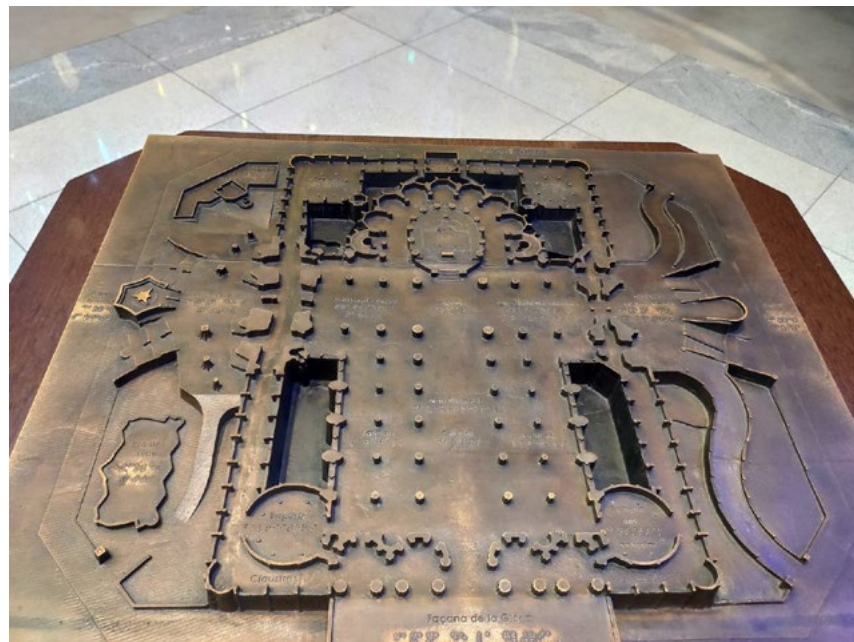


Figure 3. Miniature model. Photo taken by the author, 2022.

La Sagrada Família represents a layered construction and synthesis of an object using 3D technology. This is used to create models or prototypes of the architecture that will be constructed. This 3D technology has been previously used in various spheres—from the design process to implementation and in various parts of the construction process. Bakhromovna has explained how when any decorative architecture is created using this method:

“...attention to detail is reflected in the work with surface textures both externally and internally. Most important is the ability to combine constructive qualities, three-

dimensional architectural images, and decorative facades. Due to the robustness of the entire building system, the reliefs can be incorporated into the pattern of the walls and other elements during the construction phase of the computer model"

(Bakhromovna 2022, 16).

This will be all the more relevant for La Sagrada Família as it has many intricate details and designs that have to be exactly etched on the wall, the pillars and the church as a whole.

Theorising Posthuman Architecture

Posthuman architectural theory is a form of architecture that does not simply consider design as a mechanical process but also considers the social, cultural and psychological factors related to technology. Instead of looking at technology as something to be feared, posthumanism has always integrated technology with the advancement of humans and non-humans. In that context, posthuman architecture looks beyond the utility and economic implications of design and considers how sustainable and useful it is. Posthuman architecture can be considered as a "third space" (1977, 12-14), in Heidegger's words, which not only needs to be designed well but should also thrive within the society and culture within which it is built. Posthuman architecture derives its origin from concepts like 'techne' and from the theories of Heidegger, Donna Haraway, Katherine Hayles and Francesca Ferrando, who state that technology is not the ever-ruling, higher authority, but something to be employed in a sustainable way, so that it becomes integrated with society and the environment in ways that might improve both human and non-human lives.

There have long been discourses on humans 'becoming machine.' Posthuman architecture draws from Deleuze and Guattari's concept of machines 'becoming human' (1988, 10). It embodies human and non-human tendencies, using technical devices in order to construct a sophisticated piece of architecture. It involves technical, social and linguistic intelligence in the production of a design that exhibits society, religion and culture from a technical dimension. Posthuman architecture essentially refers to the interweaved capacity of technology and consciousness to design and construct a piece of architecture that is expressed in material reality as well as an abstraction of signifier and signified, at the same time being closely related to religion, society and culture. Posthuman architecture attempts to organise current design theories and methodologies with pre-existing hand-made drawings and designs made by architects in a more sustainable way (Figure 4). In the process, the intent of the original architect is kept consistent, while the conceptual content varies somewhat. The design process applied also varies from one architect to another. In the case of La Sagrada Família, when a new architect takes over the project, their design process will vary from that of

their predecessor. As a result, while not generating a new project, they are generating different design processes using different digital tools. Posthuman architecture also necessarily involves the architect's cognitive and perceptive skills during the design process.



Figure 4. Sagrada Família. Photo taken by the author, 2022.

Roy Ascott, in *The Transhumanist Reader*, states: "Art in the twenty-first century may come to constitute a form of mediation between human and posthuman consciousness, just as in past cultures it has been used to mediate between mankind and the gods" (2013, 444). Posthuman architecture considers climate change and represents unity and plurality. By integrating technology with art and design, new construction approaches of La Sagrada Família are a perfect resemblance between the posthuman, humans, artificial intelligence and design process in altering elements of time, both real-time and hyper-reality. Katherine Hayles notes: "There are thus within the computer multiple temporalities operating at many different time scales" (2012, 104). This is prominent in the case of La Sagrada Família, an architecture whose construction itself spans over a hundred years. Not only the time horizons but space, realities and materialities are also constantly at play in the design of La Sagrada Família. Steve Tomasula argues that in posthumanism, a human scale should be employed while studying art, literature and any other forms of aesthetics. He writes:

"To study the stars, goes the unconsidered logic, one must use a telescope; to study a flea, a microscope— instruments that allow us to see our subjects

comfortably at the Human Scale. But it must also be true that the selection of scale determines subject—as well as what can be said....” (Tomasula 2014).



Figure 5. Inside Sagrada Família. Photo taken by the author, 2022.

Thus, when digital technology and computational tools are used in the construction of La Sagrada Família, naturally, human scale comes into play as the designers and architects give shape and form to Gaudí’s design using available technology. The human scale is responsible for how the objects take shape and the designs are done in the church. In the virtual world, designers and architects create construction models and test different methodologies to see which will work out the best. Even if those actions have consequences, they are not permanent. They can be reshaped and remodeled by simply altering the design process. The technology integrated with Gaudí’s original design gives a kind of subjectivity to La Sagrada Família. The virtual transcendence of the architecture into a real object gives it some significance. The consequentiality is also an important feature of La Sagrada Família. This architecture not only serves as a repository of information and knowledge that influences people, culture and society but also is an economic resource for the country (Figure 5). Natural aspects that might pose a threat to the longevity and integrity of the architecture are also considered by designers and architects while designing. After considering these factors, the technology will automatically suggest methods and materials that could contribute to making the architecture resilient, adaptive and capable of evolving according to the population and its surroundings. New sustainable technologies help the architects imagine how they might construct a La Sagrada Família that can exist at the heart of human development and still be protected

from the effects of industrialisation and climate change. The newly developed computational design of La Sagrada Família is representative of its embeddedness in its embodied, cultural, social, religious and physical surroundings. Another innovative method being used in the construction process of La Sagrada Família is computational resource allocation. This is mainly used because:

“the objective of computing resource allocation is to minimize the cost of task processing so that resources can be fully and reasonably utilized. It consists of two processes: task assignment, namely, the assignment of tasks that can be executed in parallel to specified resources, and resource allocation” (Ji 2020, 61025) .

This computational method is effective in improving overall speed and architectural performance, reducing the time taken in designing and construction and, most importantly, in resource consumption.

La Sagrada Família and a ‘Dance of Agency’

The process of bringing posthuman architecture to an expression in material reality can be considered using the concept of ‘mangle.’ Andrew Pickering explains the process of making, applying and experimenting with a hypothesis through the use of technology as an essential communication between human goals and material resistance. Pickering refers to this process, a structured operation from which scientific knowledge emerges, as a ‘dance of agency.’ In the context of posthuman architecture, the ‘dance of agency’ can be considered as an ongoing, open-ended and temporally structured operation involving a dialectic of resistance and accommodation that is carried out using the posthumanist theory of future sustainability. This ‘dance of agency’ can be observed in the act of the ongoing construction of La Sagrada Família, where the character of the raw materials and Gaudí’s original design truly emerge from its constant resistance to being shaped and transformed into a finished piece of architecture. The architectural design process itself has been going through this process as, for decades, architects and design theorists have tried to work out the intricacies of the material form of Gaudí’s original drawings and models (Figure 6). With each new engineer and designer who takes over construction, the ‘dance of agency’ begins anew, as the formal and spatial opportunities appear unexpectedly through the process of simulation, graphic design and testing. With each unexpected scenario, the designers and the architects are required to reach a sense of individual realisation, whereby they are able to find a way of accommodating their own ideas, Gaudí’s ideas and those of former designers—all within the limitations of material reality. Although the intentionality remains the same—to construct what Gaudí originally envisioned—the materialities in each case

become significantly and fundamentally different from the previous ones. The material agency then becomes a functioning phenomenon through which raw materials have already been transformed into certain finished products. Similarly, the material agency of La Sagrada Família takes on the form of an embedded human intention based on Gaudí's agency. The materials now have become a cultural and a religious phenomenon over the years, and the ongoing construction is already entangled with a set of preconceptions.



Figure 6. Sagrada Família. Photo taken by the author, 2022.

Kenneth Frampton discusses the representational/ontological division that is evident in a lot of architecture. He refers to it as "an irreducible aspect of architecture" (1995, 89), distinguishing between the representational face of a building and the phenomenological depth of its space. In his earlier work, Frampton notes the possibility for some confusion with these concepts, offering the clarification that: "...one may assert that building is ontological rather than representational in character and that built form is a presence rather than something standing for an absence" (Frampton 1990, 23). These two aspects were difficult to reconcile in earlier architecture, but now it is quite convenient to use computational tools in designing architecture. Now, the ontological dimension involves a constructional element demonstrating its static role and cultural status. The representational mode portrays a constructional element that is there but hidden. La Sagrada Família's design can be read in both representational and ontological terms because the design, which was completed a hundred years ago, is now being given material reality using modern technologies.

Digital Fabrication in Architecture

Jonathan Hale states that "...it is also worth recalling that architectural practice as a discipline is predicated on the notion that architects create drawings rather than buildings as such and have therefore always operated via a form of graphic coding" (2012, 523). With time, this graphic coding has transformed from manual to computational, making the design more accurate and effective. Computational modeling and three-dimensional architectural design are two recent technological developments that have been usefully employed by architects. In the case of La Sagrada Família, contemporary architects who took over the construction used technology first for a conventional site analysis. The earliest use of technology in La Sagrada Família was for mapping the already constructed site and Gaudí's original design. Recent uses have included mapping other external factors, such as the landscape, tourist footfall, surrounding noise, movement and weather (Figure 7). These considerations are referred to as forces or vectors, which together play out against the intended architecture. The forces act in free space and interact with internal, external and existing factors and with each other. The greatest challenge in posthuman architecture is integrating these factors with technology into a carefully orchestrated process so that the result still emerges as an 'organic' architecture. As with other forms, posthumanism prioritises the organicity of the entity. Therefore, the mapping has to be done in a way that emphasises the individual characteristics of each of the factors along with the site specificity. In the overall 'dance of agency,' the architect's agency has to be taken into consideration alongside the agency of the designer, the tools, the technical devices, the software, and the agency of the design itself. Whenever an architect moves to tighten their grip on the design process, they face continuous material resistance. Both interpersonal and objective sets of pseudo-scientific operations contribute to the reinstatement of the architecture's agency. In the works of contemporary architects and designers, the design process of La Sagrada Família became mathematised, and even three-dimensional spatial organisation is used in the design process. The current use of generative algorithms often leads to some unselfconscious design. This proves the above-mentioned theorisation. Not only does the design process have its own 'dance of agency,' but also La Sagrada Família itself becomes a disembodied piece of information, freeing the design to flow away from the grip of the architect and attain some sort of sentience. Alongside this 'dance of agency,' there are also material constraints that emerge as a result of continuous coding and decoding, where it becomes increasingly difficult to manipulate the data in the process of digitisation of the design. As a result, different designers and architects have to execute and test their individual designs while dealing with the complexities of the design process of Gaudí. When a sophisticated programme is executed, the architectural construction begins anew, retaining the graphical and textual specifications while attempting to convert the newly



Figure 7. Stained glass window of Sagrada Família. Photo taken by the author, 2022.

designed digital model back into material reality. In the process, although Gaudí's designs and drawings are kept intact so that designers and architects might do justice to the original plan, the question remains of whether Gaudí's vision of the finished La Sagrada Família will ever be successfully conveyed to the current and future generations of designers and architects working on the architecture. La Sagrada Família, then, can be considered a curious and mystical architecture, existing on the boundary between the imagined, the possible and the actual. Whether the construction carried out after the death of Gaudí is the actual representation of his original drawings or not will always remain unsolved. This can be considered as an instance of a necessary alienation between visioning and building, which makes posthuman architecture, on the whole, both liberating and troubling. Thus, integrating technology with knowledge results, in Marco Frascari's words, in both "knowledge of construction" and "construction of knowledge." Thus, both constructing and construing are done while trying to imitate the design of Gaudí but also incorporating processes like the 'dance of agency' and material resistance.

In the case of La Sagrada Família, Gaudí's continued contribution is present, because whatever digital technologies are now employed, they are used to give shape to Gaudí's idea of the church. The process of digital fabrication can be used in order to make some links between the two processes of thinking and making. The ideas, thoughts and visualisation should be integrated with computer programmes, codes and other technological possibilities in order to achieve continuity of Gaudí's ideas in the material world. However, it should be acknowledged that some form of alienation in the architecture of La Sagrada Família is an

inevitable component of the material development of the original drawings and design ideas. La Sagrada Família is considered an archetype in the digital fabrication field. It is also used as a popular case study for digital designers. The miniature physical model of the church built by Gaudí is still present at the church's entrance (Figure 8). Gaudí used the physical model so that he could convey his vision to the other architects and workers working with him. Gaudí's design at that point in time could not be accurately represented with the available architectural design technologies. Modern technologies, on the other hand, enable contemporary architects and designers to give shape and form to what Gaudí envisioned decades ago. The digital geometrical models that are now used for pre-construction analysis allow architects to more clearly and accurately represent their design plans. In the absence of digital fabrication, Gaudí himself used parametric equations to create an upside-down model of the Colònia Güell chapel using ropes that were loaded with weights. In this way, "through changing the parameters in the parametric model, Gaudí could generate other versions of the Colònia Güell chapel and be sure that the resultant structure would be under pure compressive stress" (Makert and Alves 2016, 89–90). This method of analog computing is now replaced by digital computing, and technology is now used as a tool for the design process, which enables a conscious exploration of computable functions of different design techniques. For 43 years, Gaudí invented and used high levels of geometric rationality in the construction of the church. After his death in 1926, the geometrical models of Gaudí were adopted by the architects who took over the construction. In the present day, digital tools work so seamlessly with the original design because of the accuracy and applicability of Gaudí's geometrical calculations, which makes it much easier to integrate with technology. The architectural design process is divided into three main levels—representational, parametric and algorithmic. In the first step, the generative process is used for formulating the digital design. In the context of La Sagrada Família, this digital design has to bear a close resemblance to Gaudí's model. During this process, the designers and architects can apply an analytical and structural framework to identify patterns, plans and ways of navigating the design process (Figure 9). Different designers, such as Burry, Grifoll and Serrano, have attempted to design different elements of La Sagrada Família, such as its columns, windows and domes, using digital design and fabrication.

Digital manipulation is done very carefully in the architectural design of La Sagrada Família. The original hand-made design was itself so complicated that the designers had to be very careful and considerate of all the little intricacies while converting it into a digital design and a digital model. Because of the complexity of the project, complex codes had to be written, the data stream had to be designed accordingly, and then it had to be divided and organised. With digital manipulation, the designers and architects of La Sagrada Família have been manipulating time itself. Gaudí



Figure 8. Miniature model of Sagrada Família. Photo taken by the author, 2022. Author, 2022.

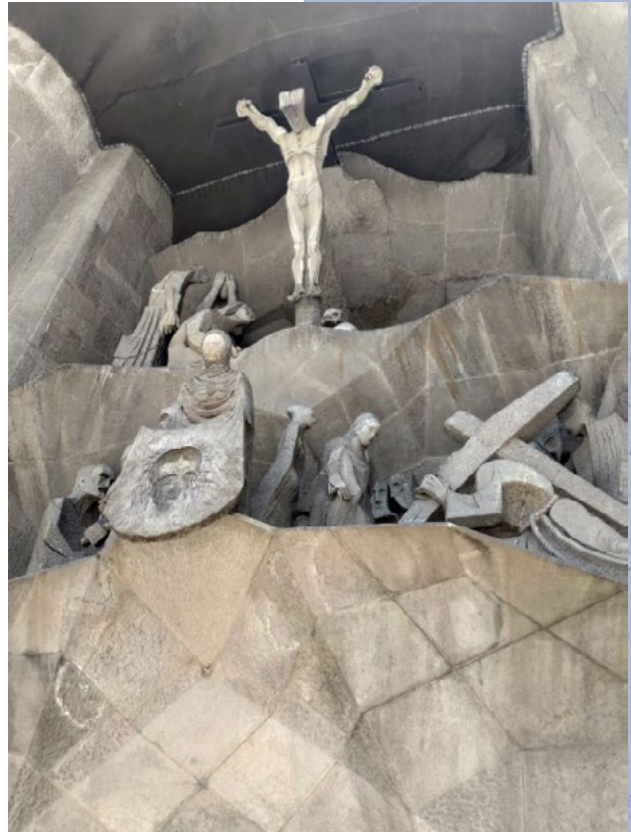


Figure 9. Sagrada Família detail. Photo taken by the author, 2022.

faced difficulties in maintaining a relationship between conception and production, as architecture was not much advanced and could not incorporate all of his visions. But with digital tools, this problem is being taken care of. As the designers and architects are able to make pre-construction analyses, the conception and the production are very much alike. The effectiveness of the architectural design of La Sagrada Família is maintained by incorporating fabrication technologies that reduce the levels of abstraction and interpretation. This makes it easier for architects to avoid mistakes in executing the church's beautiful and intricate architectural design. Using pre-construction analysis, simulations, assessment and application of design, the construction process is more efficient, reducing errors and saving time while adhering to the original design.

Conclusion

This article refers to the architecture of La Sagrada Família as posthuman mainly because it is a collaborative project at multiple levels. It has involved contributions from hundreds of designers and architects, who continue to collaborate on Gaudi's design one hundred years after his death. Moreover, the use of recently-developed technological tools, in the shape of various digital tools, computational models, 3D models and simulation technologies, makes it a collaborative project between humans and technology. It is also transitioned into the post-digital era because it provides the possibility of the rise "in circumstances where the continued contribution of the craftsman is judged as a crucial partner for the digital dialogue" (Burry 2005, 33). Once the project

of La Sagrada Família was implemented digitally, designers and architects could collaborate to conceptualise, implement and disseminate their knowledge (Burry 2004, 27). As well as programming, graphic design, engineering techniques, sonic art and design skills, collaboration became a necessary skill for those involved in the construction of La Sagrada Família. As a result of this collaboration, more intellectual synergies were created between engineers, computer scientists, designers and architects (Figure 10). La Sagrada Família is a collaborative manufactured product that is a culmination of different theories and practices, research, design processes, skilled crafts, geometrical patterns and digital dialogue, while still complying with the design and working method of Gaudí. It stands as an example of posthuman architecture because it not only has an ideological character to it but, along with using the latest technological developments, also represents the values and local identity of the culture and the society while maintaining its mathematical design complexities. As a major example of successful integration of architecture with technology, La Sagrada Família emerges as a posthuman subjectivity. It incorporates postindustrial knowledge work, innovations, technological advancements, computational tools, and fragments of physical and digital designs. La Sagrada Família enables new design methods to be integrated with Gaudí's original ideas. By thus appropriating and collaborating, it absorbs more design processes and methods, fostering a creative act of imagination on the part of Gaudí's successors. La Sagrada Família becomes a manifestation of an imagined world, a space that has been enacted from a vision and is now a lived reality. With the design process more efficient and flexible, the transformability of La Sagrada Família contributes to its emergence as posthuman.



Figure 10. Sagrada Família detail. Photo taken by the author, 2022.

With the process of constant uploading and downloading of standardised data, information, existing designs, codes and calculations, the function of La Sagrada Família as architecture has been enhanced and digitised. With the integration of computation in the construction process, human interpretation and calculation have taken a backseat to algorithmic processes adopted by the designers and architects after Gaudí. Unlike transhumanism, here in the case of La Sagrada Família, human involvement will never be completely replaced by machines and technology. It will always be a collaborative work, which, although it may face challenges and revisions, will continue to adapt to new technological possibilities and affordances, keeping in mind a sustainable construction of the architecture, giving light to Gaudí's original ideas. This paper thus demonstrates how La Sagrada Família can be considered as an ontological world-making piece of architecture rather than merely a representational form. This architecture is not only symbolic but also embodied and embedded in the nature, religion, culture, society and technology that surrounds it.

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