博士論文

Architecture as Prosthesis: An urban evolution through the extension of architectural identity

（義肢としての建築：建築のアイデンティティーの拡張による都市の変化に関する研究）

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INTRODUCTION

We would like introduce this research with a theoretical proposition: Architecture as prosthesis. Along with it, a preliminary question opens. What do architecture has to do with prosthetics?

From an orthodox perspective it has little to do, especially if we would regard both as isolated terms contained strictly in their own universe. Adopting such position would facilitate us to first understand certain substantial components of both, but would omit simultaneously the cultural and historical constraints in which they are embedded. Swiss historian and critic Sigfried Giedion, addressed architecture from a more holistic perspective in his seminal book Space, Time and Architecture (1), as a practice that springs and is product of all sort of factors anchored in a historical moment. He labeled architecture as an “index” of a historical period and recognized it rather as an organism itself, with “its own character and its own continuing life”. Moreover, he acknowledged the capability of architecture to extend its influence beyond its period of creation.

Gideon's argument of “architecture as an organism” more than a half century ago, still allows us today to revise the discipline from an anchored viewpoint, one that is also related to other concepts such as the idea of natural and artificial and the subtle line dividing them. By establishing this syntactical relation, he opens new possibilities to elaborate and approach fundamental questions within the architectural discourse and expand in other directions. Manuel de Landa for instance, sheds light in the flows of matter and energy that are needed to sustain an organism in a given environment, accumulating and releasing these flows in a chain of production and consumption. (2) In the same fashion, buildings and people in our contemporary cities pass from playing the role of consumers to producers endlessly. On top of that, the urban phenomena becomes more complex by recognizing the fact that we experience natural and man-made environments as a continuous realm, in a sort of theatrical stage where living bodies perform their everyday-dance as urban actors.

Some years later after introducing his first arguments about the organic in architecture, Gideon also aimed to understand the effects and evolution of mechanization in Western civilization. (3) In the process of tracking meticulously the history of mechanization, he entered simultaneously into other methodological operations, such as breaking down the machine into its basic components and understanding the relations of the parts and the whole during its process of production. The overall idea of Gideon's research in Mechanization Takes Command aimed to suggest a better balance between human life

and technology, portraying him as a forerunner of functionalism in the early 50's. However, what he was suggesting was in fact that "*the special task of architecture was to leap from a rational-functional mode to an irrational-organic one*." (4)

In synchrony with Gideon's arguments on reading buildings either as living organisms or as the product of a mechanized culture, this research also aims to evaluate their performance as part of a milieu, "*a place that has all the preconditions to generate a flow of ideas and inventions.*" (5) Having said so, we would like to establish an analogy between these buildings and the human body. Hence such milieu is determinant to generate particular conditions and opportunities for these bodies to extend physically and metaphorically speaking.

Through the process of scanning the body to detect specific urban symptomatologies and its different relations with prosthetics, a first question emerges: What triggers the extensions of these bodies and through what kind of prosthetics?

Essentially, the prosthesis can be seen as a replacement device used when the original body has lost a component. Its function and position in the whole body are important to determine what kind of prosthetics should be used. For instance, in the case of an extremity as an arm, it is a component with multiple functions that facilitates the interaction with an immediate environment that contains simultaneously other bodies around us. The arm itself has other sub-components that perform together to achieve specific functions. The hand for instance, along with other components such as mouth and ears can also allow us to convey functions for communication. Hence the implementation of one or various prostheses in a body should primarily prioritize specific functions to recover.

For this research, we would like to consider a second possibility for the implementation of prosthesis in the body, transcending the mere replacement of a lost component and focusing rather on the enhancement of the existing capabilities in a body. From something mechanical as a bicycle to something technologically more advanced as a smart phone, these tools perform along with and extend our bodies. A bicycle for instance allows us to reach speeds that our bodies would never be able to achieve. This is only possible through the interface between organic (the body) and mechanic (the bicycle) entities. Its time implementation in the body is much shorter (and thus softer) than a component that has been specifically designed to replace a lost component. In the case of technological devices, they also extend our bodies to the virtual realm, allowing us to communicate with other bodies in other physical locations.

It is also important to acknowledge the cultural and material evolution that prosthetics have experienced along history, passing from analogical aggregations in the beginning to more technological devices in recent times. While both tendencies will be considered, this research will put more attention to the contemporary condition of the prosthetic body, one that we pursue to read as an entity that is subject of continuous processes of hybridization and reconfiguration. This tendency is gradually blurring the boundaries between the natural and the artificial, questioning the ambiguous condition of the prosthetic body today.

RESEARCH OBJECTIVE

From human to urban prosthetics, what this research attempts to achieve is not only a translation of terms from one discipline to another, but to propose an alternative theoretical framework that can reconcile ideas from the organic and the mechanic theories in urbanism, an approach that we would like to coin as “Prostho-urbanism”.

Some authors have suggested that metaphors are context-sensible (6), hence the cultural and material background where to apply them is determinant for the construction of any argument. Given the volatile urban conditions and scale of its components, for this research we will focus in specific areas within Tokyo as the main field of study. We attempt to construct a theoretical discourse for the evaluation of specific elements that aggregate to buildings. More specifically, we will make observations in some commercial areas where sign-boards dominate the visual landscape. This is with the intention of finding differences in recurrent elements that add to buildings in order to understand how they organize. Moreover, we will attempt to show that the most significant contemporary condition of these elements in buildings, seen as prostheses in the body, is the identity that they confer to them.

HYPOTHESIS AND RESEARCH QUESTIONS

Urbanity has been described as a 'continuous polysemy' (7), bounded in a complex and perpetual evolutionary process. Beyond any attempt to decode some of those semantics, the use of a metaphor can bring an added meaning to a current urban phenomenon. Aristotle argued that a metaphor 'consists in giving the thing a name that belongs to something else' (8), implying a transgression of the categorical order of things. Along this document we will read some of the extensive mechanisms in buildings and forces involved in urban growth as 'prosthetic impulses' resulting from a semi-regulated growth in some specific high-consumption areas within central Tokyo that amplify such phenomenon.

This research embraces positively the contemporary phenomena of cities and buildings as exposed subjects of continuous processes of regeneration and re-composition. Such phenomena start by appropriating and customizing the existing structures to the ever-changing demands and necessities of tenants and consumers. Some of these recomposing elements emerge impromptu from the smallest scale as additive and self-organizing elements. These elements also act as extensions to the existing buildings that eventually aggregate into larger clusters. The figure of the prosthesis as an exogenous adding to the human body conveys primarily a regenerative process, which demands necessarily adaptation to a specific environment. These aggregations, both in the human body and in the urban fabric, hybridize some of their organizational and performative aspects, conveying a new 'monstrous' and 'eccentric' nature different from the original structure.

Taking into consideration two previous theoretical approaches using metaphors, we have on the one hand the city as an organism and on the other the city as a machine. Our first question opens: **Is it possible to construct a theoretical framework that can conciliate both postures?**

If arguing about such a posture as we are intending in this document, **what would be its relevance in the contemporary urban discourse?**

Moreover, if we accept the theoretical proposition, its implementation in a context as high-consumption oriented areas in central Tokyo shall focus on very specific elements, whose evaluation can only be informed from the metaphorical thinking that we are establishing. As we will argue in more detail through this document, signboards evaluated as prosthetics elements in buildings are primarily a source of revenue for building owners and a communicative device from the tenants to the consumers. Hence a third question arises. **What would be the main asset of these elements beyond the financial purposes that triggered them?**

METHODOLOGY

This research is constructed initially as a theory-led research, first revising two complementary theories in urban design which are themselves metaphorically structured. Subsequently an alternative theoretical proposition, also metaphorically structured, is introduced in such intellectual context. Being a theory-led research its nature is primarily qualitative and interdisciplinary, combining the body of knowledge coming from architecture and urban design as much as that coming from orthopedics, as any argue related to prosthetics would demand.

Hence the method of thinking starts from deductive to abductive, bearing in mind the potential value of what is intended to be abducted. Abductive reasoning starts from an incomplete set of premises that inform the initial theory through its practical implementation in a more specific context. Gradually the theory is refined by confronting these theoretical premises with fieldwork observations to convey a more inclusive conclusion that is the result of both.

This practical implementation covers quantitative aspects of this research, making detailed observations in buildings of four high-consumption areas within Yamanote loop: Shibuya, Shinjuku, Ginza and Ueno. As the research establishes a metaphorical analogy of buildings evaluated as bodies, this part of the research demands the production of maps and diagrams in plan and elevation to understand the morphology of each specimen. For these purposes diverse open source online database where used, such as Google Earth, Google Maps and Openstreet Maps, along with photos and several visits to each site. From the elevations the following method was the identification of each of the diverse elements that aggregate to each building in order to proceed to its reduction and categorization. Finally it is in plan that the collected data is summarized and represented through colors to render its intensity, which for the purposes of this research we will refer as "index of prosthetability".

RELEVANCE

There are two significant aspects to highlight from this research; one more general coming from the theoretical proposition we intend to introduce and other particular derived from the fieldwork evaluations conducted in the chosen high-consumption areas in Tokyo.

Regarding the first, we can claim its originality since there has not been any previous approach to bring together the realm of prosthetics with the discipline of urban design. If well there are precedents of a prosthetic theory in the work of Mark Wigley as we will discuss in further detail, there is no proper precedent of a framework that aims to conciliate the organic and mechanic theories in urban design. Its importance resides in the creation itself of such theoretical proposition in order to nurture the body of knowledge of the discipline. Moreover it establishes a novel framework on how to evaluate 'informlism' as a relevant urban phenomenon, aimed to be included in the agenda for architects and urban designers by providing its own principles and terminology.

The second has to do with the identification and categorization of these informal elements that aggregate in commercial buildings in Tokyo. As we will argue in the principles of this

theoretical proposition, there is a gap in the coding system of Tokyo that allows this informalism to occur, but policies related to Land Readjustment (LR) are contributing if not to its complete eradication, at least to diminish its intensity in the commercial urbanscape of Tokyo. This research well could be regarded as a radiography which shows the symptomatologies of a mutant and monstrous entity in a precise historical moment, a city that is in a perpetual state of becoming. Beyond the documentation of such specific conditions, it can also aid to elucidate the futures of this trend, and if it is relevant or not to continue allowing them to occur. It is in the urban experience and the eye of the citizen that these elements could be regarded as perpetrators of the chaotic image of the city, or as this research pursues to stress, as the most valuable asset of these area's identity.

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CHAPTER 1

FROM HUMAN TO URBAN PROSTHETICS

1.1 Prosthesis as a metaphor

A metaphor is in principle a figure of speech to compare two things. We use them every day to convey communicative transactions, initially translating the properties of one of them to shed light into the other. In architecture, as a broad discipline whose body of knowledge is constantly re-evaluated and expanded, it has extensively served as a rhetorical figure to bring alternative readings of specific conditions or elements in our built environment. Peter Eisenman well acknowledged the absurd need of them in an interview (1):

"*If you do not like metaphor, you do not throw it away, you dig into it to find out what it represses.*"

Another relevant aspect of them is its playful nature to connect allegedly divergent terms transgressing meanings and creating new relationships. From Metabolism to Functionalism, the use of metaphors in architecture theory have served extensively to create alternative frames to understand the urban phenomena, sometimes evidencing new aspects which were unseen from previous approaches, but sometimes also creating superficial correspondences that end up misleading its use and purpose throughout the rhetorics of the discipline. As Hans Blumenberg refers, "metaphorology" is not a discipline by itself but "part of a larger disciplinary frame" (2), being more a tool to be used into an interdisciplinary discourse.

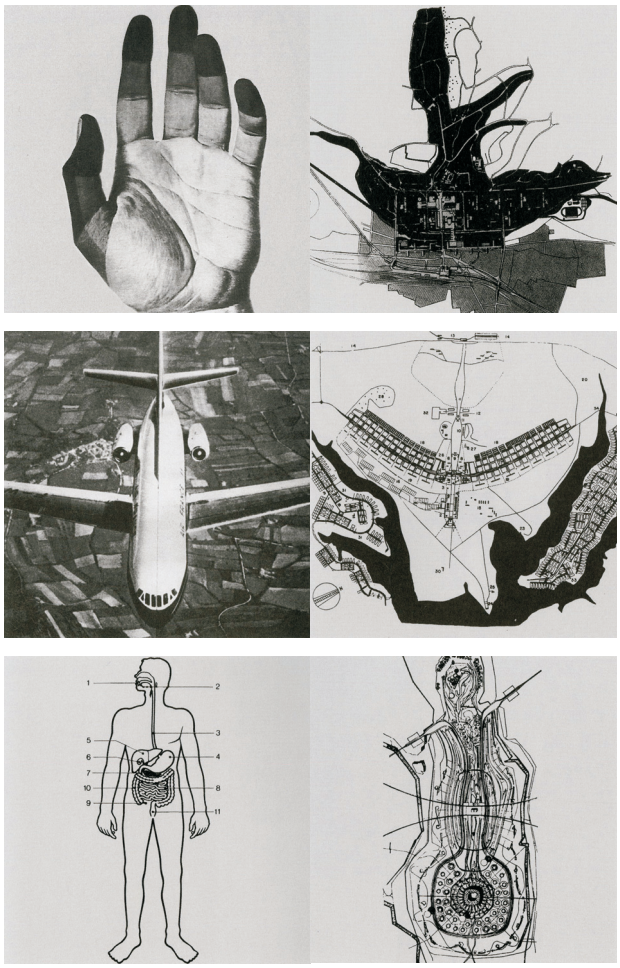


Image analogies from top to down:
UNFOLDING. Plan for the reconstruction of Saint-Die, France, Le Corbusier, 1945.
STRETCHING. Brasilia, Oscar Niemeyer, 1960.
ORGANISM. Project for a mesa-city, P. Solerie, 1959.

(Source: O. M. Ungers Morphologie City Metaphors, 1982)

What this research attempt firstly through this comparative approach is a deliberate methodological instrumentation of metaphorical thinking. We aim to establish not only a linguistic metaphor but conceptual one, which is when one conceptual domain is understood in terms of another conceptual domain. By conceptual domain we understand "*our conceptual representation or knowledge, of any coherent segment of experience*."(3) More specifically, our approach within conceptual metaphorology is structural, which "*enable us to understand a target domain in terms of the structure of a source domain, based on a set of conceptual correspondences between elements of the two domains*." (4)

It is within the context of metaphors that we would like to reconsider the concept of prosthesis not only as a mediator between the organic and mechanic, but as a relevant term to highlight other aspects happening in the urban phenomena beyond what other scholars have evaluated. By accepting the possibility of reading buildings as bodies, affinities and dissonances are stressed in order to create an alternative terminology that allows us to identify and assign specific functions to the components of our "metaphorical bodies". From framing the original body as the object of prosthetic operations, to the additive elements that "prostheticizes" it. This research would also like to acknowledge the many possibilities a human body can be framed; whether from its morphological and material features, its interior and exterior qualities, or its "syndromes" and "symptomatologies" when performing in a given environment.

1.2 Confronting the city with the human body

The structure and operation of the human body has served as a paradigm to compare some of the organizational forces and self-performance happening in urban settlements. The city regarded as an organism has much stimulated the visual approach and representation in the work of many architects after post-war period worldwide. For urban designers it has proven divided opinions or even flaws (5), praising cities on the one hand as the highest product of civilization but different from nature; on the other hand, as Graeme Davison argues, "*They also manifested an astonishing order within their vast complexity, and demonstrated a capacity of growth and self-regulation that resembled the working of nature itself, reflecting man's own ambiguous relationship to the natural order*." (6) Similar positions on urban growth and development such as those from Harvey, Havlick and Castells were also rooted, if not explicitly, on the organic theory. (7)

When establishing an analogy between the city and the human body we could speak about certain coincidences on how the components

within evolve in time and space, but the fundamental difference would lie still in another paradigmatic equation, embedded in the artificial-ness and natural-ness happening in their inner processes. While nature tends to behave 'organically', artificial thinking aided through technology has become an emulative instrument to decode these nature-behavioural processes. In 'Collage City' Collin Rowe quotes Waldo Ralph Emerson's idea that "*cities force growth and make men talkative and entertaining but they make them artificial*." (8) Indeed most of our current living activities in cities rely completely on this idea, and again a prosthetic impulse extends or projects (if not physically, virtually) our human body and mind towards more adaptive relations with other components in the system, including social, natural and artificial realms. Kevin Kelly points out a significant difference between how organisms and cities grow, laying in the universal laws of growth they respond to, which can become self-limiting, arguing that in difference cities not only grow but evolve more as ecosystems and evolution is not self-limiting but limit-less. (9)

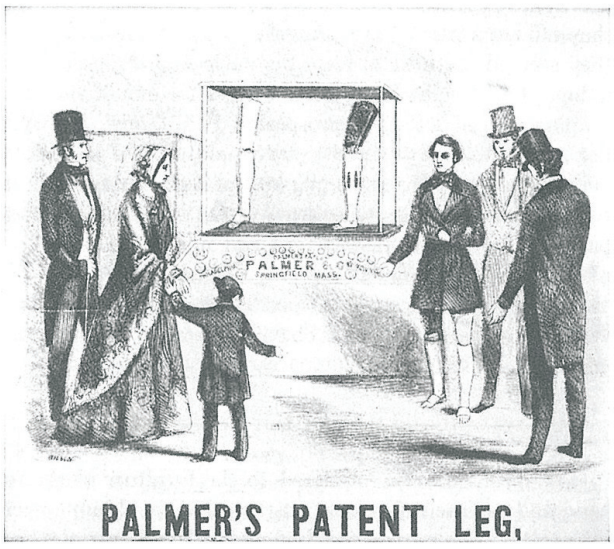
1.3 The origins of architecture and prosthetics

There might not be an accurate historical moment by convention where to trace the origins of prosthetics in architecture; however we would like to suggest that one of the keystones happened in 1923. This is the time when Le Corbusier dared to elevate the machine to the height of the temple in his book Vers une Architecture (10), presenting an image of the Parthenon next to one of a car. For Le Corbusier the standardization of the parts, in both the classic temple and the technological machine, was only a step to achieve a functional perfection through experimentation. In such irreverent juxtaposition is embedded the spirit of what we are attempting to pose in this research, not only to transgress the limits of established ideas in the urban discourse but to set a frame that allow us to evaluate the contemporary city from an alternative perspective.

We have already introduced briefly some ideas of Sigfried Giedion at the beginning of this research. We would also refer to them as subsequent origins of the prosthetic discourse given Giedion's dual interest in the organic and mechanic. Regarding the first, his proposal to grasp architecture as an organism emerges from identifying a problem with human habitat as one that "*exists in tension between continuity and change.*" (11) It is important to bear in mind that his ideas were introduced in 1941 with the publication of his book Space, Time and Architecture, embedded in a historical context when the Modernist discourse and CIAM were at their apogee. His idea of organic was revised in later editions, advocating for an integration of dynamism in

new urban planning. He presented the concepts of “megastructure” and “group form” as embodiment of such dynamic approach, both corresponding to the work of the once “new generation” of Japanese architects Kenzo Tange and Fumihiko Maki respectively.

The second interest of this research in Giedion is his approach to the concept of mechanic, vastly researched in his book Mechanization Takes Command. In it, he tackles directly the theme of artificial limbs in 1850's, pointing out its high adaptable mechanism to the body in connection with the evolution of what he calls “furniture of the engineer” (movable furniture design): “Not by accident did the problem of mechanically operated artificial limbs draw so strong an interest at this time.” (12)



General interest of mechanical mobility and artificial limbs around 1850’s.

(Source: Sigfried Giedion, Mechanization Takes Command, 1948. p.391)

Above the connection of prosthetics and urbanism, there was already a strong engagement in the paradox between man and machine by the end of the 19th Century. For instance, a lot of science-fiction novels of Verne and Zola for mentioning few, were devoted to the outcome of technological advances in the future of human civilization. Verne himself had already premonitions of what prosthetics would partly become in the future when presenting a mobile house-machine similar to a huge iron animal, as Martin Bressani suggests in his article Prosthetic Fantasies of the First Machine Age (13); a hint of the army tank. Hence we would like to take account that the topic of prosthetics was primarily linked to the development of war machines, as Mark Wigley stresses:

“*Prosthetic technology alternated between producing substitutes for the body parts that military weapons had destroyed and producing these very weapons. All weapons are prosthetic.*” (14)

This notion resonates with the ideas of Violet le Duc by the end of the 19th Century, which we also find fundamental to ground the idea of prosthetics in architecture. In many of his work he showed a fascination for mechanized artificial limbs and the use of iron by the end of the Century. In fact he never addressed by name the concept of prosthetics in architecture, but he recognized the technological evolution triggered by the war-far machine. Thus the armor in the human body

constituted for him a perfection of the weapon by the extension of the body.

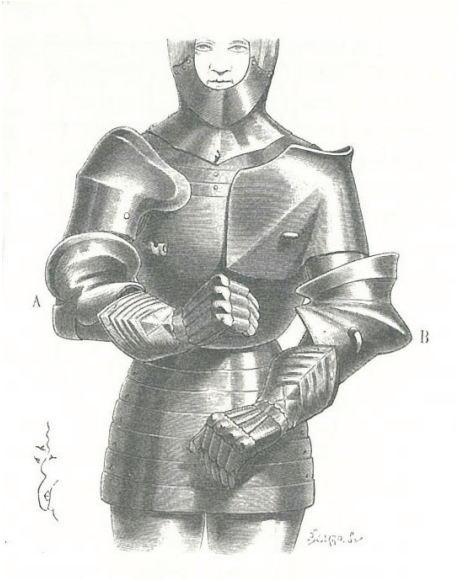
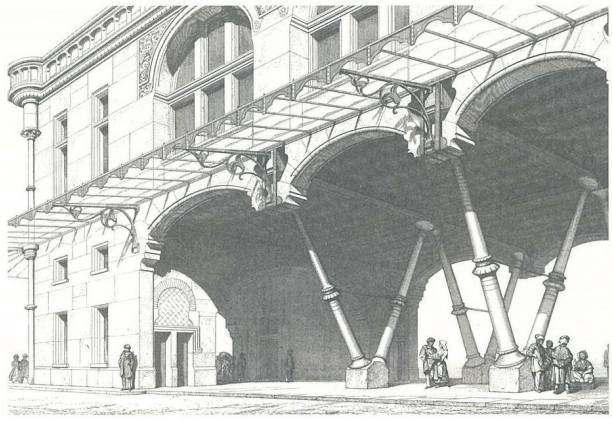


Diagram of the medieval Horseman.

(Source: Eugene Emmanuel Viollet-le-Duc, Dictionnaire raisonné du mobilier, vols V and VI, 1874-75)

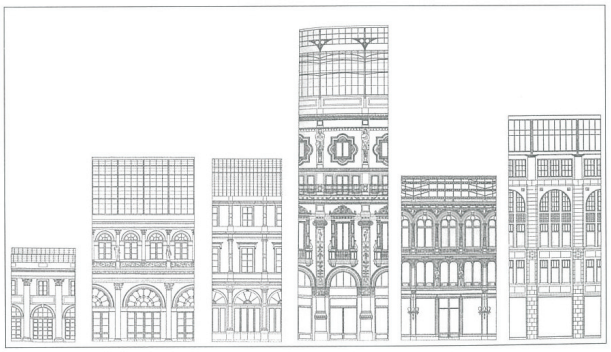
Moreover his fantasies about the Gothic cathedral and the possibility to reconvert them through the technological are a clear sign of a prosthetic impulse.



Violet-le-Duc's visual exploration between the classic and the mechanic.

(Source: Eugene Emmanuel Viollet-le-Duc, Entretiens sur l'architecture, vol II, 1872)

Tom F. Peters also argues around the idea of incorporating military procedures in buildings, such as the iron skeleton used in many buildings during that period, replicating the mechanized such as in the Crystal Palace. The studies of J.F. Geist about such iron structures (15), more specifically in arcades are relevant for this research, not only for the visual relationship between the exo-skeleton of the building and prosthetics, but in the methodology he employed to study his specimens. This consisted in grouping frontal views of each building in order to evaluate aesthetical features. Further on, we will apply for this research a similar methodological approach for the study of buildings in Tokyo to evaluate additive elements in their surface.



Elevation studies from arcades.

(Source: J F Geist, Arcades, The History of a Building Type, 1983)

1.4 The Morals of Prosthetics

When arguing about any additive element in the human body or in architecture, we cannot avoid entering into the debate of its morals.

Prosthetics in the human body are supplementary but transgressive by definition, modifying the image and identity of the host. The case of the South African former sprint runner Oscar Pistorius is an example to notice, using prosthetics in both of his lower legs. In the process of recovering functionality through prosthetics, his previous capabilities were enhanced and much was discussed about the morals of having an individual with prosthetic legs running along with standard competitors.

The morals of an enhanced human body performing versus other ordinary runners.

(Source: Oscar Pistorius. by Elvar Pálsson. Wikimedia Commons. 2007)

In the field of architecture, additive elements fall often under the category of beautification and ornamentation rather than performative or functional augmentation. Ornamentation specially, has been overly-praised by many or completely shunned by others depending on the historical moment. Leon Battista Alberti, as a paradigmatic figure during the Renaissance period, acknowledged it in his Ten Books of Architecture as "*a kind of additional brightness and improvement to beauty.*" (16) In contrast, the ideas of Adolf Loos at the beginning of 20th Century would criminalize it to pave the ground for Modernist thinking in architecture. (17)

As we have previously mentioned, Viollet-le-Duc's bold interest for alternative materials as iron indicates his preference for the technological, defying simultaneously more conservative positions within his contemporaries. As Nikolaus Pevsner elaborates in more detail, the most relevant example to bring into discussion is John Ruskin, another Gothic architecture enthusiast along with Viollet-le-Duc (18). While Ruskin admires more artistic aspects of the craftsmanship in the Gothic cathedral, Le-Duc admires the logics of its construction and its designer, probably derived from the fact that the first was a writer and the second a practitioner, as Pevsner points out. In other words, Ruskin's position is about preservation while Viollet-le-Duc's is about restoration. For Le-Duc restoration was an opportunity to experiment with new materials in construction as iron, understanding the logics and advantages that such material could add for structural performance, but also embracing positively the prosthetic appearance that such

exogenous adding would visually convey in the existing building. There had been before Le-Duc other projects that pioneered the use of exposed iron elements, more specifically Henri Labrouste's Bibliotheque Saint-Genevieve in Paris; however it was only until Viollet-le-duc's proposals that we observe ironwork as an alternative for restoration.

For Ruskin it is clear that the idea of restoration has negative connotations as something that he rather associates with the act of destruction. In his Seven Lamps of Architecture he acknowledges the necessity of restoration in the discipline, but always emphasizing extreme care and reverence for the existing building. He adds on this:"*better a clutch than a lost limb, and do this tenderly, and reverently, and continually*." (19) From confronting the ideas and ideals of Ruskin and Viollet-le-Duc, Pevsner persuades us to consider another variable beyond architecture; this is their cultural identity, framing the ideology of an emotional Englishman versus the one of a revolutionary Frenchman respectively.

Morality always convey ideological connotations, legitimizing or disqualifying those that align or not with a particular agenda. The text of Learning from Las Vegas by Robert Venturi, Denise Scott Brown and Steven Izenour is particularly relevant for the theoretical discourse that this research intends to pose. Written by the end of 70's when the discipline was experimenting divided opinions on the next architecture to follow, the text scrutinizes the morals of modern architecture and reconsiders the heterogeneous symbolism of the urban sprawl in favor of the ugly and the ordinary. As much as this research, Learning from Las Vegas sheds light partly in the study of billboards and the phenomenon of architectural communication. The narratives and particularities of our research for the study of signboards arrive from a completely different theoretical background, in a completely different cultural context and a different historical moment; however there are resonances in the interest for the informal and the ordinary in the urban phenomenon. Venturi, Scott Brown and Izenour focus their survey in Las Vegas Strip, considering the implications of a ready-made city settled in the middle of a desert and designed for the car. They proposed on the one hand the 'duck' as a paradigm of buildings that are morphologically a symbol, and on the other the 'decorated shed' as a conventional shelter that applies symbols. Through these figures they support their standpoint on the morals of modern architecture as a duck: "*Modern architecture of today, while rejecting explicit symbolism and frivolous appliqué ornament, has distorted the whole building into one big ornament. In substituting 'articulation' for decoration it has become a duck*." (20) Hence the decorated shed becomes the paradigm for their particular

approach in their own practice, modest and away from protagonism.

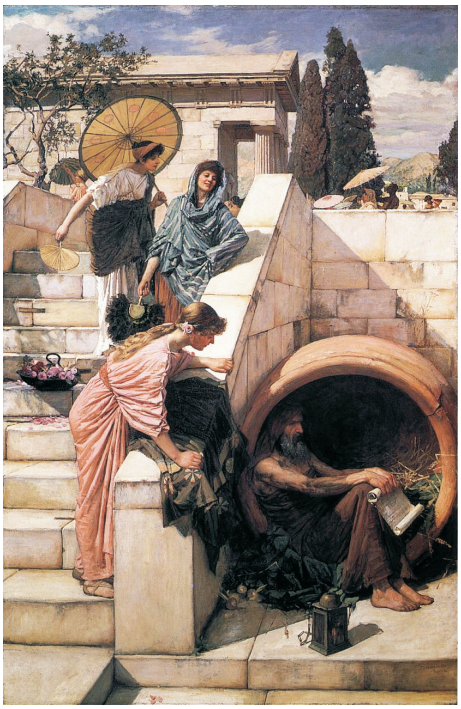
1.5 The first Prosthetic Theory

If we dig into architectural theory after post-war period, we will find that there is scare material addressing the topic of prosthetics or using it as means to construct an architectural discourse. If not directly mentioned, still there are traces that imply a "prosthetic language" in some arguments of Modernist architects:

"*We all need means of supplementing our natural capabilities, since nature is indifferent, inhuman (extra-human), and inclement; we are born naked and with insufficient armor…The barrel of Diogenes, already a notable improvement on our natural protective organs (our skin and scalp), gave us the primordial cell of the house; filing cabinets and copy-letters make good the inadequacies of our memory; wardrobes and sideboards are the containers in which we put away the auxiliary limbs that guarantee us against cold or heat, hunger or thirst…Our concern is with the mechanical system that surrounds us, which is no more than an extension of our limbs; its elements, in fact, artificial limbs.*" (21)

This text from Le Corbusier is introduced by New Zealand architect and theorist Mark Wigley at the beginning of his contribution to the magazine Assemblage No. 15 of 1991. His article, named Prosthetic Theory: The Disciplining of Architecture (22), is key to ground the first ideas of a proper Prosthetic Theory in architecture; one that for this research will demand reconsideration.

Le Corbusier's argument first establishes a difference between nature and artifice, acknowledging the vulnerability of the human body against the harshness of nature. Furthermore, he regards the body as an imperfect or "insufficient" entity in need for supplement.



Diogenes. By John William Waterhouse, 1982.

(Source: Public Domain)

For instance, if we observe in detail a depiction of Diogenes' barrel as he mentions, we find four bodies. All of them could be seen as

deficient, from the standpoint that they are not capable to sustain themselves naked in an extreme warm day without being supplemented. The woman on the left of the painting standing on the stairs has an umbrella and a hand fan, just as the other woman next to her also handling a hand fan to protect from a probable warm day. The third woman has no tools but a robe that serves as a primary layer for protection. Yet, Le Corbusier refers more specifically to the barrel in which the Greek philosopher Diogenes is taking shelter, acknowledging an “improvement” to protect the body and underlining the origins of domesticity, or what he refers to as the very first cell of the house. At the end of his text he points out that the context in which we develop our human activities, including those mechanical instruments that our bodies interact with, are precisely artificial extensions of our body, just as (prosthetic) limbs in the body.

This artificiality is well noticed by Wigley primarily in Modern architecture, which he addresses as “the space of the artificial”. He argues the prosthetic in this context by understanding the body as artificially being extended by the technological towards the artificial. He also emphasizes the differences between ornament versus mechanized ornament, where the first has been suppressed by the Modern posture and replaced by the second, one that not only provides structure to the body (building), but that actually has the capability to completely re-structure it.

Wigley's Prosthetic Theory is not intended to create an alternative framework for evaluation of urban phenomena as it is intended in this research and is rather argued under an educational discourse. He elaborates more into the genealogy of the word, where the “-thesis” of the prosthesis implies a “position”, not physical but philosophical. His ideas revolve around the university seen as a “corporation” and as the space par excellence to construct a thesis, hence the architectural discourse is itself regarded as a “prosthetic intrusion into the domain of the thesis”.

There are two aspects that I would like to highlight from his Prosthetic Theory. The first is his position understanding that the concept of prosthesis is always “already architectural and structural”. By comparing the architect as a figure that constructs buildings (on a specific ground) to the philosopher as a figure that constructs theory (also in a specific ground), he positions the prosthesis as a supplement of the structure (being that structure the building in the case of architecture and the theory in the case of philosophy) with the aim “to repair some kind of structural flaw”. The ground would be, from my perspective, the city itself with its own cultural rules, its urban symptomatologies and its space-time constrains. In Wigley's paradigm (of the

architect constructing buildings vs. the philosopher constructing theory), he emphasizes a “crack” in the foundations of what he metaphorically understands as buildings. Such gap(s) in the main body is consequently not only a structural deficiency but the space where the prosthesis occurs, and its presence within the body is only possible in order to supplement the body.

The second aspect is the “blurring identity” that he identifies as produced by prosthesis in a body. Wigley exemplifies this through the case of Austrian neurologist and founder of psychoanalysis Sigmund Freud, who had claimed consciousness to be a prosthetic attachment, worn on and off just as the relationship we have with garments and tools. (23) Interestingly Freud had himself a prosthetic jaw that his friends called “the monster” (a term that I will revisit again along this research). As Wigley elaborates, Freud had a particular relationship with his prosthesis; one physically painful on the one hand and on the other being simultaneously part and not of his body. In Civilization and Its Discontents (24) Freud also unveils a paradoxical reading of the prosthesis; one of fascination being the source of technological advances, and one of discomfort since it also brings along a more complex relationship with these technologies:

“*With every tool man is perfecting his own organs, whether motor or sensory, or is removing the limits to their functioning…Man has, as it were, become a kind of prosthetic God. When he puts on all his auxiliary organs, he is truly magnificent; but these organs have not grown on to him, and they still give him trouble at times…Future ages will bring with them new and probably unimaginable great advances in this field of civilization and will increase man's likeness to God still more. But in the interests of our investigations, we will not forget that present-day man does not feel happy in his Godlike character.*”

Both Freud's and Le Corbusier's recognize the innate limitations of the human body when performing in nature, a “defective” body in Freudian terms or “insufficient” in Le Corbusier terms, as Wigley stresses. Still Freud's approach enshrines a more futuristic reading of the prosthesis, elevating its figure to the apotheosis of culture and civilization as much as presaging a conflicted identity for the body.

Elizabeth Grosz is also a relevant contributor to the prosthetic discourse, acknowledging that “living bodies tend towards prosthesis” (25). As much as Freud, she regards an ambiguity in the prosthetic body coming from its materiality in connection with the organism:

“*This ambiguity-for prostheses both augment and generate, they both confirm an already existing bodily organization and generate new*

bodily capacities- is the very ambiguity of the material world for living consciousness: as both resource and limit, the material world is the ongoing source and condition of life, the surface on which life elaborates itself and that against which it distinguishes and changes itself."

We will revisit and elaborate further in all these ideas in the following chapters.

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CHAPTER 2

PROSTHESIS AS AN IDEOLOGY

2.1 A recount of ideologies in Japanese Architecture

Among other Asian cultures, Japanese thinking has distinguished itself for its simplicity and high sensibility to nature. Behind the eye that observes and has learnt from it, there is also a society that has been controlled throughout its history, evolving into a hierarchical social order. If we observe carefully the beliefs, values and environment in any culture, we will always find ideological traces behind. The mechanism that have transformed and deformed the modes of architectural production in Japan are not completely opposite to those in the Western world but still different, and even with its particularities within an Asian context.

Japanese critic Kojin Karatani affirms that the foundation of Western thinking is based in the “will to architecture” (1), understood from the metaphorical sense of “construction”. For Karatani this idea doesn't exist in Japan, since doctrines as Buddhism and Shintoism are rather based in the transience of things as an essential part of human existence. Japanese architect Kazuo Shinohara commented that in the Western world meaning is added to things (2), just as Ibsen introduces in his novel The Master Builder, depicting an architect obsessed with filling his emptiness in one way or another (3). In Japan the process is reverse, abstracting the significance of things from the things themselves. In this sense Japanese culture is structured from “absolute nothingness” (zettai-mu) rather than being (yu), with an intuitive grasp of the “formless and voiceless” rather than the concrete things, as philosopher Nishida Kitaro remarks (4).

Before elaborating my argument I would like to establish some preliminary criteria concerning the topic of ideologies. I accept that fact that we produce them as much as we consume them, simultaneously revealing our innate ideological nature not only in theory but in practice. I also embrace the possibility that not all ideologies are necessarily identifiable through a proper label or an '-ism' suffix; neither those who identify themselves with them are an ideology, but I recognize symptoms of certain ideological posture.

In Japanese language, the concept of ideology is generally used with the suffix '-gi' (—義), a Japanese character (kanji) related to the notion of “righteousness” or that denotes something “morally correct”. I do not intend to argue in detail about this aspect but the question of who legitimizes such “righteousness” remains for discussion. I finally recognize that when arguing about ideologies we fall into another paradox, properly named

“Mannheim Paradox”, which discloses the impossibility to detach ourselves completely from them. For practical purposes of this research, it might be an advantage to have an approach from an external viewpoint, which can allow me to evaluate the idea of prosthetics in urbanism with certain ideological distance. I will follow to introduce some ideologies in Japan that can frame the discourse under which I attempt to insert “prostheticism”.

Perhaps the first great ideology is, in a similar fashion to a lens that has distanced our sight of Asia with the rest of the world, precisely the very separation between Western and Oriental thinking, something that critic Edward said refers to as “orientalism” (5). In it, Said recognizes that the term is more a kind of authoritarian notion to represent Orient from a Western perspective. He also suggests that “to know something is to have power over it, and conversely, to have power is to be able to know the world in your own terms” (6), in the same manner how Western thinking generally portraits Orient.

Geography generally comes accompanied with some ideology linked to a historical moment; hence an individual can more or less be conscious of his linkage with a determined culture based on certain territorial criteria, but not necessarily of the ideologies imposed in such geography (or not necessarily aims to represent any of them in particular). In the case of Japan, given its insular condition it has prevailed a will to project certain identity of what Japan is about to the 'outer world', along with a notion of uniqueness in comparison to other Asian cultures. This can be seen as a kind of “architectural ideology for exportation”, permeating positively the global perception of almost every large project that emanates from the island and their architects. This is the case of architects such as Sou Fujimoto, who designed in 2013 the Serpentine Pavilion in London, or SANAA's new museum of Louvre in Lens just to mention few. It becomes relevant to reconsider how Japan has regained self-consciousness in its own “japan-ness” perceived as a kind of particular ideology from inside and outside.

2.2 On Insular ideologies

A central figure to understand this phenomenon is the architect Arata Isozaki, who designed in 1978 the exhibition MA, Space / Time in Japan at the National Museum of Design of Cooper-Hewitt, which would be the base for his book Japan-ness in Architecture (7). In it, he explores the essence of Japanese architecture and opens the question of what makes architecture to convey such Japan-ness. He identifies in the origins a process of assimilation and learning from other cultures coming from China and Korea through

another ideology: Buddhism. Soon it was merged with their local beliefs founded in Shintoism. Isozaki's argument centers on the features of three structures that according to him define the essence of Japanese thinking and traditional architecture in diverse historical moments: The Ise Shrine in Mie Prefecture, the south entrance of the Great Temple of Todaiji in Nara, and the Villa Katsura in Kyoto. In the first, he finds the culmination of an architecture that was able to detach from ideas coming from China (7th Century). In the second, he sees a technological achievement given the large scale of the wooden structure, and also an alienation from many of the ideas that had been considered as the premature Japanese style (12th Century). Finally in the Villa Katsuta (17th Century) he recognizes a more refined style and autonomous from external influences, which would serve as a conciliator with the Western thinking through the interpretations of Bruno Taut and Walter Gropius in the first half of the 20th Century.

In the samurai way of life or Bushido, there was a clear stratification of a class that oppressed versus one that was oppressed; an authoritarian figure and one at their service. The clearest example would be in a feudal lord (Daimio) and the samurai warrior at his service, a relationship that occurred simultaneously to that of Master and apprentice. The same formula was applied to craftsmen, and was eventually inherited to the architectural discipline. More specifically, we can read a continuous ideological thread among Japanese Master Architects and their pupils, many of them also becoming great Masters themselves after some years. We can identify specific trends and approaches to the discipline that evolve with each generation such as the case of Kiyonori Kikutake, who belonged to the Metabolist Group in the 60's, instructing Toyo Ito. Pritzker prize Kazujo Sejima of SANAA worked some years later with Ito and had a young Jyunya Ishigami working for her. There were also samurai warriors who for some reason ended up without a Master, becoming a 'rounin'. This could be similar to the case of architects as Sou Fujimoto, who claims an ideology independent from a previous architectural lineage. It is relevant to acknowledge in Japan this ideological continuation in the architectural discipline to understand the conscious and collective evolution of their knowledge.

2.3 From Western to Japanese Ideologies

The term 'architecture' can also be seen as a kind of ideological use of language imposed by Western thinking in Asia. From the Greek 'architekton' or master builder, it established an aesthetic canon that elevated the discipline to a 'high art'. Until the 19th Century this term was alien to Asian cultures, and other concepts were used instead to refer to the discipline,

such as 'building' or 'structure' in the case of China, and 'domestic construction' in the case of Japan. It was Japanese architect Chuta Ito who proposed the use of the world 'kenchiku' as an equivalent for being more ambiguous and flexible (8), embedding a wider sense of the term in resonance with the notions of the one used in the Western world. The ideograms (kanjis) used for this word (建築） were later adopted by Chinese and Korean language.

Before these linguistic adaptations, in Japan there used to be the Master carpenter, referred as 'daiku' (大 工 ） or 'Great Artisan', possessing a knowledge that was passed orally from people to people. Eventually this practice was encrypted through the creation of design manuals such as the 'shoumei' in 1608. These codes became the base for the edification of 'the right' style for more than two hundred years during the Edo Period (1603-1868). As William H. Coladrake remarks, architecture had served even since before this period as an instrument of authority and power, with the construction technology at the service of religion and the state (9). Concerning residential architecture the samurai class was represented through strong and heavy shapes ('shoin' style), contrasting with the austerity of the 'sukiya' style for the commoners class. Despite the class hierarchies imposed through architectural styles, there was another style of smaller scale but more refined, used for spaces destined for tea ceremony ('chadou'). The entrance to these places was very low ('nijiriguchi'), forcing the people belonging to the samurai class to lean down and remove their sword ('katana'), becoming paradigm of the most inclusive and democratic space in Japanese architecture. Hence we have Zen philosophy as another ideology that reshaped directly the spatial practice in Japan, understanding architecture rather as a mediator between man and nature. Ideas as simplicity and tranquility ('wabi'), rusticity and the patina of time reflected in objects ('sabi') or even asymmetry ('fukinsei') where concepts that supported the understanding of the whole starting from the smaller components. Such ideas also contributed to create an architecture of light materials, with wooden structures and floors of rice straw, sliding partitions and spaces without furniture. A complete different universe, if compared with the idea that the word 'architecture' aimed to depict in the Western world.

Japan also passed through a period of imperialism and expansionism during the end of the 19th and beginning of the 20th Century, in an obsessive desire to tune an idea of a modern nation in correspondence with the scene happening in several countries in the Western world. As I mentioned previously, such insular condition determined many of the accounted ideologies above, but it also determined many of the urban conditions that we can observe today in Tokyo. Human and

natural disasters such as the Great Kanto Earthquake in 1923, the several bomb raids in 1945, or even the most recent nuclear disaster in Fukushima in 2011, have served to reinforce collective ideals rather than individuals. With each disaster a new opportunity has been brought in order to insert new ideas, such as the Peace Center in Hiroshima by Kenzo Tange, “the favorite Japanese architect in the West” as Robin Boyd referred to him (10). Tange would put his ideas on the site in 1955, materially with a building and symbolically inserting a new ideology coming from the Western world: Modernism. Some few years later with the foundation of the Metabolist movement in 1960, a new ideological platform allowed him and a group of young architects to produce a significant amount of texts and projects for “the last movement that changed architecture”, as Rem Koolhaas refers (11). Isozaki had been invited to join the movement since the very beginning, but declined. Later in 1962 he would participate in a Metabolist exhibition but keeping some distance from the progressivism of his colleagues, embracing instead the idea of ruins as a significant discourse to confront destruction versus construction. The movement would last until the beginning of the 70's, when the oil crisis in 1973 dimmed the utopian aspirations of their members. By the end of 80's until the beginning of 90's, during the period known as 'the economical bubble', Japan had a blind faith for progress through technology and consumption, a trend that would affect directly the image of most cities in Japan. Yoshiharu Tsukamoto of Atelier Bow-Wow refers to many building in Tokyo as “shameless” or even “disgusting”, not necessarily with a negative connotation but as potential novel ways to make urbanism and learn from such “bad forms of architecture” ('da-me kenchiku') in juxtaposition with other components of the city such as its civil engineering structures (12). Finally Tsukamoto highlights as many other authors the hybrid nature of buildings in Tokyo.

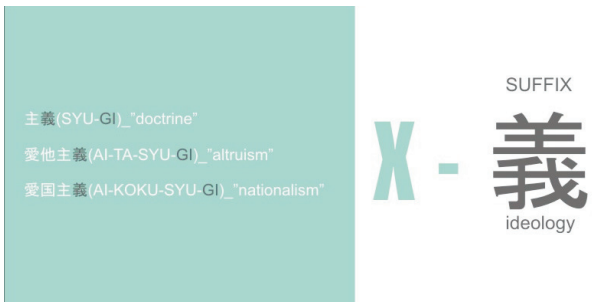
An example of such hybrid architectures could be the urban node known as Meguro Sky Garden, nearby Shibuya area. The project echoes other international interventions as the High Line in New York, attempting to reconvert strategic areas in the city and providing innovative elevated public spaces. The project is a ring road with similar dimensions to the Roman Coliseum, combining a complex program of a highway with residential areas, commerce, sport facilities, a library and a park on the top of the ring. The project that started to be planned in 1990 is also a good example or perfect orchestration between four urban entities: The government of Japan, the metropolitan government, the metropolitan highway and the district of Meguro in collaboration with private real estate developers. Such a project could well depict how economical interests can be above the

diverse ideological postures of each of the government entities involved.

2.4 The ideological language implications of the Prosthesis

I have reviewed Mark Wigley's Prosthetic Theory. In it he stresses the '-thesis' laying in the word 'prosthesis'. He refers to it as an ideological 'position' parallel to the use of a metaphor. I find resonances in Japanese language regarding Wigley's ideological approach. It is necessary to trace back to etymological origins of the word.

Originally from the Greek prostithenai (pros 'in addition' + tithenai 'to place'), the concept of prosthesis was first used in medicine referring to a “replacement of a missing part in the body with an artificial one”. In a similar manner, the ideogram (or kanji) used in Japanese language for this concept is 'gishi' (義肢), from which the first ideogram 'gi-' (義-) stands for 'artificial / substitute' and the second '-shi' (-肢) for 'limb'. Specially the first ideogram 'gi' is very ambiguous depending on how is combined. If used as a prefix it denotes 'artificiality or replacement' as just mentioned before. As a combined suffix ('-shyugi'), it has ideological connotations ('-ism'), as could be in the case of 'national-ism' (愛国―主義) or 'altruism' (愛他―主義) for mentioning few examples. Eventually the single character 'gi' (義) stands for 'righteousness', being one of the five virtues that humans should follow in Confucianism. Hence, when used in architecture and urbanism, this can support the possibility to read in the '-thesis' of the prosthesis a 'position' from an ideological perspective.



2.5 Prosthetic not parasitic

The implementation of any metaphorical framework is subject to discussion if confronted to other similar concepts. When using a term belonging to a specific realm, most probably there will be others that share similar features within the same universe. Hence identifying the differences is relevant to construct a more coherent argument. Specificity within the structure and elements of our source domain (prosthesis) and target domain (impromptu additive elements in architecture) must be well established.

In such case, the concept of prosthesis presents analogous features with the one of parasites, since both are additive entities to a host body. If we look again into the etymology of both words we can observe significant differences. As we have explained above, '*prosthesis*' derives from the Greek roots *pros-'in addition'* + *tithenai-'to place'* in contrast with '*parasite*' which derives from the roots *para-'alongside/beside'* + *sitos-'food'*. From the first root pros and para we learn that the first is in closer relation with the host body, since it is not only next to it but performs as a proper addition to it. From the second we observe that *tithenai* emphasizes the '*position*' in the host body, which is related to a particular auxiliary function. *Sitos* is rather position-less, emphasizing in one single function, which is to be fed directly from the product of the host body.

We can argue that prosthesis has positive connotations since it is about an adding element that can supplement the host, contrary to parasite whose negative connotation derives from an opportunistic connection to the host body. Moreover, we must take into consideration that a prosthetic relationship is in principle hybrid, between organic and mechanic entities whereas parasitic is fully organic, happening only between organism. Such difference is determinant to ground our proposition that additive elements in the urbanscape for this research are prosthetic and not parasitic.

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CHAPTER 3

THE IDENTITY OF THE MONSTROUS

"*The monster city of Tokyo continues to evolve*". Taro Igarashi

The figure of the Monster has a paradoxical relationship within the social imaginary. In one hand it has been constructed as an entity that embeds our greatest fears, and on the other it has become object of one of human's greatest fascinations. We fear the monster as much as we want to know more about it and the causes of its eccentricity, always referred from our own humanness. This fascination has been built bottom-up, from Aristotle's Poetics where he already introduced an enjoyment for the unknown and the obscure, to Kant's praise to the "sublime" where he acknowledges a shared emotion between fear and pleasure. Being in essence 'otherness', the monster well could support the discussion to establish a metaphor regarding the configuration of the cities we dwell and the relationship we have with them, accounting of the myths and cycles in which we have been consumed and reconfigured with and through them.

3.1 The Myth of the Monster

The word 'Monster' is generally related in the Western world to "a strange or horrible imaginary creature" deriving from the Latin root "monstrum" which corresponds to the verb 'to show'. In Japanese language the word used for this concept is "Kaibutsu" (怪物), from which the first ideogram (kanji) "ayashi" has connotations of something suspicious, mysterious or simply that suddenly appears. Similar to other ancient cultures the monster in Japanese culture is an enigmatic figure intertwined with that of the Gods. The first recount of it is observed in the Kojiki (or Records of Ancient Matters) represented through an aquatic monster similar to a serpent with 8 heads and 8 tails named "Yamata-no Orochi" (八岐の大蛇) subdued by God Susanoo, who was later expelled from the paradise after misleading her sister Amaterasu, Goddess of the Sun.

Once the myth lands in the earthy plane, its representation acquires very specific shapes and cultural values. It is true that the Monster lies "where the reason falters and the fantasies flourish", however for our argument we will find more relevance in other aspects as the hybrid condition of the monstrous, its multiplicities and the inventiveness to reconfigure a sense of wholeness from the diversity of its components. In Japanese culture this hybrid nature happens culturally with concepts

inherited from other civilizations coming from China, Korea and India, and through juxtaposing symbolic elements with others that existed in the everyday life. In religious architecture for instance, we observe the latter in creatures guarding the entrance of temples, sometimes as hybrid animals between lion and dog (Komainu) or even between devils and humans (Nio). One fundamental aspect in the representation of the monster is the spatial production through the manipulation of emotions linked to its image, where fear and grotesqueness are embodied. Moreover, monsters in this case often indicate that we are entering to a spiritual realm.

3.2 Tokyo fear city

If we accept the premise that the monster has been historically grounded in the human emotion of fear, we will find that contemporary media has also nurtured this motion by creating a new geography of fictional urban destruction. It is not surprise to find cities like Los Angeles or New York as part of the itinerary in the apocalyptical map of vanished cities in several movies. Beyond imagination, there might be no other city in the world that has been objet of destruction in the last century (either by natural or human agents) as Tokyo, whose urban history could well be interpreted as one revolving around fear.

Let's first reconsider the history of fear in Tokyo first as a myth, almost like a ghost that persists until today in some of everyday practices. One of them is observed during the first months of Winter when the air in the city is dry. It is common to see in many areas of the city where there are still old wooden houses a group of neighbors who have organized to warn others about possible fires. “Hi no youjin!”(火の用心), “watch out for fires!” they repeat one time after another almost like pilgrims hitting rhythmically a couple of wood pieces hanging to their necks. The origin of such tale dates back to Edo Period when the city was already the largest human settlement in the world, around 1700. By that time the Great Meireki Fire (1657) had already vanished more than half of the city and it is estimated that more than 100,000 people died. “Fights and fire are flowers of Edo” was a common remark in those days. Gradually these myths were incorporated in everyday culture such as in Kabuki theatre representations. But the monster disguised as the ghost of fire also brought relevant morphological changes in the city. Streets became wider, new materials besides wood started to be used for house construction, height in buildings started to be regulated, new bridges were built around the city; all for to prevent another disaster.

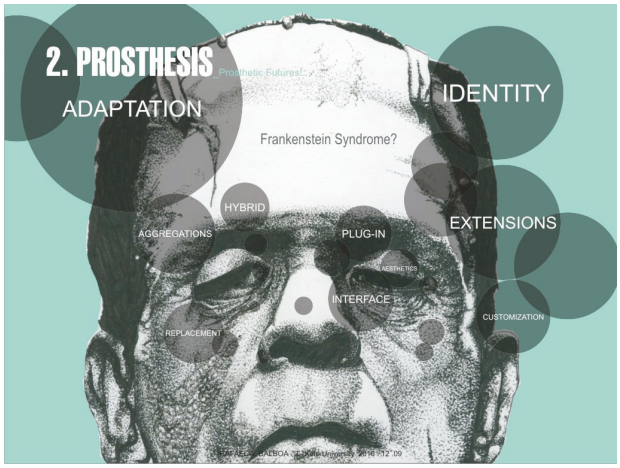
Even when other disasters followed after the Great Meireki Fire, none of them could compare to the one that happened almost 200

years after when the Great Kanto Earthquake in 1923 brought back fear to the city. The same day and time when celebrated Imperial Hotel designed by American architect Frank Lloyd Wright was going to be inaugurated, an earthquake destroyed 60% of the houses in Tokyo and 70% in the area of Yokohama, closer to the epicenter in the Sagami Bay. Add to this the strong wind that day multiplied small fires around the city. Again the monster triggered a deep transformation in the city, and from this very event we can start to talk about the first urban planning system of Tokyo, with politics of land redevelopment and the expansion of the rail system around all the city. It is in short the decline of the low city (shitamchi) and the rise of the high city around Yamanote area, which saw the rise of new areas like Shibuya, Shinjuku and Ikebukuro. New urban housing typologies emerged with reinforced concrete apartments like Doujunkai along with the first attempts to create Garden Cities (Den-en).

Only sixteen years passed to open a new chapter of destruction in the city, this time not by natural but human factors during the WWII. The next twenty years, or what people refer as post-war period, was an era of accelerated growth that fostered a Japanese obsession for economic development based on technology. Along with the reconstruction a new type of fictional monstrosity was about to born for Japan, product of hybridization between the American culture and the local. The first black and white televisions displayed a monumental monster named “Godzilla” destroying Tokyo, which replicated another named “King Kong” destroying New York. Its creator Tomoyuki Tanaka collaborated with the movie director Eiji Tsuburaya, who had prior worked in movies of war propaganda and special effects in educational programs. Tsuburaya would later become one of the most important figures to nurture Japanese mediatic culture with a whole catalogue of fictional creatures, devoting his career to create monsters and destroy cities. Just like those monsters of ancient mythology or those in Jorge Luis Borges' Book of Imaginary Beings, Tsuburaya aided by graphic artist Tohl Narita would produce an infinite combination of beings inventing the genre “Kaiju Eiga” (or Japanese monster film industry). Here there are differences with the Japanese monster that we described before “kaibutsu” and “kaiju” (怪獣). While both words share the first ideogram kaiju conveys better the idea of strangeness. The incorporation of fear and the fictional monster passed from a consumer to a consumed product when represented in the TV screen.

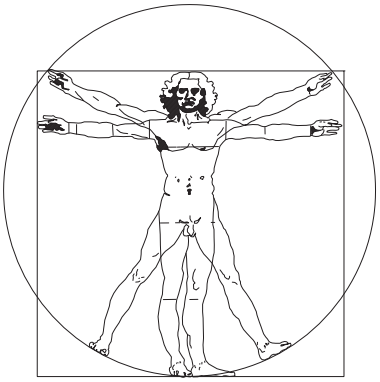
3.3 The Prosthetic Monster

What is a monster if not the very deviation of our own humanness? The more it conserve traces of the original human body, the more it reveals (as its etymological root shows) what it lacks of it. There should be a calculated tension between the deviation of the human and the monstrous, otherwise its image would divert too much until the unintelligible. If the monster is too deformed, it becomes something else but not a monster, since the remaining part of the original human body is completely lost. What is a monster if not a perfect hybridization between human and machine? It is the ultimate extended body but it has lost its original identity; it has mutated into a new one. Such unique capacity of transformation reveals its untamable nature and the complexity of its visual transgressions.

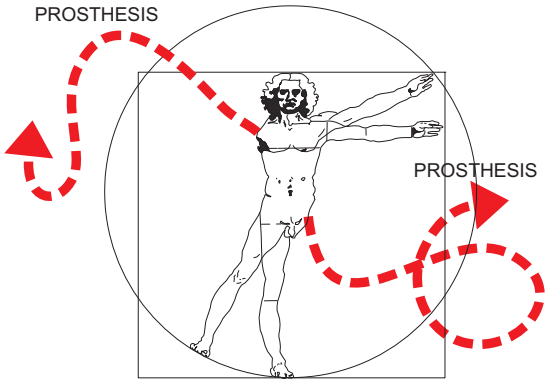


Instigations derived from the Prosthetic Monster

Alberto Manguel reminds us in his recount The Library at Home that “Frankenstein's monster is both the utter foreigner and the perfect world citizen; he is alien in every way, a horror to look upon, and yet made up of all manner of human pieces”. Such is the nature of the Prosthetic Monster.



“HUMAN”



“MONSTER”

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CHAPTER 4

THE ECCENTRIC IDENTITY

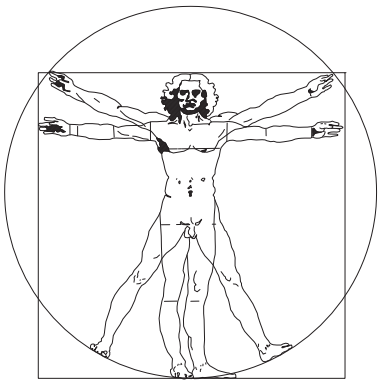
The way we see things, as John Berger remarks, is “affected by what we know or what we believe” (Berger, 1972) . But how diverse can be the idea of 'self' from one culture to another? How much each individual is determined by the myriad of variables and legacies that have overlapped through time and history? Many of the myths created by each culture rooted a strong model of a man's journey “not as a courageous act but as a life lived in self-discovery” (Campbell, 1988). From Aristotle to Deleuze, passing through Descartes and Nietzche, it has always been a fundamental question to explain what is the substance that constitutes each individual. When pursuing to find answers an implicit act of confrontation of the 'self' with the 'otherness' is unavoidable, and through that process affinities and differences emerge. It is an act that demands standing in front of a mirror where we can read reflections of our own identity, but also where we can perceive voids and denies of our self-constructed image. When looking through those mirrors, kaleidoscopic nuances appear from one culture to another; some of them according to the viewer will probably be labeled as extravagant, aberrant, unusual or more specifically as we will draw the attention to: 'ECCENTRIC'.

The following geometrical studies started as explorations of this concept in traditional Japanese patterns, seeking to decode some of the forces and hidden orders embedded in them. Three study cases from different nature (Matsuba, Taiko and Asanoba) were carefully analyzed in order to find the relations of the components and how they behave spatially. In all the cases it was intended to start by defining a 'center' and from it their degree of eccentricity. Eventually the analysis opened the possibility to argue further on how Japan beyond being considered as an eccentric country for the foreign eye, found a meaningful idea of the term that permeated all the spheres of Japanese sophistication.

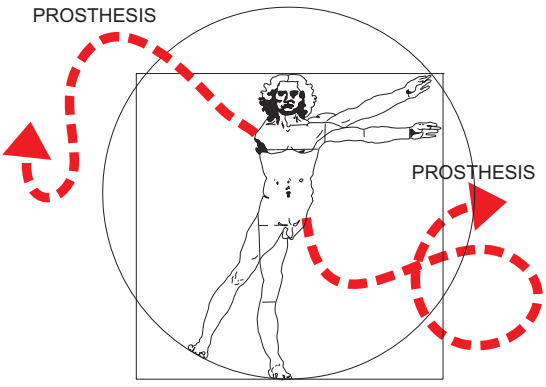
4.1 From (west)centricity to ec(zen)tricities

Any argument on eccentricity must account firstly for centricity as the origin of the concept. The latter stands for a preconceived and socially accepted kind of rationality, while the other for all the rest of different possibilities of thinking that deviate, no matter how much, from that fixed center. Centricity has been favored in western aesthetics as a symbol of perfection and harmony in contrast with eccentricity, that stood in an opposing direction. One of the first conditions to recognize a centralized system is symmetry, which has been highlighted since ancient times

in the architectural theories of Vitruvius and which he found in the human body. His idea would endure and be reinforced a thousand and a half years later by Da Vinci's Vitruvian Man, signifying the beginning on an era where human was elevated to the center of the known universe. Chronologically what would be the end of the so called Renaissance in Europe coincided with the raise of the Edo Period, where Japan consolidated many of the values that would support most of its representative aesthetical features (Inoue, 1985) and that differ completely from the Western perspective.



“CENTRICITY”



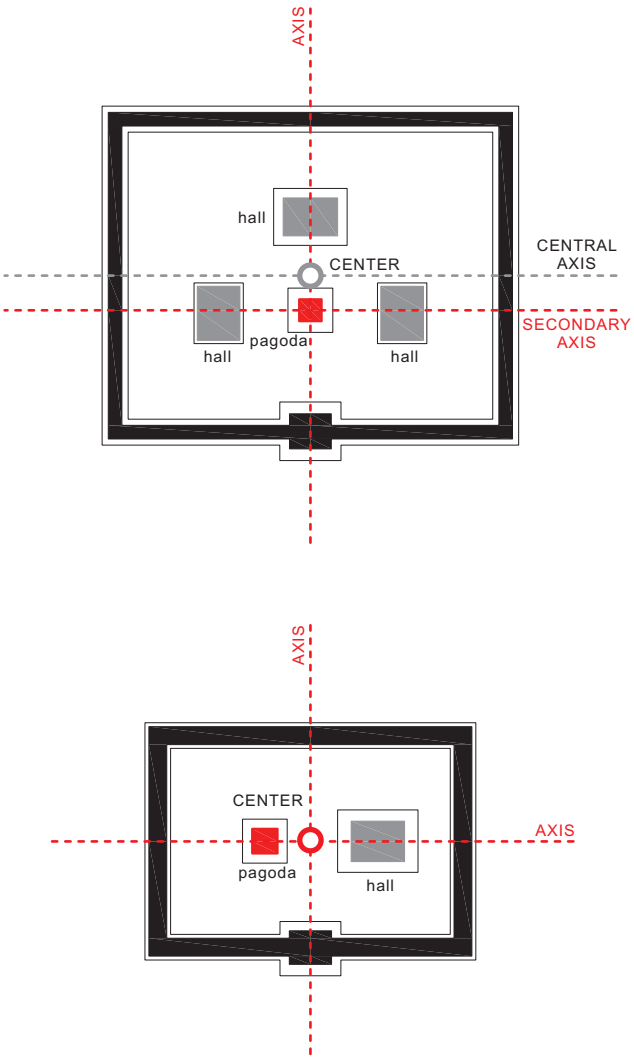
“ECCENTRICITY”

The origin of the term began in astronomy in the 14th Century to describe a circle in which the earth and stars deviated from the center. Some years later it would be incorporated into the everyday language to denote a human behavior. In the 19th Century in cities as Paris for instance, there was “a culture preoccupied by the need for order simultaneously drawn to the values of freedom and innovation. Eccentricity continually tested the boundaries of bourgeois identity, ultimately becoming inseparable from it” (Gill, 2009). In those days to call someone 'eccentric' was to describe an odd attitude, abnormal and counter to conventionalisms. The idea indeed had at first glance certain negative connotation, a deviation from normality, but also claimed for the bold spirit of the time. In Japan there was a similar idea used as paradigmatic in literature, known as Kyo (狂−Crazyness), as the reversal of literary conventions and found in the work of Matsuo Basho (Qiu, 2008). Still eccentricity, as we have also found in these geometrical studies, was a preference and not a mere accident.

For Japan, religion and isolation became the two most significant factors that brought a singular way of understanding the paradox of human and nature as part of the same idea. Being WITHIN nature and BEING nature are completely different ways of reading one story; while the first one creates hierarchies between the components and its relations, the second

blurs and dislocates human existence out of the center, to somewhere slightly away from it. It reveals rather an eccentric attitude towards everything around than a centralized idea.

Comparing for instance two of the earliest Buddhist temples from Nara period, Asukadera and Horyuji, we can notice the incorporation of elements inherited from China as the pagoda, which was also taken from India before. We can read also the early denial of symmetrical disposition in the elements (Edagawa,2009).



Asymmetric typologies in the plans of early Buddhist temples from the Nara Period. Asukadera (above) and Horyyuji (below).

In the case of Asukadera the Pagoda stands softly out of what would be the center of the ‘kairo' (covered corridor) but still flank by three main halls placed symmetrically. In Horyuji the degree of eccentricity is more recognizable, and the pagoda is only flank by one hall.

The amalgamation of Shinto and Buddhism (from which Zen philosophy developed) resulted into something more democratic and fluid for Japan, with a high sense of the whole and parts as Yuichiro Edagawa remarks:

“Most of Japanese architectural styles were based on daily activities rather than monuments; hence the authoritative symmetrical style did not develop. In other words, it was not possible to create symmetrically under Japanese creation process starting from the parts”.

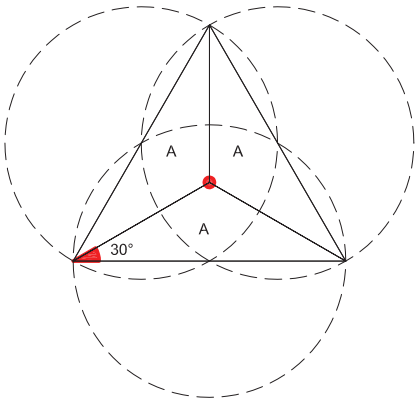
An isolated geography followed by land-lock policies (鎖国–Sakoku) during Edo Period fostered the idea of Japan as an eccentric country, contrasting with the relatively nearness of European countries, where ideas passed from one place to another with certain viral impulse. Nonetheless naming superficial differences as merely eccentric lacks of cultural depth to construct such conception. Junichiro Tanizaki's In Praise of Shadow, opens recounting the simplicity of a man seeking to retreat from the material world, the “solitary eccentric” he refers to him, or “the man of tea” (Jacquet, 2012). One of those

eccentric was the Buddhist priest Yoshida Kenko , whose “Essays in Idleness” brought deep reflections on Japanese aesthetics that permeated their cultural preferences. Coming from his accurate observations in solitude with nature, he established a series of diverse tastes that would become the tendency of the time. (Hume, 1995). For Kenko the ideas of irregularity and incomplete-ness were relevant since they could give one 'the feeling that there was room for growth' (Keene, 1967), and which was an essential aspect in pattern production. From the principles of Wabi-sabi, Fukinsei (不均斉) denotes a lack of balance and symmetry. This concept became a preference and an alternative for craftsmen to endow their decorative designs with a surprising and charming look (Lafayette De Mente, 2006). In calligraphy for instance, “the vertical stroke should always cross the horizontal one at some point not equidistant from both ends”. A symmetrical character is not preferable and is considered to be 'dead'. (Keene, 1995). A direct abstraction of what they observed in nature became the way to do anything related to the creative fields, including patterns and motifs.

4.2 Towards a (de)centered future

When Roland Barthes was confronted with Japanese culture, nuances and subtle aspects in the everyday life of the Japanese were highlighted. Alienated from the culture he could detect, if not explicit, an eccentric cultural pattern. From how a common meal is served and eaten, in a non-hierarchical manner, to the way a haiku is written. It might lie in that eccentric attitude the possibility of endless imagination. Lucretius acknowledged in The Rerum Natura (The nature of Things) the relevance of decentralization as a 'swerve' in an atom that would cause a collision with others and thus created all existing in nature. Eccentricity, as we have found and argued in these geometrical studies, is on the one hand an accurate manipulation of how far to be from a center, and on the other a synonym of singularity and creativity. A paradigm could well be a city as Tokyo, which is better understood as a cluster of cities with and empty center. Hence the relations between the elements and how they intertwine become more relevant than the center itself. Patterns are better understood not from a centralized idea but from the interactions among its decentralized components (Resnik, 1994). In order to evolve grow an invent, instability will become the new space for possibilities (Kwinter, 2008).

Finally Japan will remain eccentric for the foreign eye, as a self-suficient universe closed to itself, living from its own substance (Paz, 2005) and informing our understanding of the self when confronted with such a rich culture.



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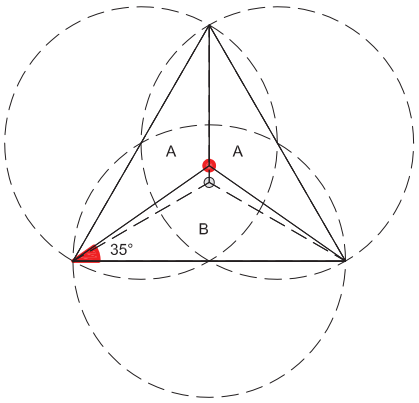

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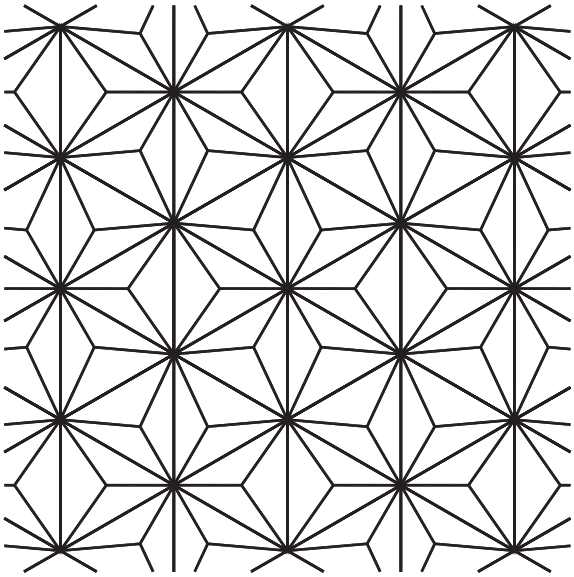

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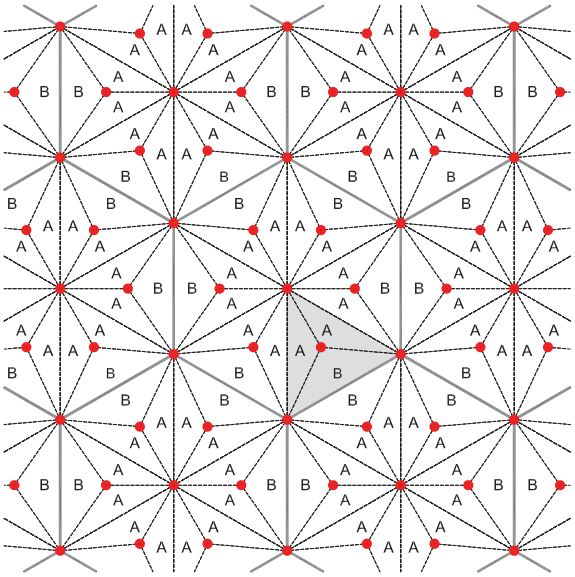

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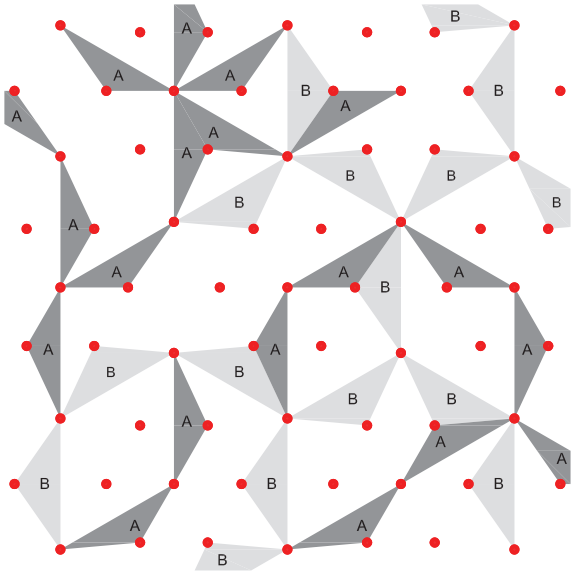

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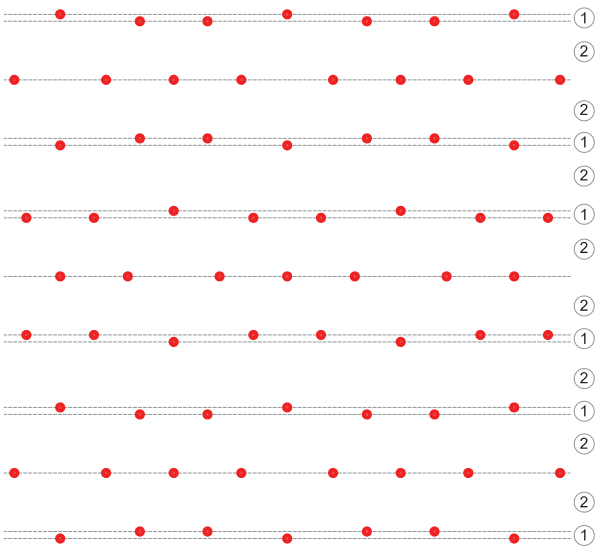

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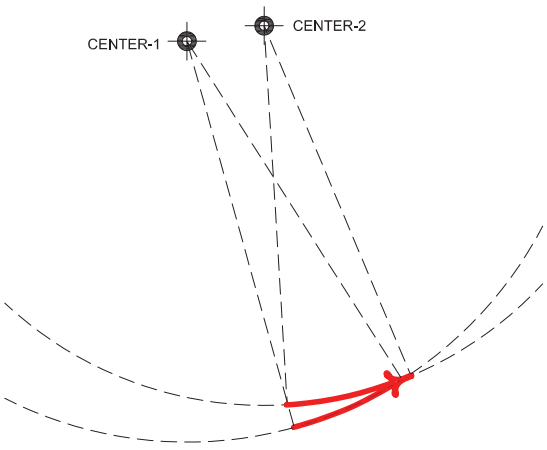

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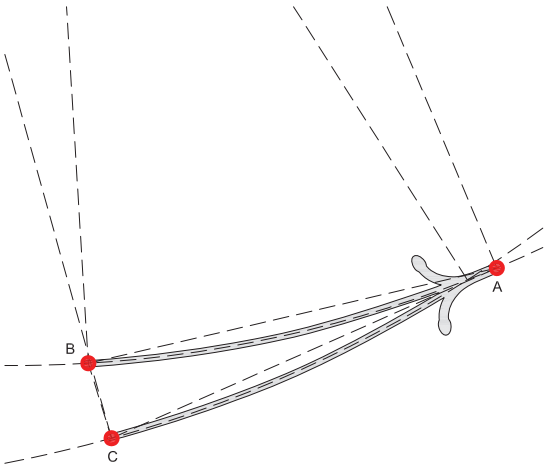

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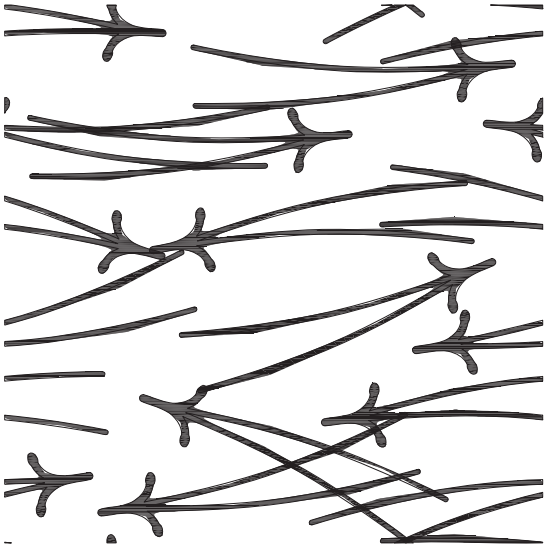

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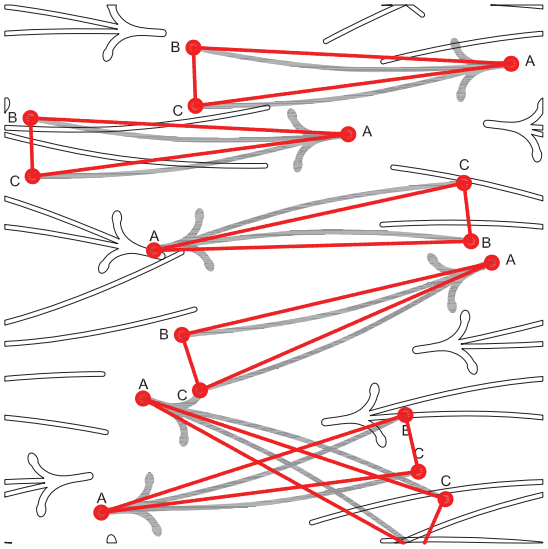

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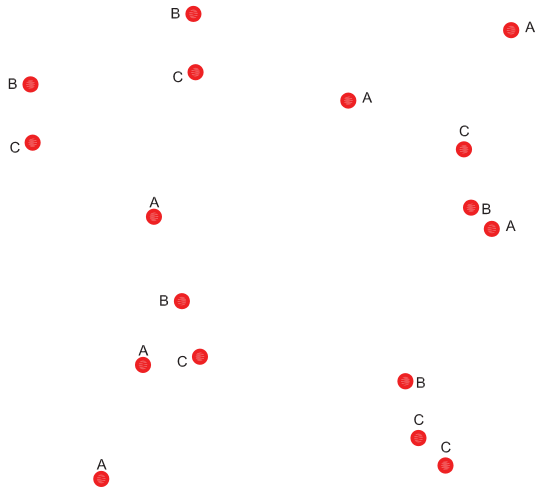

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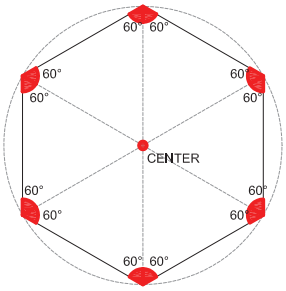

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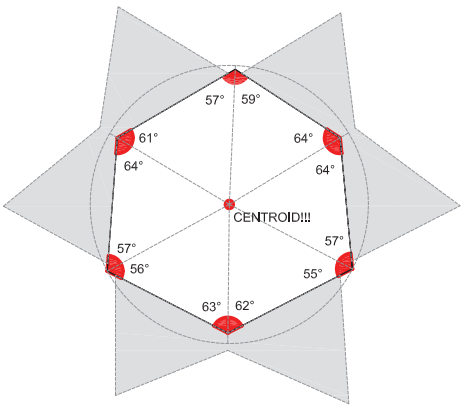

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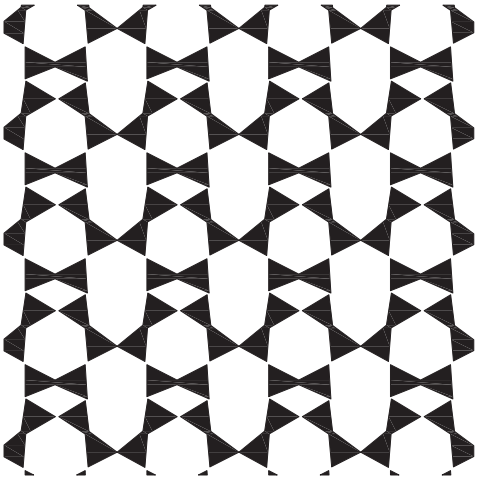

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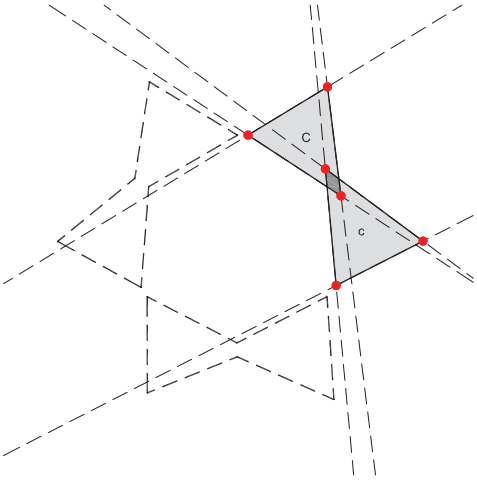

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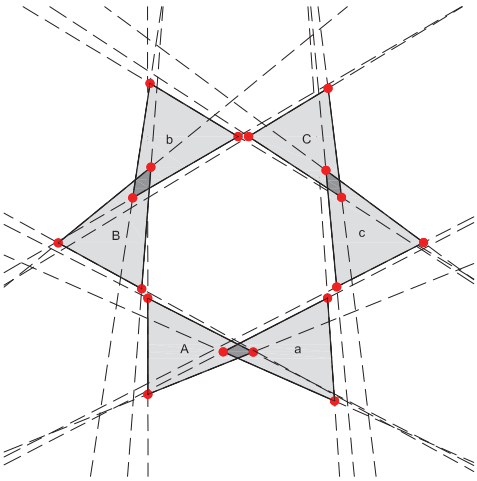

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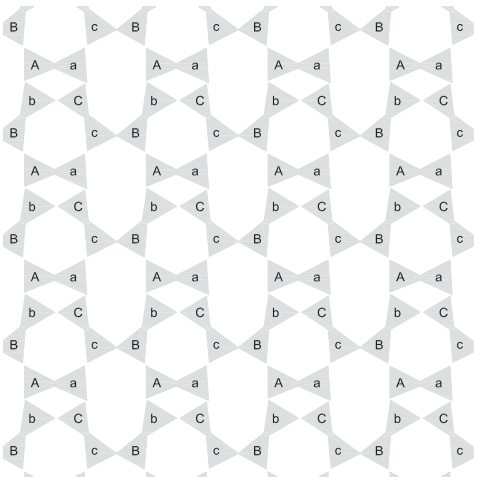

DECODED NETWORK

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CHAPTER 5

EMBODYING TOKYO: PRINCIPLES OF PROSTHO URBANISM

We have introduced in Chapter 1 the relevance of the use of metaphors in the way we construct arguments (not only in the architectural discipline but in rhetorical thinking in general), along with etymological and fundamental ideas of prosthetics, essentially borrowing a term originally coined and used in medicine and orthopedics, with the aim to transplant it into an urban discourse. We have also identified specific features that diverse authors refer and highlight regarding the topic of prosthesis and prosthetics in general and in architecture. In Chapter 2 we have also suggested the possibility of reading ideological connotations in the use of the word. We have suggested that there are linguistic resonances in the Greek root '-thesis' and the character (kanji) used in Japanese language, which is used to refer the word 'prosthesis' and 'ideology' ('-ism') simultaneously. When used in architecture and urbanism, this can support the possibility to read in the '-thesis' of the prosthesis a 'position' from an ideological perspective. We have also embraced a particular theoretical frame for the prosthetic body in Chapters 3 and 4. One is the city as a mutant entity, whose technological aggregations reconfigure the original body until the point of turning it into a 'monstrous' entity (something that for this research we perceive as a positive asset, rather than the negative connotations that some people can understand from this term). Moreover, we also argue that the nature of such monstrosities is essentially eccentric; not only as a result of prosthetic accumulations but as a relevant feature that confers a unique identity to the 'prostheticized' body, rooted in historical and cultural values.

This Chapter will condense what this research aims frame as the principles of Prostho-urbanism, a theoretical term in urban design that we have coined to embrace the ideas and ideals that we have presented in previous chapters. We will also introduce city observations in commercial districts of Tokyo and evaluations that can support our thesis: Aggregative elements seen as prosthetics in buildings are one of the central factors that contribute to the mutant nature of the city, creating visual and spatial reconfigurations in short spans of time.

5.1 An alternative theoretical frame in urbanism

Contemporary cities embody a fundamental paradox; they stand as one of the greatest triumphs of human civilization but also as one of our greatest concerns. As they expand and collapse in an organic fashion, we are simultaneously proud and, as we have pointed

out in Chapter 3 of this research, uncertain of the 'monsters' that might derive from them. Despite the manifold theories aiming to explain the complex forces happening within cities, urbanism is “compelled to redefine the forms, functions and structures of the cities” as Henri Lefebvre suggests in his essay The Right to the City (1). Hence it is relevant to remain skeptical and continue bringing alternative ways to redefine 'the urban', not only as a holistic discipline but as a juxtaposition of specific forces that input and output, deforming and reconfiguring cities, always in very particular manners. In this sense, Tokyo's imagery has fed well in contemporary culture the myths of the chaotic, the entropic and the incoherent as much as the futurist, the dense and the intense.

Yet, any attempt to read some of the urban phenomena happening in Tokyo often escapes the efforts of orthodox urban planning. Continuous mutations driven partly by the high demand of services for still the largest urban settlement in the world make it a very challenging field of study. When compared to similar agglomerations in the world, the urban topology of Tokyo is sometimes described by the foreign eye as 'eccentric', understood as something deviated from the Western idea of 'ordinary'. Beyond casual interpretations, we have suggested in Chapter 4 that it might make sense to label the city as eccentric if considering the term firstly from a strict geometric argument, as the quality of being out of a center; one that was imposed from a Western imaginary. If we accept this expression, it might be admissible to add a variation of the term from eccentric to 'ec[zen]tric', where tradition is anchored at the core of the word and structure the rest, a more flexible part that tends to the unfinished (2). This corresponds with a concept in Zen thinking named 'mujo' (無常） conveying ideas of mutability, incompleteness and transience, allowing the possibility of embracing evolution without affecting drastically the core (3). Thus we observe in Tokyo a symbolic center that structures the city represented by the Imperial Palace, a more static portion f the city that acts as a self-regulated enclave, often discussed under the idea of a void. It is surrounded in contrast by multiple satellite-centers, more dynamic and in continuous transformations.

In order to ground our argument in the context of Tokyo, this research find relevant to take into consideration the dystopic image of the contemporary city; something that Gyan Prakash has referred under the term 'Noir-urbanism' (4). Douglas Kelbaugh more specifically refers to 'Post-Urbanism', inscribing it as one of the three terms to understand the city as an 'integrated paradigm' along with two others concepts: 'Everyday Urbanism' and 'New Urbanism' (5). Precisely nested into the Post-Urban discourse, we would like to reposition the idea of the city beyond the city by making an analogy with the explorations of Post-Humanism about the body beyond the body, or better expressed the extended body. More specifically, we would like to stretch the boundaries of the concept of 'Prosthetics' and its relationship with the human body towards the urban realm. By using a metaphor, we pursue to give an added meaning to specific

components in the city that can support a new term that we would like to address as 'Prostho-Urbanism', a theoretical approach that we regard as hybrid, since it reconciles ideas coming from the organic and mechanic discourses in urban theory.

5.2 Tokyo Organic

Japanese architect Yoshiharu Tsukamoto is an avid user of metaphors in many of his texts, such as in his work published in Pet Architecture (6) and Made In Tokyo (7); even though he emphatically denies it: “We strongly wanted to get away from the attitude that the city can be summarized by metaphorical expression” (8). From a Western traditional standpoint, his approach (as many other Japanese architects of his generation and after) could be seen under the light of a phenomenological discourse, in which his observations of everydayness and personal experiences are often the main sources to validate his ideas. His construction of arguments doesn't necessarily look for legitimization through the continuation or disruption of an existing philosophical lineage as in Western thinking, and rather attempt to make evaluations in the urban discourse from his individual practice as an urban actor and as an architect.

In one of his metaphors related to the “mask” (9), he argues how facial communication is the result of the relationships between the parts and the whole. He regards the mask as a “deformation” of these relationships in order to convey “symbolical meanings”. The relevance of his argument for this research derives firstly from how he expands his metaphor to the urban discourse, more specifically grounding it in Tokyo. This is to say that metaphors derive from a given environment and become a specific theoretical method to frame particularities. In resonance to the organic theory, Tsukamoto recognizes the continuous “metabolic changes” that the city has been subject to throughout its history; from natural disasters and accelerated economical growth, to events that have reshaped its infrastructure such as the Olympic Games. This mutability, according to Tsukamoto, is what confers to Tokyo a global reputation as a “new urban model”. Another aspect that I find relevant is how he acknowledges the importance of the smallest scale in the city, the house in this case, and how minimal deformations in the typology of such components can create other meanings, such as the variation of expressions that a mask is subject to convey communication.

5.3 The biological order

It is recurrent in many of Tsukamoto's arguments about Tokyo the idea of urban spaces perceived as a “biological order”. More specifically, he argues about “environment” by reconsidering the term “umwelt” (the world as it is experienced by a particular organism) used by German biologist Jacob von Uexkull and illustrator Georg Kriszat (10). While he never refers directly to the concept of prosthetics as in the case of Wigley, he also points out the limitations of the Modern Posture to embrace a wider vision of the contemporary urban phenomena, regarding it as reductive. He uses other strategies to deal with it, such as a term he coined as “Environmental Unit”, “a hybrid and integrated building: a building that can only be completed when assimilated into the surrounding civil engineering structures –a building as a segment of urban ecology”.

Tsukamoto opens a more relevant question through his concept of Environmental Unit: “How far can buildings' design intervene in urban spaces and where is the threshold for it to become uncontrollable?” I see in this threshold something related to Wigley's idea of a “gap” or “fracture” in the structure where the prosthesis can come to existence. Also his notion of uncontrollability is an important asset that contemporary cities should also allow intentionally (as a design feature) to happen. Moreover, the Japanese architect recognizes an “urban intelligence” that buildings acquire through time as part of their urban ecology. His idea resonates directly with how I regard small aggregations in some buildings in Tokyo as part of such urban intelligence, allowing them to adapt successfully to their environment.

What Tsukamoto addresses as uncontrollable in the small scale, is linked directly with another idea that is often attributed to the urbanism of Tokyo: a sense of chaos. This concept suggests certain kind of order, but still unintelligible from a typical model of making urbanism. Japanese architect Yoshinobu Ashihara embraces this idea in what he suggests as a “hidden order”: “If any part of Tokyo embodies the whole, then Tokyo perhaps represents the concept of the hidden order. By contrast, Western cities would fulfill the concept of explicit order”. Ashihara argues this order from an ambiguous nature given by the changing conditions of the city, something that I address more specifically in prostho-urbanism as “mutability”. Such ambiguity and incompleteness are recognized by Ashihara not as alien concepts, but as well grounded in a Japanese cultural context and aesthetic values.

Ashihara as Tsukamoto make use of the organic metaphor to convey many of their ideas about Tokyo. They recognize the city as a kind of organic entity, subject of constant transformations that allow a regenerative process, where the parts can be severed and replaced easily in order to continue adapting to the environment. More specifically Ashihara refers to the city as an amoeba: “Tokyo, thus, is an 'amoeba city' with its amorphous sprawl and the constant change it undergoes, like the pulsating body of the organism” (11). Both approaches identify the whole and the parts as

instrumental to understand the urban phenomena in a city as Tokyo. In the same manner we would like to stress such particular awareness to the smallest components in the city through our prosthetic theory approach.

It is also relevant to introduce what Rem Koolhaas recognizes as “the last movement that changed architecture”: Metabolism (12). The group formed by four young architects,one critic and a graphic designer in the 60's, would become not only the generator of some of the most radical urban ideas of its historical moment but the DNA of what we still see today in Tokyo. Even though the movement diminished with the oil crisis in the beginning of the 70's, its influence still resonates with the mutable and spirit of impermanence that prevails in the city. While none of the members addressed directly the concept of prosthetics, I find in this movement the foundations of the prosthetic theory in Japan.

5.4 Toward a Prosthetic Urbanism

From the perspective of Prostho-Urbanism, the concept of prosthesis can be understood not only as a technological vehicle, but as a rhetorical figure to embrace more comprehensive connotations of the concept, such as materiality, replace-ability, perform-ability and ubiquity. In principle any tool that mediates the interaction of the human body with the environment can be seen as a prosthetic device, extending (and in some cases reducing) the natural capabilities of the body. Tim Ingold's definition of a tool highlights such idea: “A tool, in the most general sense, is an object that extends the capacity of an agent to operate within a given environment.” (13) Set in context, from each component of the Samurai's armor and his sword, to the clothes and utensils employed by the tea ceremony Master, or the most sophisticated communication device, the body becomes an extended entity, whether to intimidate, to appeal or to virtually communicate. This is a posture that is properly remarked by Merleau-Ponty:

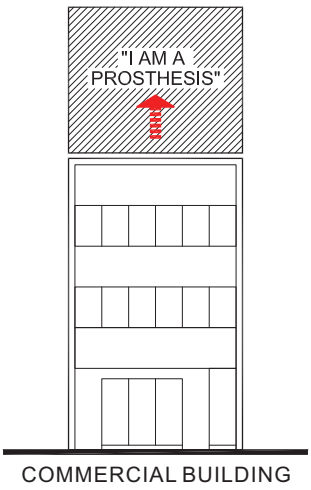
“ Visible and mobile, my body is a thing among things, it is caught in the fabric of the world, and its cohesion is that of a thing. But because it moves itself and sees, it holds things in a circle around itself. Things are an annex or prolongation of itself; they are encrusted into the flesh, they are part of its full definition; the world is made of the same stuff as the body.” (14)

In the process of bodily extensions, there is always a subject that aggregates and another that hosts that aggregation (prostheticizer vs. prostheticized), always with very specific performative functions. This interface between the body and the prosthesis become more dependent through time, eventually blurring the boundaries of both. As Bernard Stiegler stresses, “the prosthesis is not a mere extension of the human body, but the constitution of this body qua human” (15); this is to say that the prosthesis is the constitutive element par excellence that confer the human body its 'humanness'.

We have argued that Prostho-Urbanism

pursues to study the paradigmatic figure of the body and the prosthesis in resonance with that of the building and its aggregative components. Concerning the discourse of the body in philosophy, we consider relevant to speculate what kind of body(ies) a city as Tokyo would be. French Philosophers Gilles Deleuze and Félix Guattari imagined a 'body without organs', being pure exteriority and behaving more as a 'desiring machine', opposed to the 'organic body' which they propose to be more about interiority and made from determinate (functional) organs (16). Continuing their fantasy, we regard Tokyo as a city that can accept these two philosophical embodiments, which is in essence the paradox that creates its ambiguous image. Buildings in Tokyo could well correspond to what Deleuze and Guattari describe as a body without organs, an imageless body. They only serve as a structure to receive external 'free organs' (prostheses) with an independent life span detached from that of the body. An intensive orchestration of these prostheses could end up in some cases neglecting completely the existence of the host body. The prostheses in the buildings of Tokyo are not an intruder in the body as Jean-Luc Nancy poses in his text The Intruder (17), they are rather an expected event to protrude, a supplement for the spectacle society. Above all efforts to communicate like the pixels in a high definition screen, they end of becoming only part of the big urban landscape seen as the whole screen. There is no possibility of rejection, since the host body is in many cases numb to them. Every new prosthetic aggregation is just another temporary guest in the complex urban celebration. But, as Henri Lefebvre and Michel de Certeau stress, the temporal is as significant as the spatial in the everyday life.

Prostho-Urbanism as an urban theory embraces positively the 'prosthetic impulse' existing in our contemporary technological culture, accepting the idea that “living bodies tend toward prosthesis” (18) -as Elizabeth Grosz suggests. In the same fashion buildings in Tokyo receive manifold aggregations such as signboards, infrastructural equipment or even vending machines that are in continuous transformation. Such interface is in one hand the materialization of the adaptable nature established between body-machine / building-signboard performing to endure in a high consumerist environment. On the other hand the prosthesis becomes the dominant visual element in order to convey communicative transactions. Furthermore these prosthetic elements become the ultimate urban device to confer identity in cities as Tokyo.



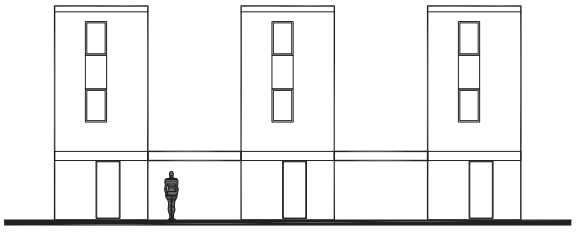
Prosto-Urbanism proposes to evaluate signboards in Tokyo under the frame of a prosthetical discouse.

5.5 Prosthetics and Informalism

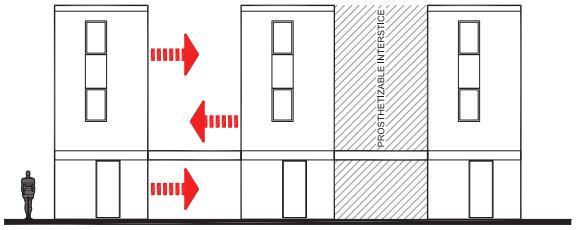
We have stressed the possibility to evaluate impromptu aggregations in building surfaces under the figure of prosthetics, narrowing it down to signboard to exemplify our evaluations; however we would like to regard urban prosthetics from a wider perspective, where other additive elements can be considered as part of the theoretical proposition that this research is establishing.

While prosthetics in the human body emerge generally from a well planned background, in the urban discourse there is possibility to read a prosthetic impulse emerging also from unplanned urban conditions, where informal organization suits better with the changing nature of cities. Many examples of such architectures can be observed in anonymous buildings in almost every city, where people extend and customize structures in order to satisfy their spatial needs. The architecture of favelas and shanty towns for instance evolves from this principle, mutating materials and configurations continuously without any proper orchestration but mere functional purposes. Building infrastructure such as pipes, antennas and heating units among others become part of such unplanned landscape, where unintended a priori aggregations reconfigure the image of the original structure. This is to say that design often discard from the original agenda such additions, denying the natural evolution of these buildings.

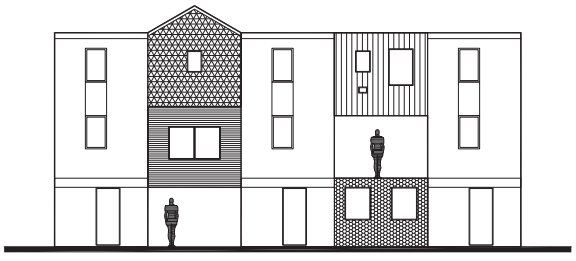
The case of Quinta Monroy project in Chile by Elemental is a relevant case to understand this evolutionary prosthetic condition in the domestic realm. The team led by Pritzker Prize Alejandro Aravena was commissioned in 2003 by the Chilean Government to design a low-income social housing project to settle 100 families in the area. There are precedents of a similar project in Peru during late 60's, undertaken by some members of the Metabolist group (Kikutake, Maki and Kurokawa). Aravena's team proposal established a basic three-store structure connected on the ground floor and leaving gaps of the same length in between each tower. Such open space was gradually used by each family to extend their space organically, without any restrictions of material or style.



ORIGINAL BODY



ORIGINAL BODY (prosthetizable interstice)



EXTENDED BODY (Heterogeneous identity)

If we regard the original structure as the main body, we can read every extension as a prosthetic evolution, from the accumulation and organization of informal elements following the spatial conditions established by the original body. As we will observe further, the relevance of the project in our argument lies in the design of the gap between towers, an ambiguous space acting as a prosthetizable interstice. It is precisely where prosthetic transactions occur and allow the buildings to extend. A heterogeneous identity emerges extroverting the interior lifestyles and tastes of their dwellers.

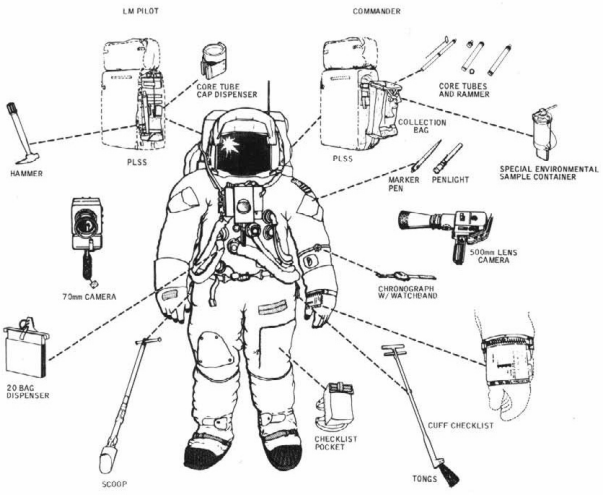
In Tokyo we can also observe in older shitamachi areas of the city as Yanaka or Mukojima a similar informal trend in the domestic realm. Japanese photographer Ishiwata Fumiaki has largely observed and documented many of these structures rebuilt with galvanized iron sheets labeling them as “totanism”. The term derives from the Portuguese world 'tutanaga', an alloy composed of copper, zinc and nickel to which bits of iron and other metals are added. (19) Such temporary solutions act as elements that can be easily replaced once they age, in resonance with prosthetic elements adding to the body. Its identity is also remarkable given its rusty appearance in contrast with the rest of the houses which tend to be more homogeneous.

Attempting to be consistent with our observations in commercial spaces in Shibuya, Shinjuku, Ginza and Ueno, we also mapped in detail the area of Nombei Yokocho, next to

Two domestic structures in the area of Nezu-Yanaka whith replaceable elements in their facades. Circa 2007

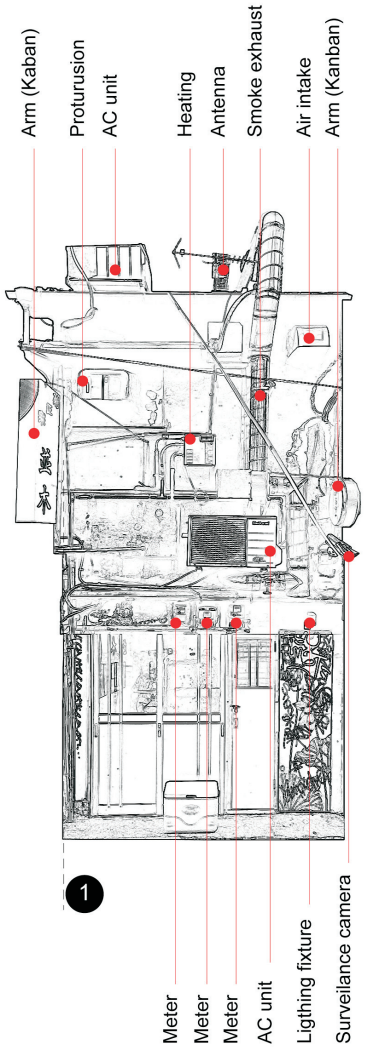
(Source: Author)

Shibuya station to indentify other prosthetic elements added to smaller commercial buildings. It is one of the few areas remaining in central Shibuya where we can still observe today such phenomenon of informalism. We can make an analogy between the observed specimens and the space suit used in early Apollo flights and its equipment to illustrate the ambiguity and difficulty to identify additive elements. In the case of the space suit it is visually redundant to add extra equipment to what it is already a prosthetic element to the body. In a similar fashion these thirteen specimens present features that make us restate our idea of prosthetics, since we cannot identify as in other cases which elements belong to the original body. Specimen No. 1 for instance, presents the highest intensity of aggregations, with elements that range from infrastructural, to kanban and protrusions in windows that correspond positively to our idea of 'monstrous'. In other cases as specimens No. 2, 9 and 10 there are less adding elements in the upper part but the lower part also deploys access ambiguity through several doors. Other specimens as No. 6 and 11 present an upper wooden lattice that seems to be added to the original wall, but with uncertainty of its original nature. Finally the spatial qualities and charm of the passage are directly linked to the variety of materials an adding elements in the façade, along with the scale and location of these area of the city.



Astronaut's suit and equipment used in early Apollo flights.

(Source: Gene Simmons, On The Moon with Apollo 15. Nasa, 2001)



Frontal elevation of an old commercial building with high intensity of aggregations in its facade. Nombei Yokocho, Shibuya.

SHIBUYA - NOMBEI YOKOCHO

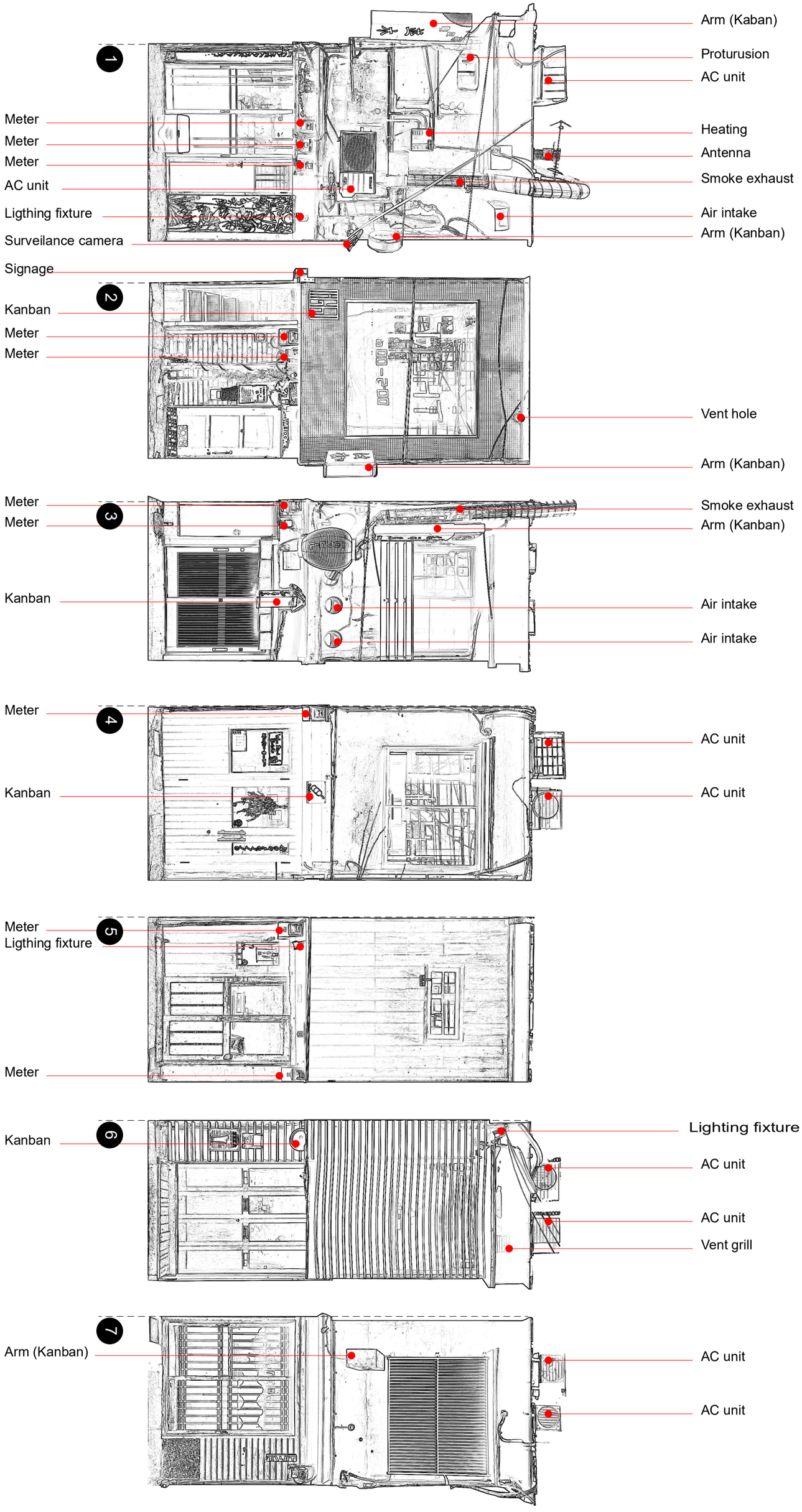
Total number of buildings 13

KEY MAP

SHIBUYA - NOMBEI YOKOCHO 01.

Total number of buildings 7

KEY MAP



SHIBUYA - NOMBEI YOKOCHO SPECIMENS - PART 01.

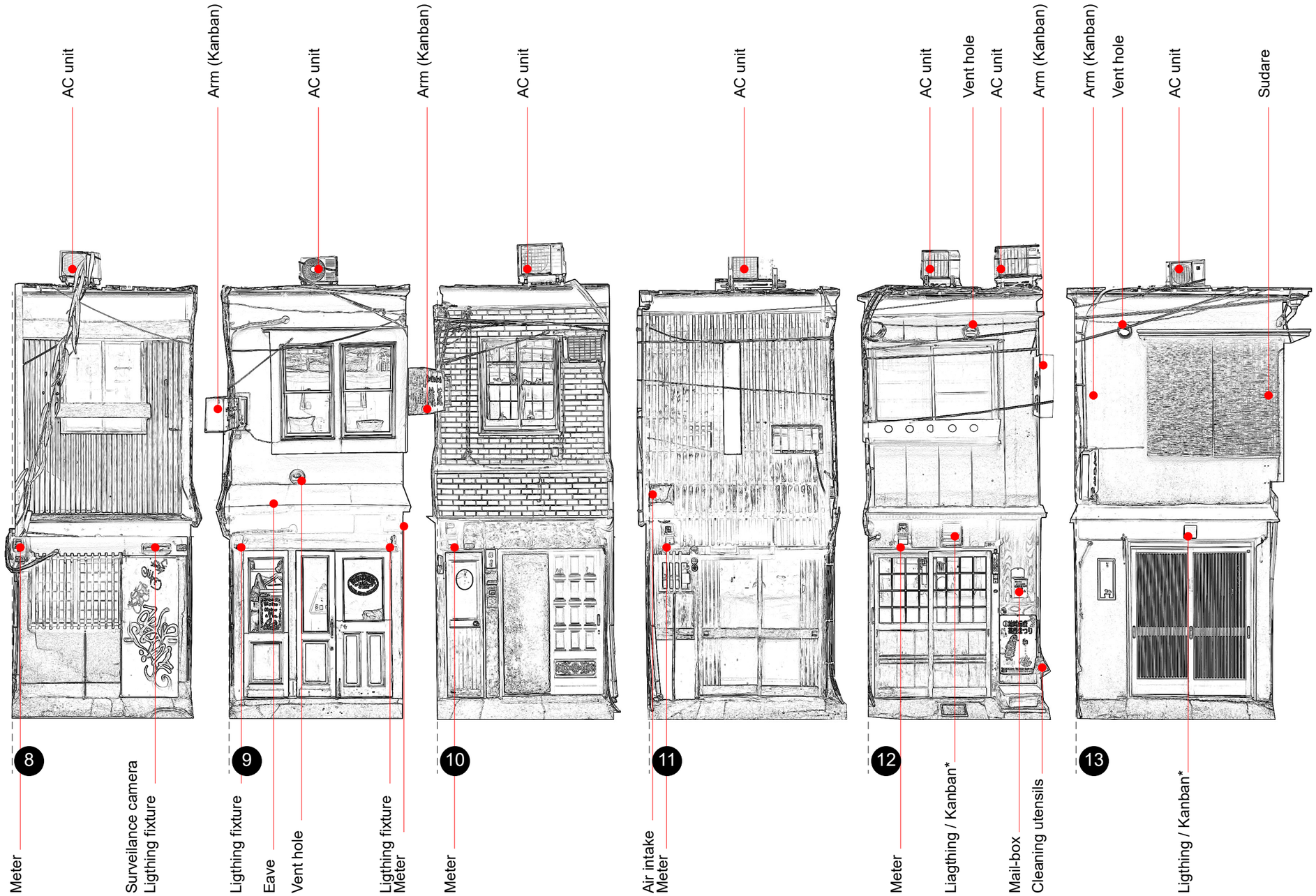
SHIBUYA - NOMBEI YOKOCHO 02.

Total number of buildings 6

KEY MAP

SHIBUYA - NOMBEI YOKOCHO 02.

Total number of buildings 6



KEY MAP

5.6 Signboard as prosthesis

Signboards in architectural buildings are not a particular phenomena occurring only in Asian cities or in Tokyo. Many other commercial areas in Western cities also portray intense aggregations in the surface of their buildings, especially in areas of high consumption. Cities like Sao Paulo in Brazil have addressed this trend with radicalism, banning completely all signboards in their buildings.

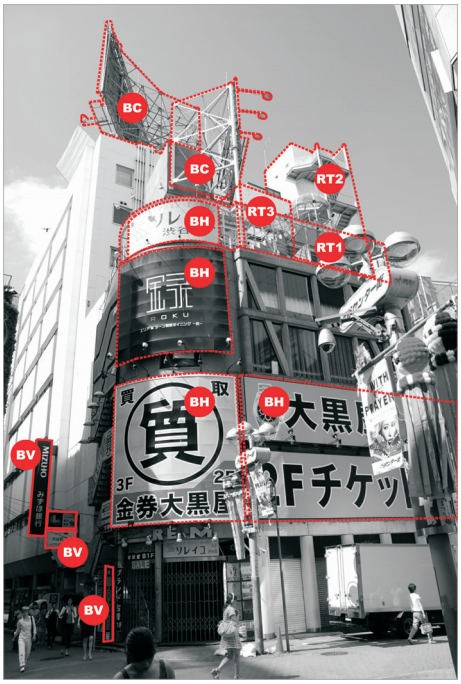
In the case of Japan, buildings and signboards have had historically a close relationship. Japanese architect and historian Terunobu Fujimori uses the term 'Kanban-Kenchiku' ('signboard-architecture') to refer a typology of buildings dating from Edo Period, when Tokyo was at the point of becoming the largest urban settlement in the world. These buildings had a unique décor; an identity that was built through motifs and the selection of materials in the façade in combination with the signboards or 'kanban'. The design of such elements was an extension of the identity that the owner of the shops customized for their clients, varying in shapes and content. These elements, generally made in wood or steel, where a highly inventive materialization of the prosthetic dream, performing as visual communicators and allowing the shops to attract more people.

A constellation of old signboards from Edo Period. It can be observed playfulness and creativity in shape and design, where customization extended the identity of each shop in order to attract more clients.

(Source: Jidai wo utsusu kanban, Takamura Goro. 1994)

5.7 Index of Prosthetablity

My observations of signboards have been focused in the contemporary city; more specifically in some of the most popular satellite centers destined to amusement and massive consumption (e.g. Shibuya, Shinjuku, Ueno and Ginza). In these districts, sometimes knows as 'sakariba', the dominant elements in the cityscape are luminous signboards, large screens and other components attached to the surface of the buildings, which I aim to approach as prosthetic elements in the body.



TYPOLOGIES OF PROSTHETIC ELEMENTS
STUDY AREA: SHIBUYA

FACADE ELEMENTS

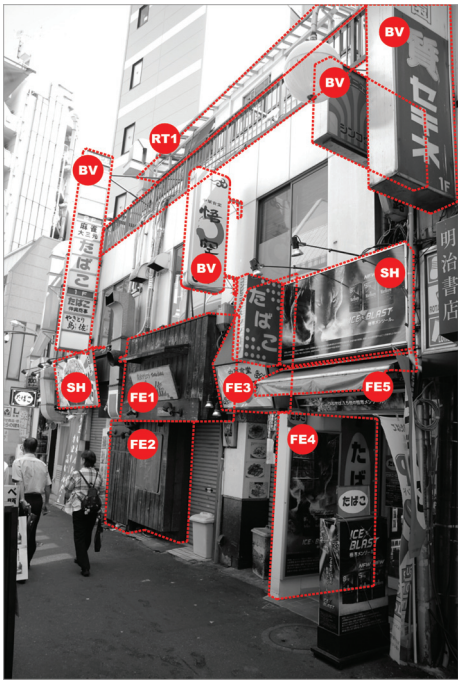
- FE1 ENTRANCE PORTAL DETAIL HORIZONTAL
- FE2 ENTRANCE PORTAL DETAIL VERTICAL
- FE3 ENTRANCE CANOPY
- FE4 CANOPY
- AC1 AIRCONDITIONER
- SH SIGN, HORIZONTAL

BILLBOARDS

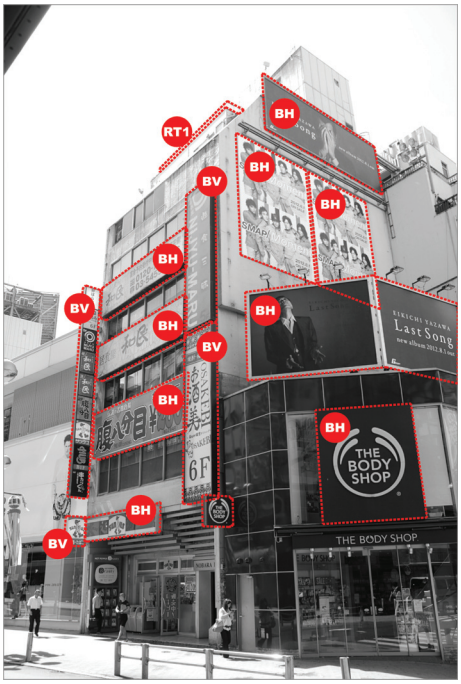
- BH HORIZONTAL
- BV VERTICAL
- BC CROWN

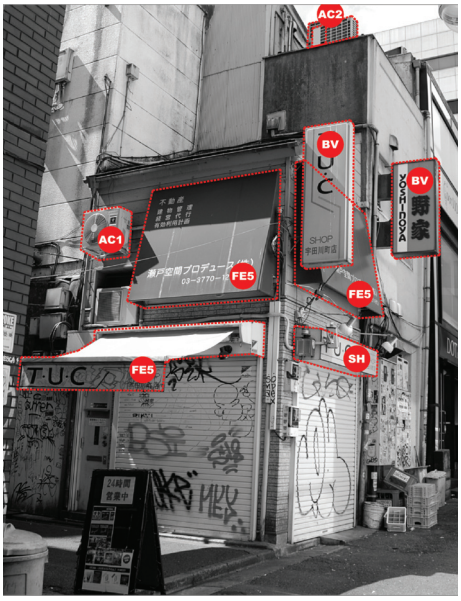
ROOFTOP ELEMENTS

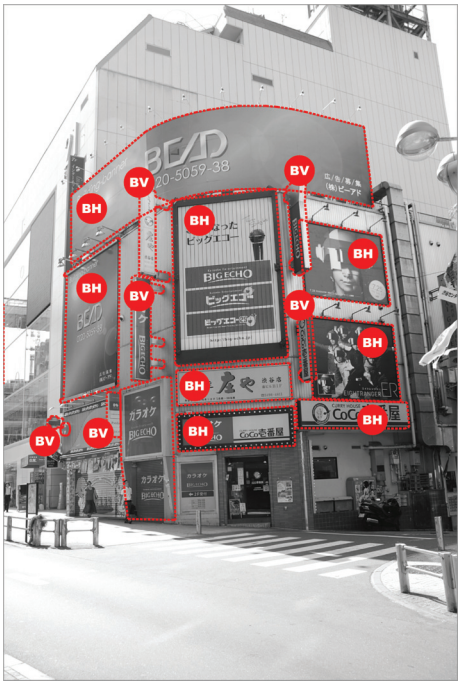
- RT1 TERRACE STRUCTURE
- RT2 ACCESSIBILITY STRUCTURE
- RT3 ENGINEERING STRUCTURE
- WT WATERTANK
- AC2 AIRCONDITIONER

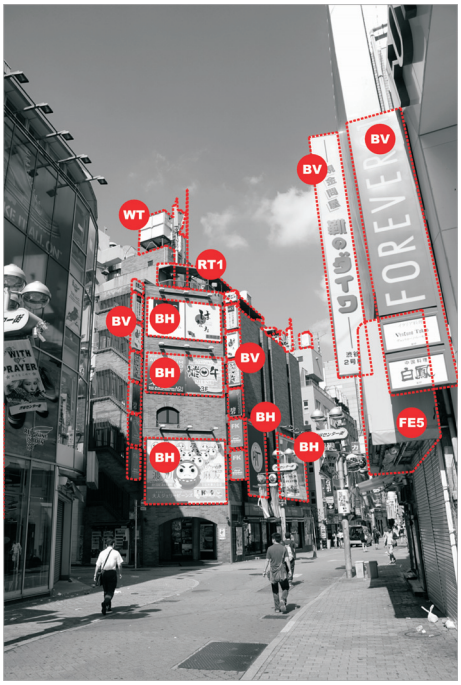


Example of identification and classification of aggregative elements in building surfaces in Shibuya









Example of identification and classification of aggregative elements in building surfaces in Shibuya

Following a methodological scanning procedure, buildings within a radius of 1 km have been observed and evaluated. My aim is first to identify and categorize all the elements that aggregate to the surface of buildings in these areas. Once counted, I aim to find an 'index of prosthetability', which can visually portray the intensity of these additive elements. The results are quantitative, showing how in general larger scale buildings receive a less amount of aggregations but larger scaled signboards. Those buildings in corners which are of older periods receive more aggregations. This trend has to do with two performative aspects: One is the position in plan, where buildings with higher level of visibility become more desirable bodies to prosthetizise. They sometimes are also subject to receive 'crowning' signboards on the top. The other is the amount of tenants that each building can hold. Older buildings tend to have multiple tenants, hence the amount of aggregations communicate such condition. Larger buildings which are more recent often host larger corporations and their signage is properly embedded in the design or even through media screens.

UENO

SHIBUYA

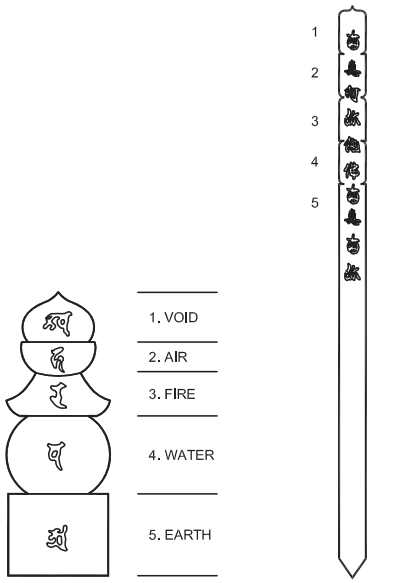
SHINJUKU

Intensity of building aggregations

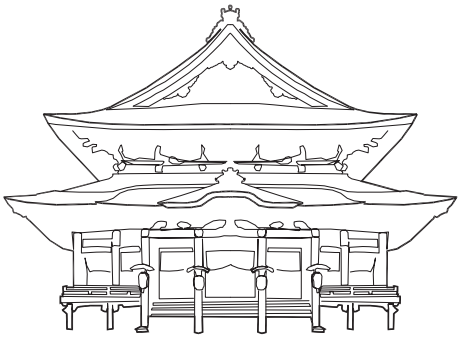
Intensity of building aggregations in billboards (400 mts. diameter scope)
The map shows quantitative result of each building and its aggregations. Smaller buildings in narrow streets are subject of higher degree of prosthetization, while larger buildings receive less amount of addings but in bigger scale.(IP_Index of Prosthetization)

5.8 From Kanban to Sotoba

The 'sotoba' is the prosthesis to the Buddhist temple as much as the 'kanban' is to the average commercial building in Tokyo. The sotoba, an elongated wooden stick found in Buddhist cemeteries, is in principle reductionist, simplifying the symbolism and morphology of the stone-made Buddhist pagoda known as 'gorintou'. According to Buddhist beliefs, the gorintou organizes vertically the five elements of the universe, from down to top: Earth (represented by a square), water (a sphere), fire (a pyramid), wind (a hemisphere) and void (a jewel-like shape). The sotoba represent these same elements through side indentations that subtly reinterpret them. Both elements the sotoba and the kanban are replaceable elements that perform visually alike, organizing a text in vertical direction. They are prosthetic not in the '-thesis' (or position) but in the way how they convey communicative transactions; the sotoba portrays the name of the deceased person and the kanban the name (or essential information) of the shop. The temple and the commercial building are the structure that physically sustain the prosthesis (the sotoba and the kanban respectively), but vice versa they (the prosthetic elements) mutually perform in financial terms to sustain the existence of the original body, which is the temple and the commercial building.



'GORINTOU' 'SOTOBA'



BUDDHIST TEMPLE

Alternative analogies in the prosthetical discouse could be argued; such as the 'sotoba' seen as a prosthesis to the temple, in resonance with the one of the signboards to commercial buildings in Tokyo.

5.9 Five principles of Prostho-Urbanism

1. The prosthesis can only exist when there is an interstice in the host body that allows its implantation. Such interstice is in principle an ambiguous space and physically liminal. It is the space where environment and body interface. Functionally is rather a fracture in the system or structure, such as the gap in codes of Tokyo that doesn't fully restrict behavioral and morphological aspects of signboards.

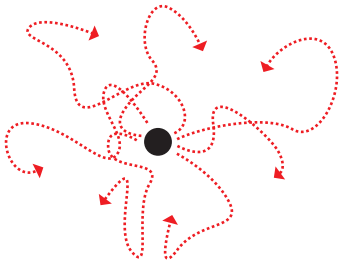
2. The prosthesis regarded as a whole is a hybrid structure, product of organic and mechanic processes. The host body is subject of mutations in larger time spans, while the additive elements have a more intense transformation in a shorter scale of time. It is impossible to understand commercial buildings in Tokyo detached from their signboards, since they establish a reciprocal system of dependence.

3. The prosthesis extends the capabilities of the original body. That is the essential feature of all the prosthetical discourse. Commercial buildings in Tokyo need to get economically supplemented in order to sustain their functions in a high consumptive society. Their location also determines its visual 'desirability'. As I observed, corner buildings in wider streets or with visibility from higher spots become more 'prostheticized' than those along narrower streets, in some cases becoming hosts of crown signboards. This is to say that their performance along with larger additive elements is linked to their capability to convey communicate transactions.

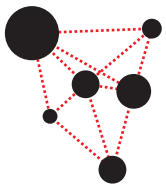
1. INTERSTICE

2. HYBRID

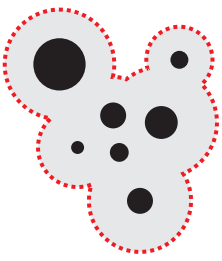
3. EXTENSIVE



4. RECONFIGURATIVE



5. IDENTITY



4. The prosthesis reconfigures the original body, sometimes with intensities that make the original body irrelevant. This reconfiguration is regarded from my perspective as 'monstrous' since the resultant body becomes a deviation of the original one. It can also lead to unintelligible but playful urban creatures in the case of Tokyo.

5. The prosthesis is the ultimate feature of identity. It leaves the body in a state of eccentricity, grounded in aesthetic values existing in Japanese culture. Signboards in many commercial areas in Tokyo are the most evident example of this trend.

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CHAPTER 6

FOUR STUDY CASES.
SHIBUYA, SHINJUKU, GINZA AND UENO

We have been arguing throughout this document about a specific metaphorical figure that we would like to introduce in the urban discourse; however the materialization of such proposition can only be evaluated once implemented in particular study cases.

This research did not intend initially to focus particularly on signboards, since our strive intended firstly to answer our main research question of elaborating a theoretical framework to conciliate two existing theoretical postures. As we have elaborated at the beginning of this document, the chosen methodological approach has been under the scope of a theory-led research, whose nature is qualitative and not quantitative. Its reasoning started from the premise that the prosthetic theory can shed light on reading from a unique standpoint the several elements that add to buildings; hence we aimed to read a prosthetic impulse also in other urban elements such as vending machines and infrastructural equipment to mention few. Finally we narrowed down our scope to signboard since they are the dominating elements in the visual landscape of Tokyo, especially in commercial areas denominated as 'sakariba' in Japanese language.

Sakariba existed originally during the Edo period as entertainment quartiers where "*large numbers of people of all social ranks gathered to eat, drink and be entertained*" as Roman Cybriwsky introduces in his Historical Dictionary of Tokyo (1). The name has prevailed until our days but the places have changed significantly. We have chosen four commercial oriented areas mainly for its visual similarities, all of them presenting an intense amount of aggregating elements attached to their buildings, more specifically signboards.

Our first assumption was that the only possibility to understand such complex contexts in Tokyo can only be through the fragmentation of elements in the medium and smaller scales. Another assumption was that if prosthetics in the human body can endow it with a particular visual identity, subjective similarities in these places could be proven objectively through rigorous methodological observations of these specific aggregations. Moreover, proper documentation of the same amount of buildings in each of the four areas could lead firstly to a categorization of elements and secondly to summarize intensities on each typology which could be translated as unique to each of these cities.

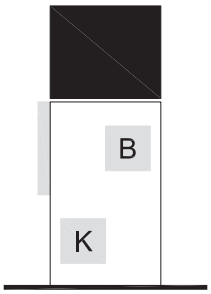
Being consistent with the idea that prosthetics in the human body are categorized according to their position, four typologies of signboards where established following the same criteria:

Crown, Arm, Billboard and Kanban.

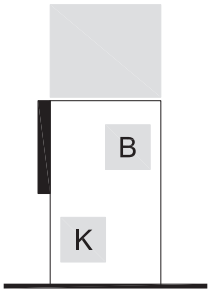
A. CROWN: This typology corresponds mainly to signboards on the top of buildings, which by law need to be separated 80 cm. from the building. As we will observe in the next categories, crown signboards can be related to the tenant of the building or simply announce something unrelated. The revenue that this typology can bring to tenants is the highest of all, since the building position on the street provides more visibility for consumers.

B. ARM: As its name shows, these signboards are set up vertically on one side of the host building. Their smaller size limits the quantity of information they can provide, generally indicating activities of tenants by floor, rarely promoting other information unrelated to the activities within the building. Their long position allows easier visibility from one side of the street.

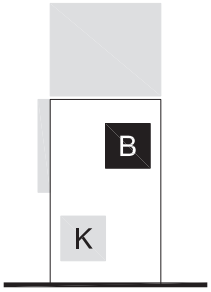
C & D. BILLBOARD & KANBAN: These two last categories are similar in size and position within the host building. Both are set to take any other position in the surface of the building that is not taken by the previous two categories. Billboard is used specifically for signboards that are not related to tenants or activities in the building, generally rented to third parties to bring revenue mainly to the owner of the building. Kanban signboards are related exclusively to tenants of the building, in resonance to the original concept introduced by Prof. Fujimori and commented in the previous chapter of this document.



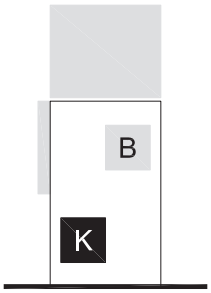
A. CROWN



B. ARM



C. BILLBOARD

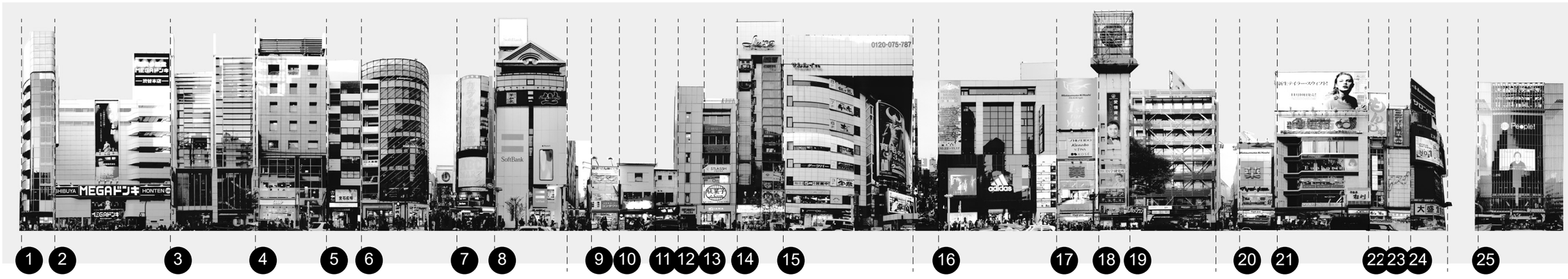


D. KANBAN

Four signboard typologies according to their position on the building, following the principles of prosthetics in the human body.

SHIBUYA

Total number of buildings 25



SHIBUYA SPECIMENS

SPECIMENS

KEY MAP

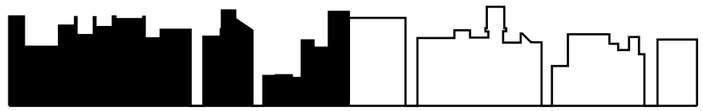
full section

SHIBUYA 01.

SHIBUYA SPECIMENS - PART 01.

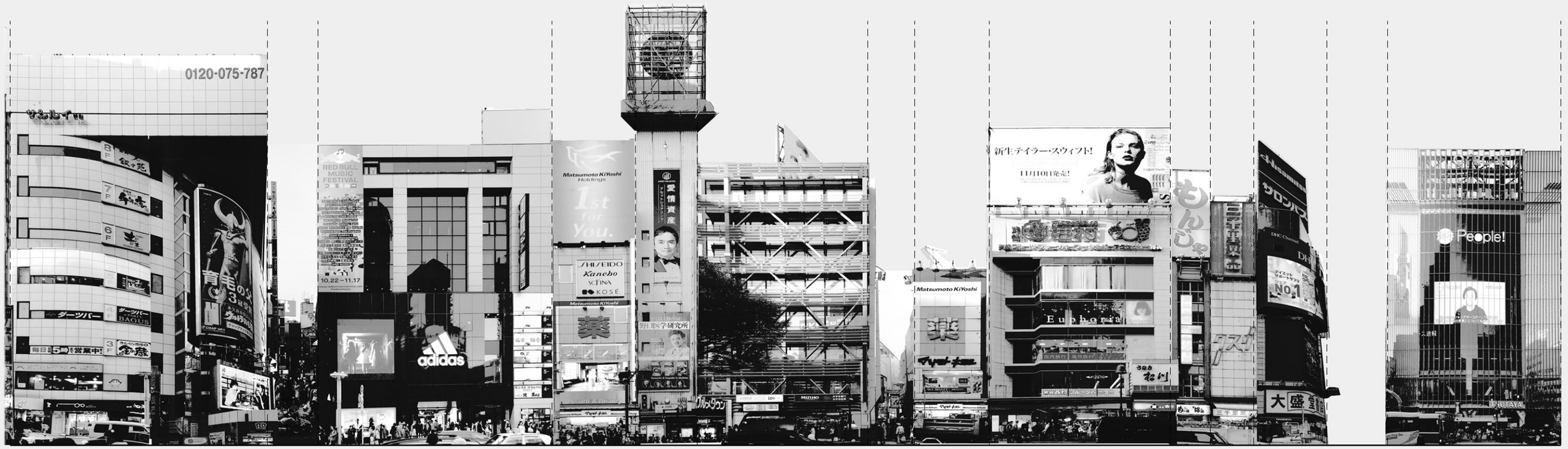
SPECIMENS

KEY MAP



part 01.

SHIBUYA 02.



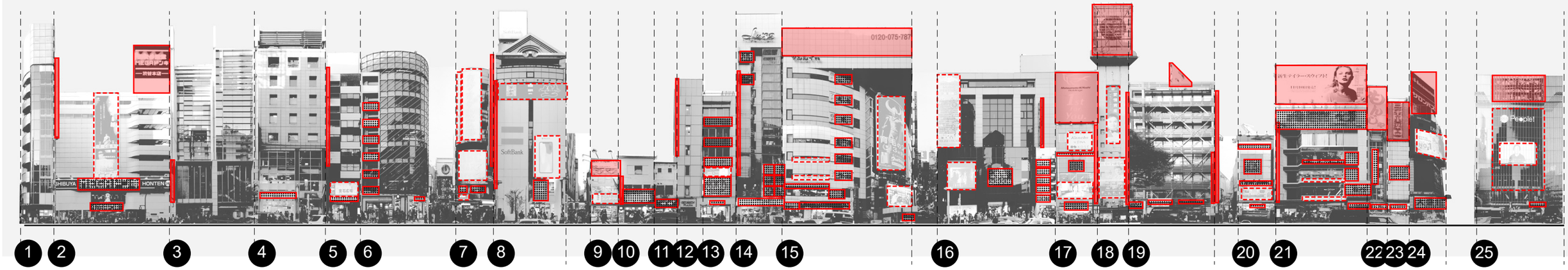
SHIBUYA SPECIMENS - PART 02.

SPECIMENS

KEY MAP

SHIBUYA

Total number of buildings	25
Total number of prosthesis	119



SHIBUYA SPECIMENS

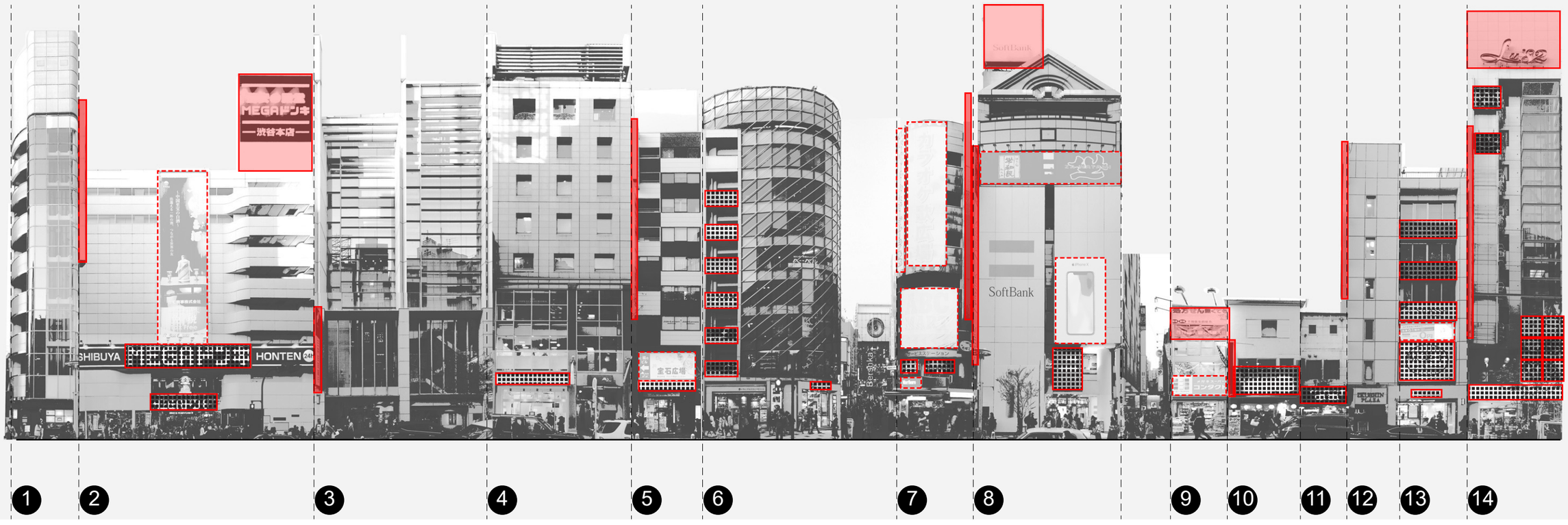
PROSTHESIS LEGEND

a. Crown	15	
b. Arm	12	
c. Billboard	24	
d. Kanban	68	

KEY MAP

full section

SHIBUYA 01.



SHIBUYA SPECIMENS - PART 01.

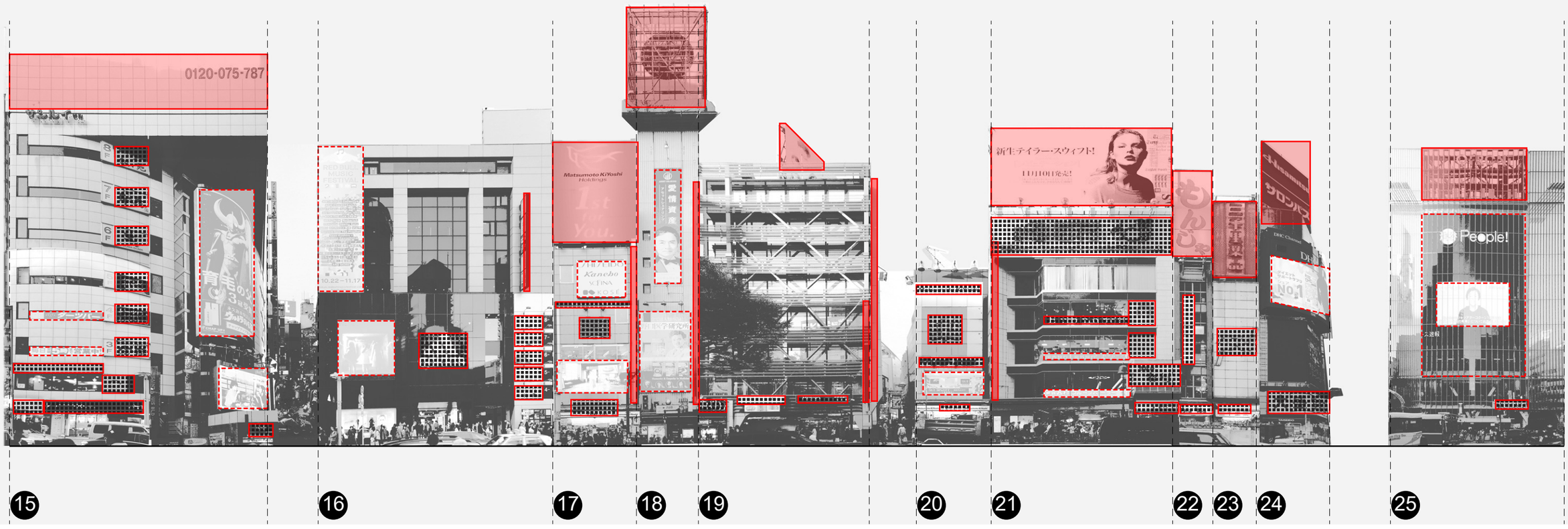
PROSTHESIS LEGEND

a. Crown	6	
b. Arm	6	
c. Billboard	9	
d. Kanban	30	

KEY MAP

part 01.

SHIBUYA 02.

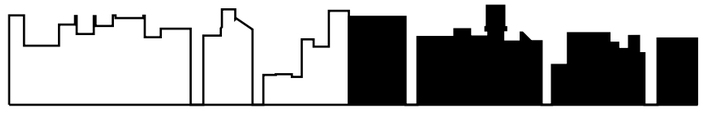


SHIBUYA SPECIMENS - PART 02.

PROSTHESIS LEGEND

a. Crown	9	
b. Arm	6	
c. Billboard	15	
d. Kanban	38	

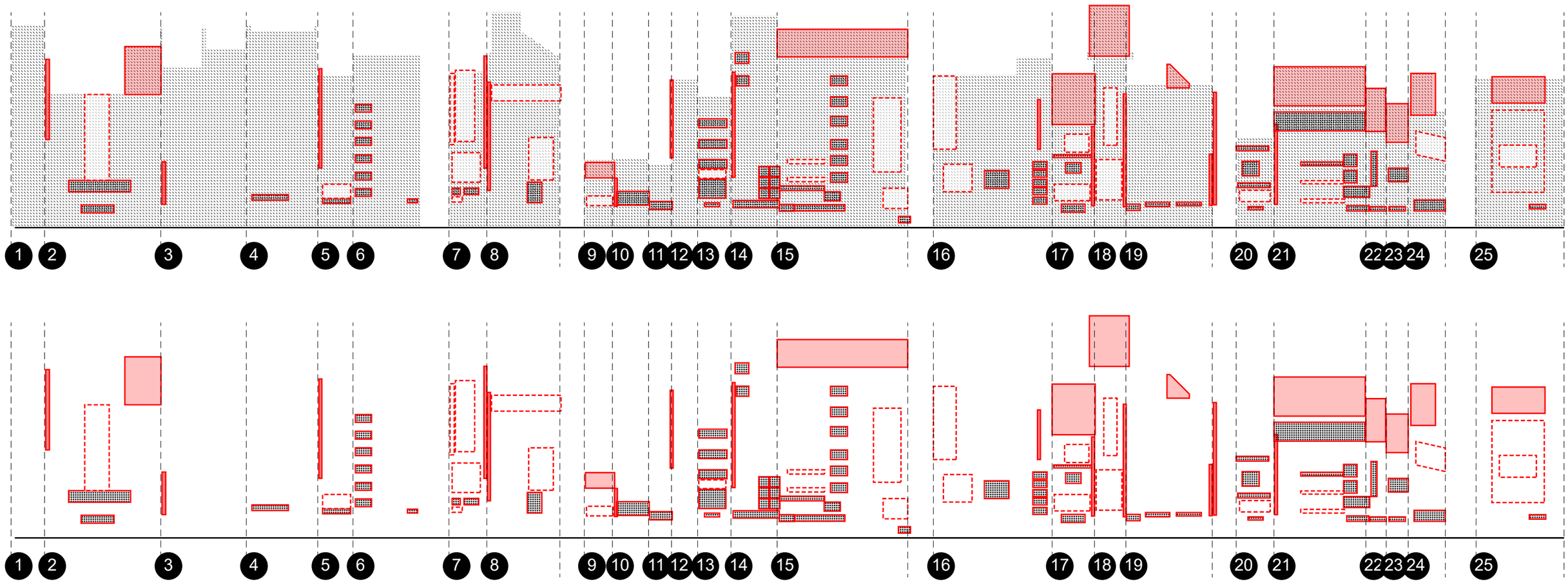
KEY MAP



SHIBUYA

Total number of buildings 25

Total number of prosthesis 119



SHIBUYA SPECIMENS

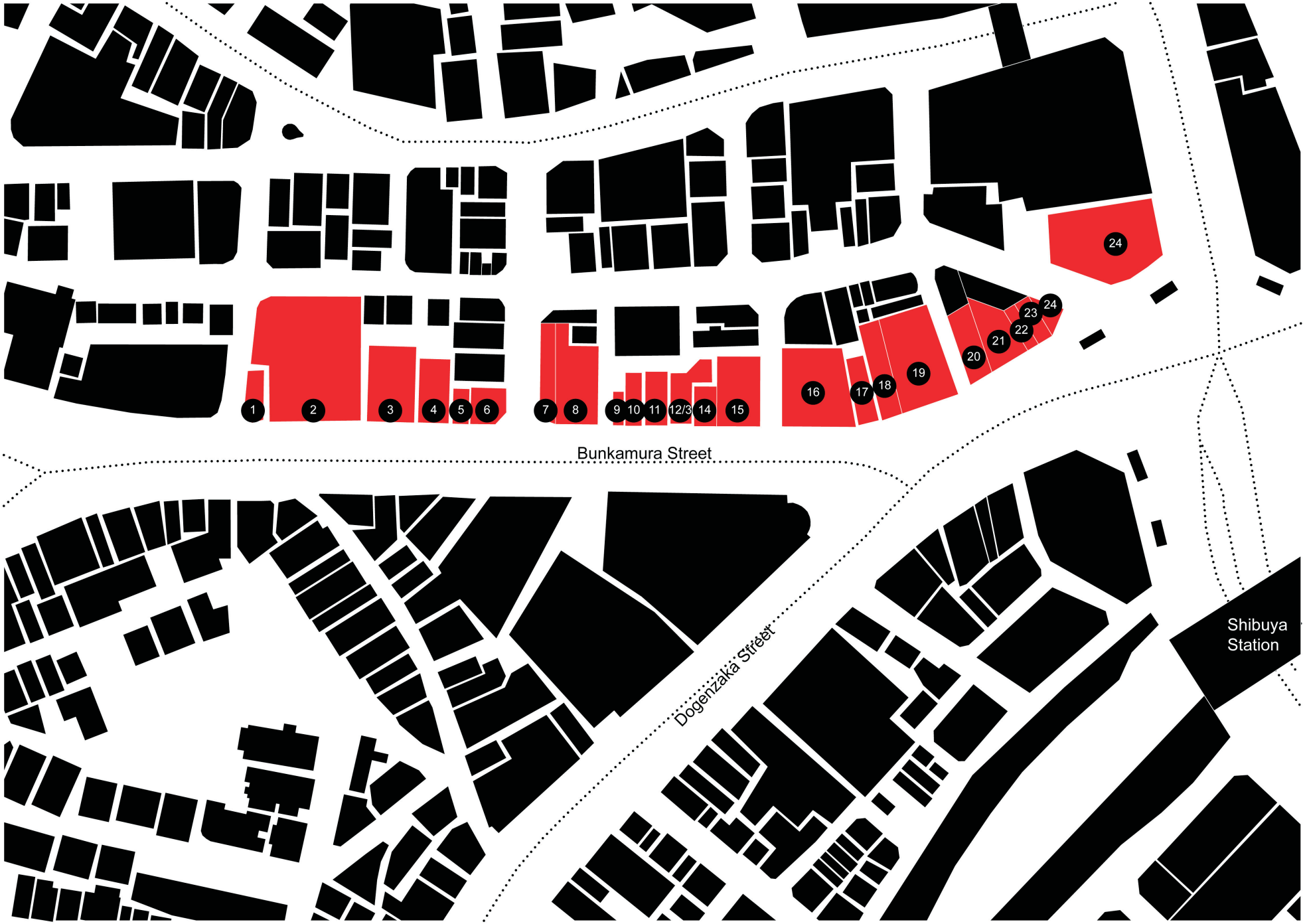
PROSTHESIS LEGEND

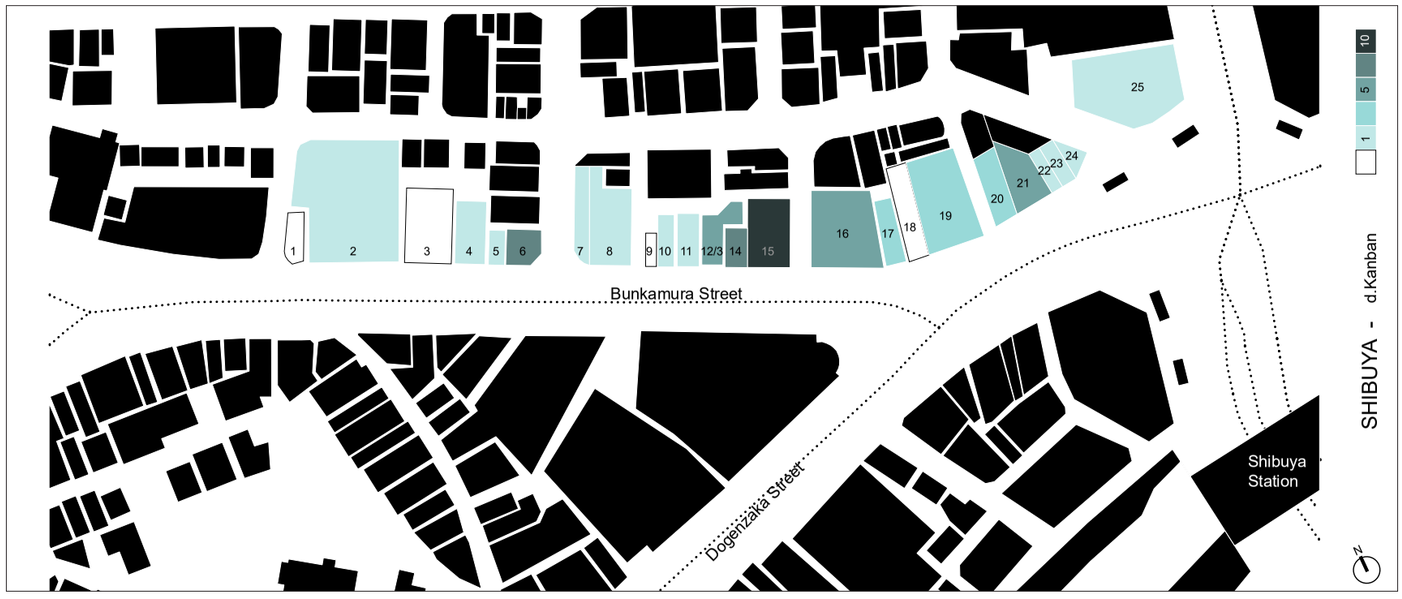
a. Crown	15	
b. Arm	12	
c. Billboard	24	
d. Kanban	68	

KEY MAP

full section

SHIBUYA - Key map

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Shibuya
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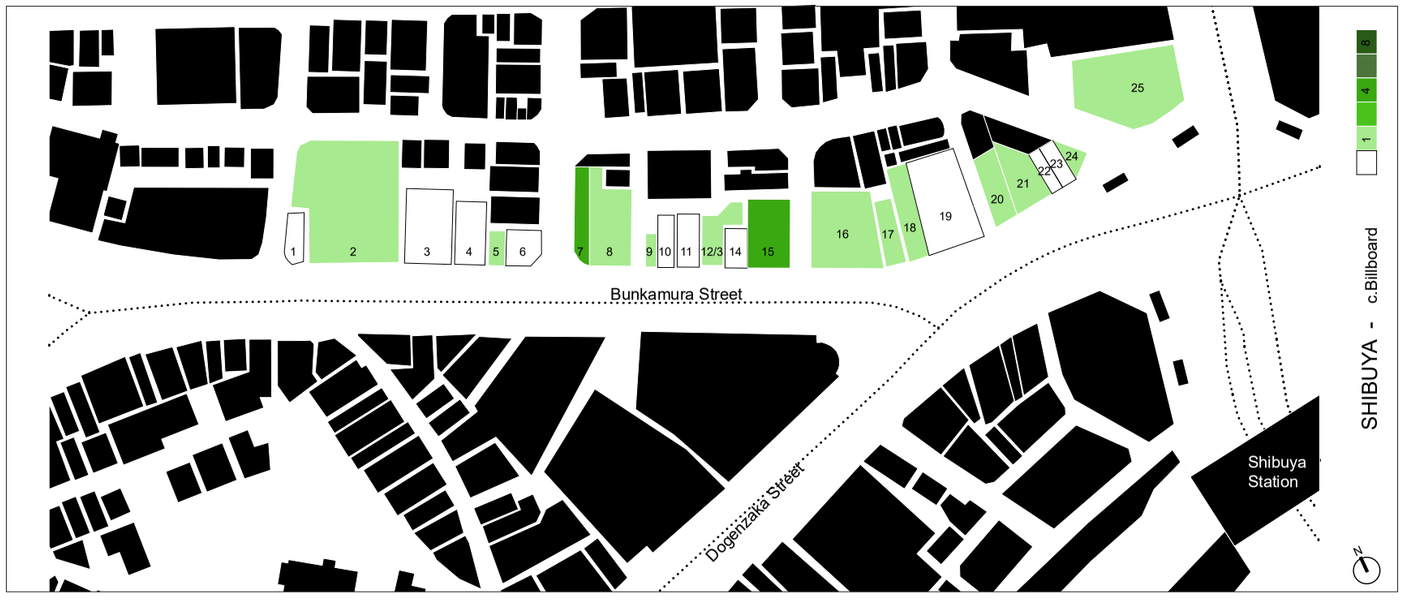
SHIBUYA - d.Kanban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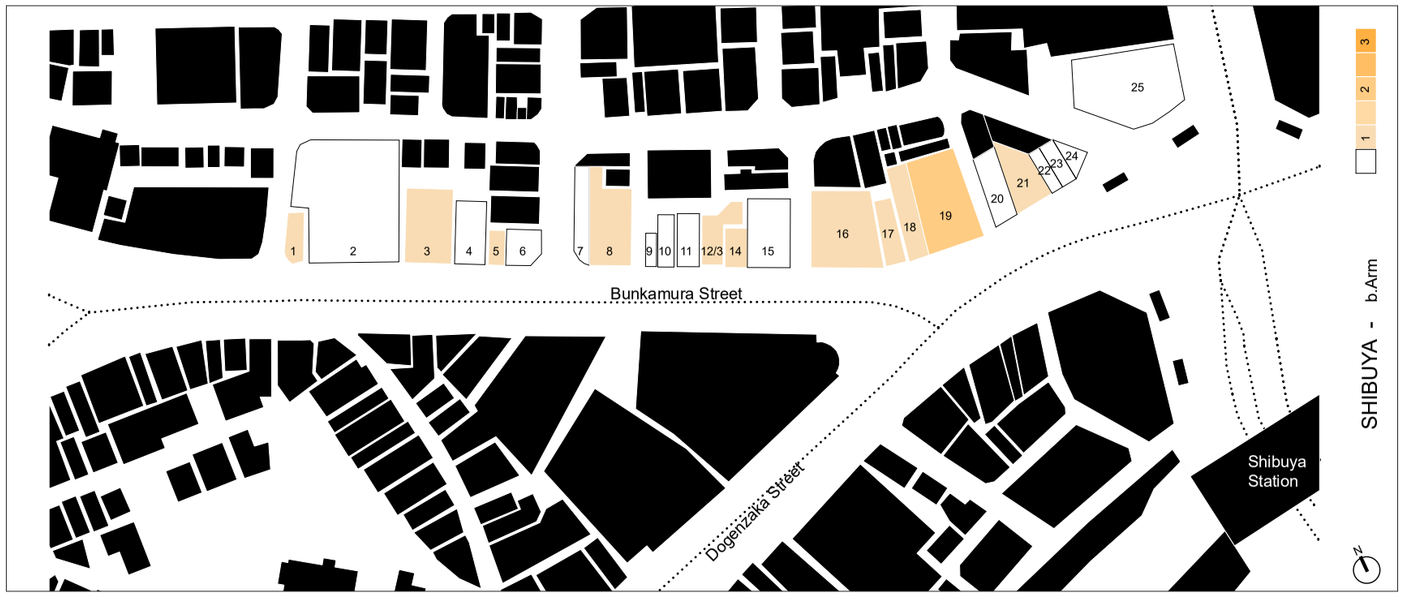
SHIBUYA - c.Billboard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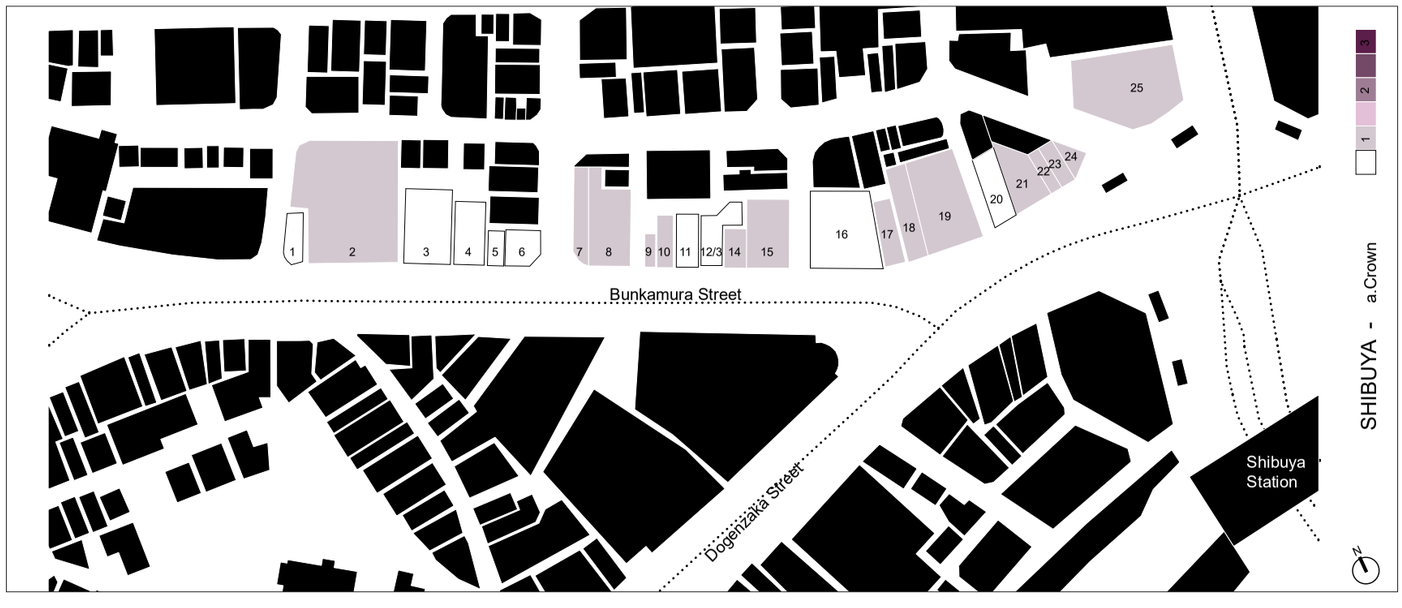
SHIBUYA - b.Arm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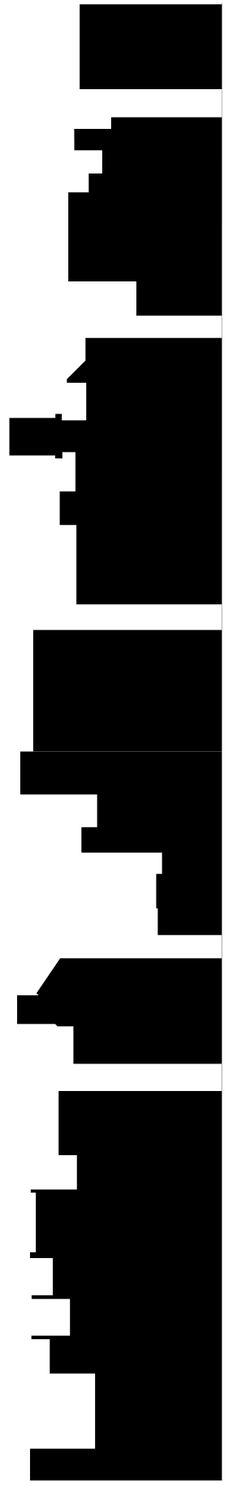
SHIBUYA - a.Crown

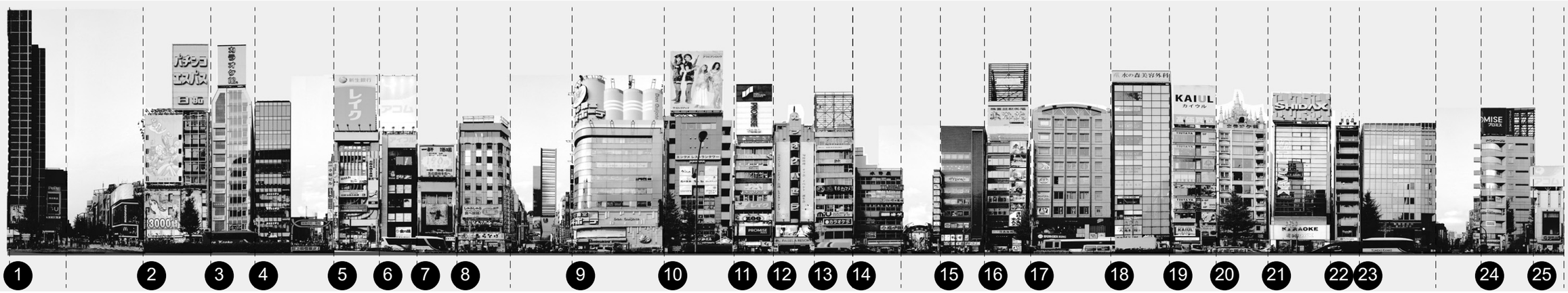
DISTRICT Shibuya								
District code	Building #	Image	TYPE OF PROSTHESIS				Note	Sheet
			a. Crown	b.Arm	c.Billboard	d.Kanban		
SHB.	1			1				1
SHB.	2		1		1	2		1
SHB.	3			1				1
SHB.	4					1		1
SHB.	5			1	1	1		1
SHB.	6					7		1
SHB.	7		1		4	2		1
SHB.	8		1	1	1	1		1
SHB.	9		1		1			1
SHB.	10		1			1		1
SHB.	11					1		1
SHB.	12			1				1
SHB.	13				1	5		1
SHB.	14		1	1		9		1
SHB.	15		1		4	11		2
SHB.	16			1	2	6		2
SHB.	17		1	1	2	3		2
SHB.	18		1	1	2			2
SHB.	19		1	2		3		2
SHB.	20				1	3		2
SHB.	21		1	1	2	6		2
SHB.	22		1			2		2
SHB.	23		1			2		2
SHB.	24		1		1	1		2
SHB.	25		1		1	1		2
Total # of prosthesis			15	12	24	68		
Total # of all prosthesis						119		
Total # building						25		



SHIBUYA SPECIMENS

SHINJUKU

Total number of buildings 25



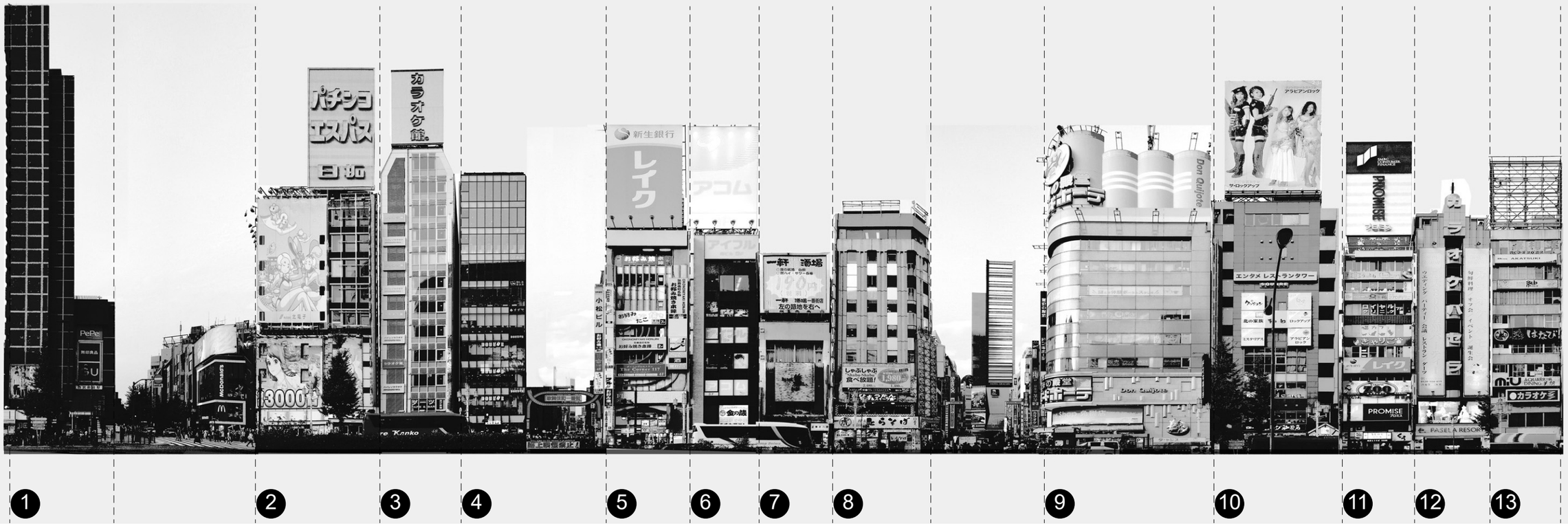
SHINJUKU SPECIMENS

SPECIMENS

KEY MAP

full section

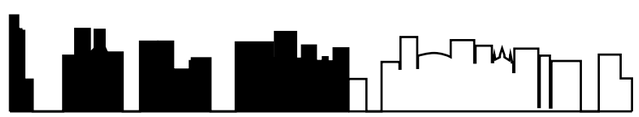
SHINJUKU 01.



SHINJUKU SPECIMENS - PART 01.

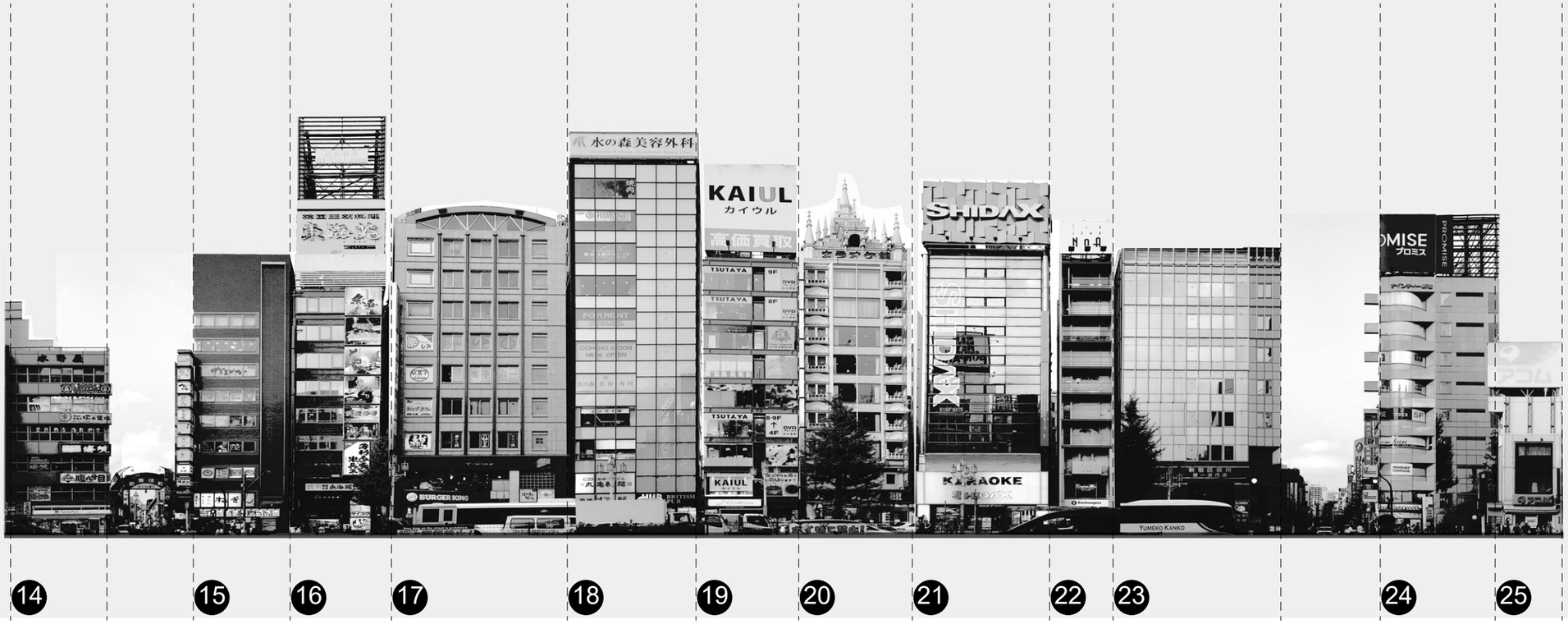
SPECIMENS

KEY MAP



part 01.

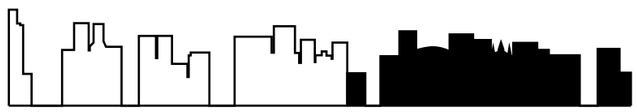
SHINJUKU 02.



SHINJUKU SPECIMENS - PART 02.

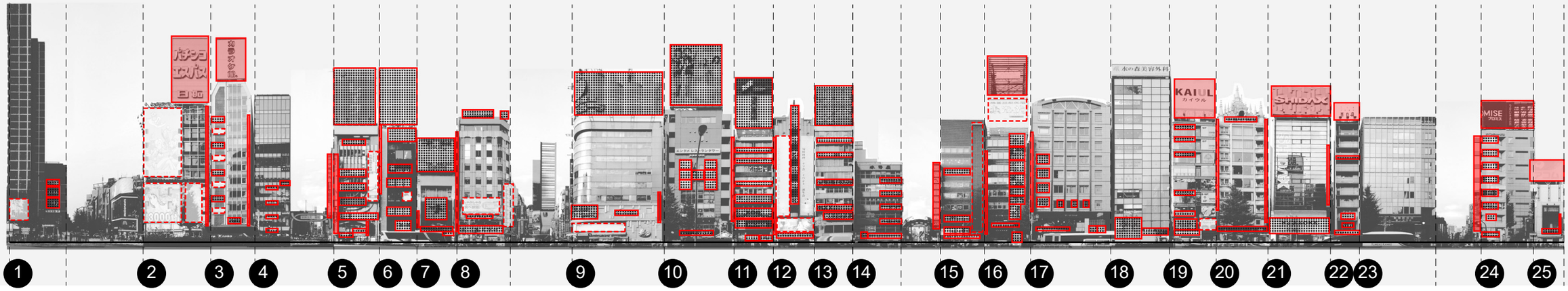
SPECIMENS

KEY MAP



SHINJUKU

Total number of buildings	25
Total number of prosthesis	165



SHINJUKU SPECIMENS

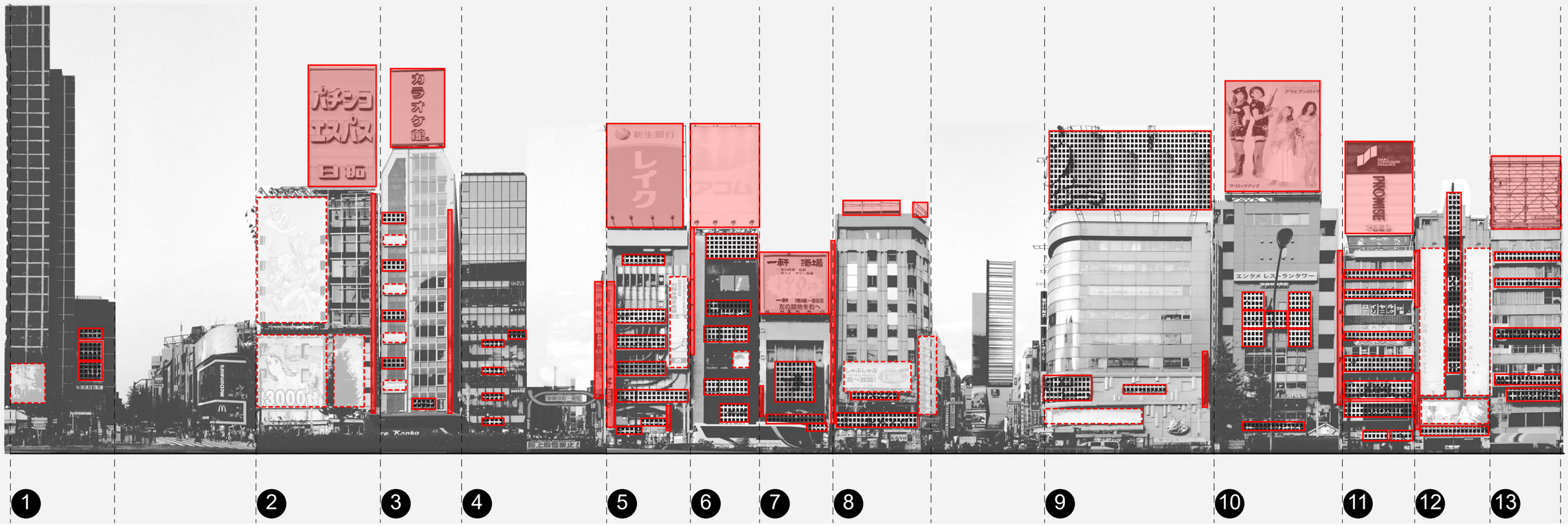
PROSTHESIS LEGEND

a. Crown	17	
b. Arm	20	
c. Billboard	18	
d. Kanban	110	

KEY MAP

full section

SHINJUKU 01.



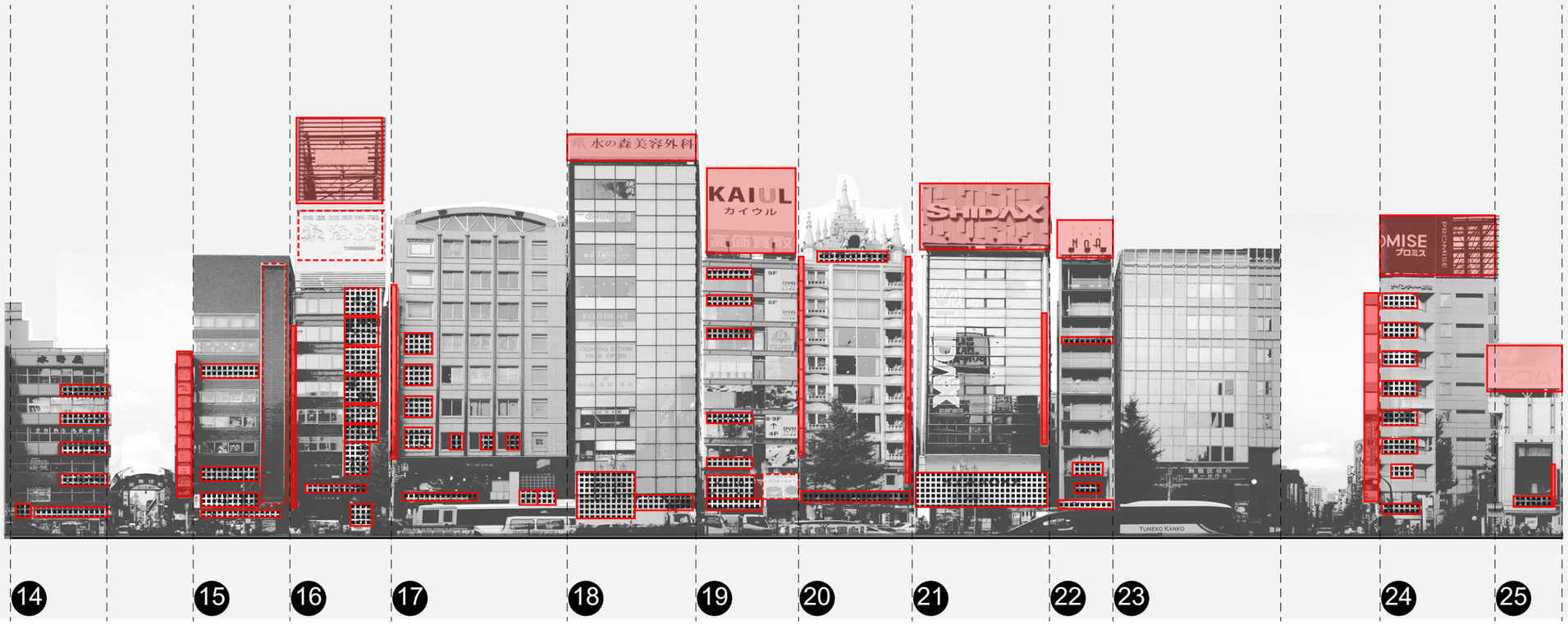
SHINJUKU SPECIMENS - PART 01.

PROSTHESIS LEGEND

a. Crown	10	
b. Arm	12	
c. Billboard	16	
d. Kanban	56	

KEY MAP

SHINJUKU 02.

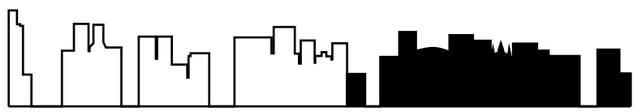


SHINJUKU SPECIMENS - PART 02.

PROSTHESIS LEGEND

a. Crown	7	
b. Arm	8	
c. Billboard	2	
d. Kanban	54	

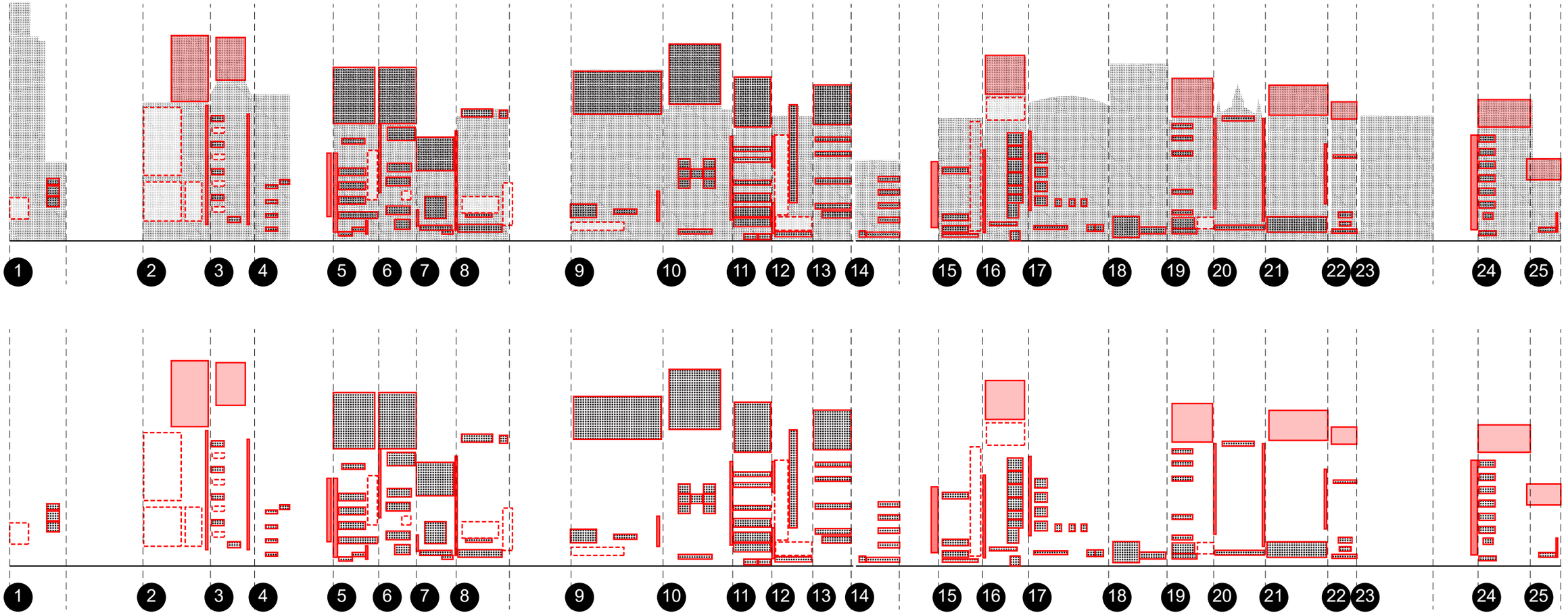
KEY MAP



SHINJUKU

Total number of buildings 25

Total number of prosthesis 165



SHINJUKU

SPECIMENS

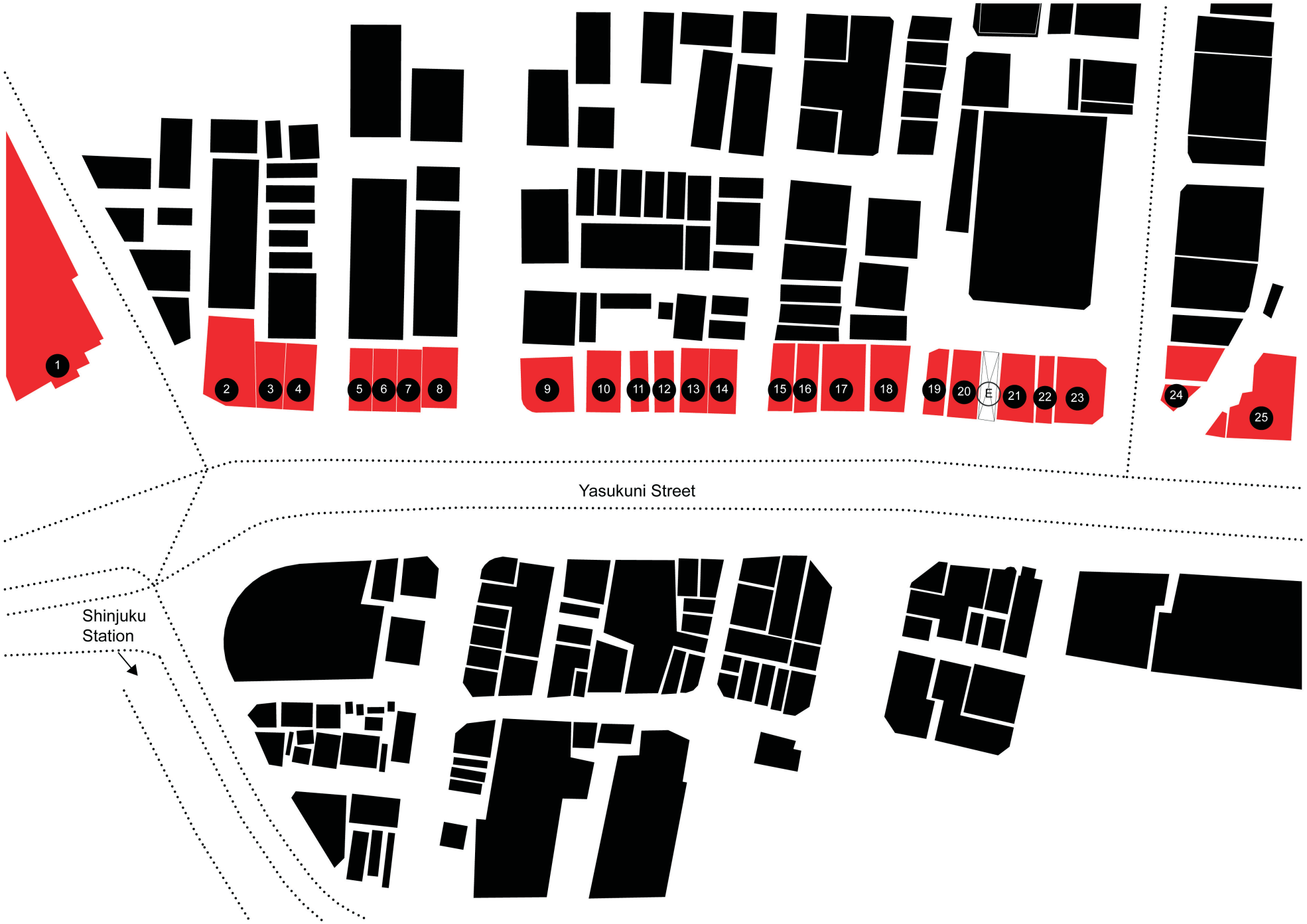
PROSTHESIS LEGEND

a. Crown	17	
b. Arm	20	
c. Billboard	18	
d. Kanban	110	

KEY MAP

full section

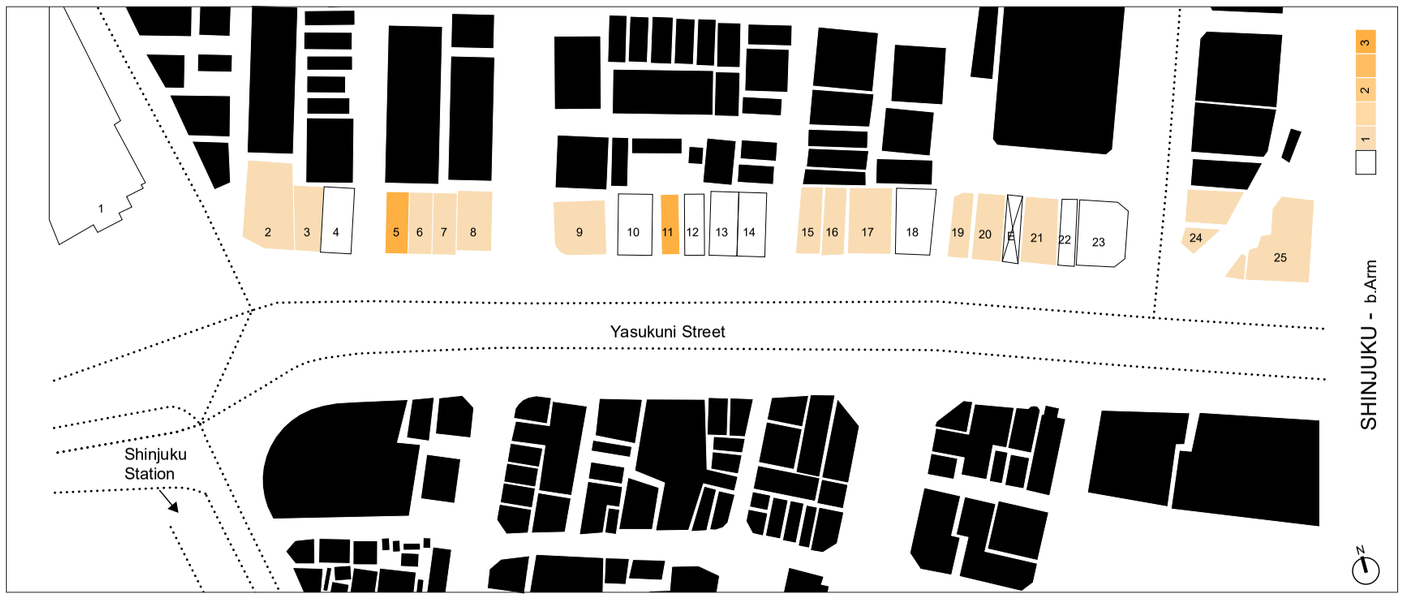
SHINJUKU - Key map

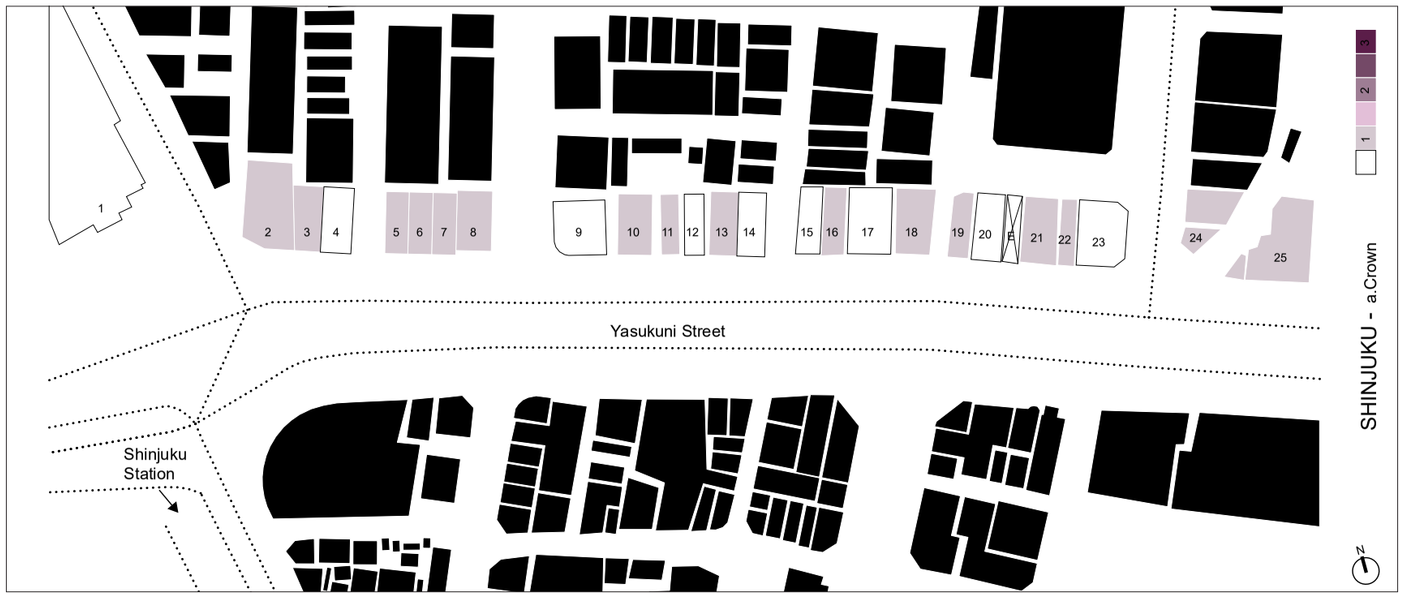


SHINJUKU

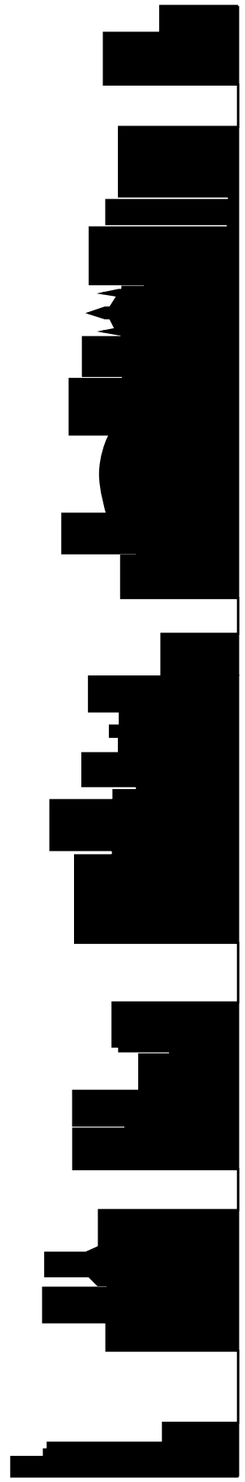
1
2 3 4
5 6 7 8
9 10 11 12 13 14
15 16 17 18
19 20 E 21 22 23
24 25
10
5
1
Yasukuni Street
Shinjuku
Station
SHINJUKU - d.Kanban
N

1
2 3 4
5 6 7 8
9 10 11 12 13 14
15 16 17 18
19 20 E 21 22 23
24 25
8
4
1
Yasukuni Street
Shinjuku
Station
SHINJUKU - c.Billboard
N


1
2 3 4
5 6 7 8
9 10 11 12 13 14
15 16 17 18
19 20 E 21 22 23
24 25
3
2
1
Yasukuni Street
Shinjuku
Station
SHINJUKU - b.Arm
N


1
2 3 4
5 6 7 8
9 10 11 12 13 14
15 16 17 18
19 20 E 21 22 23
24 25
3
2
1
Yasukuni Street
Shinjuku
Station
SHINJUKU - a.Crown
N

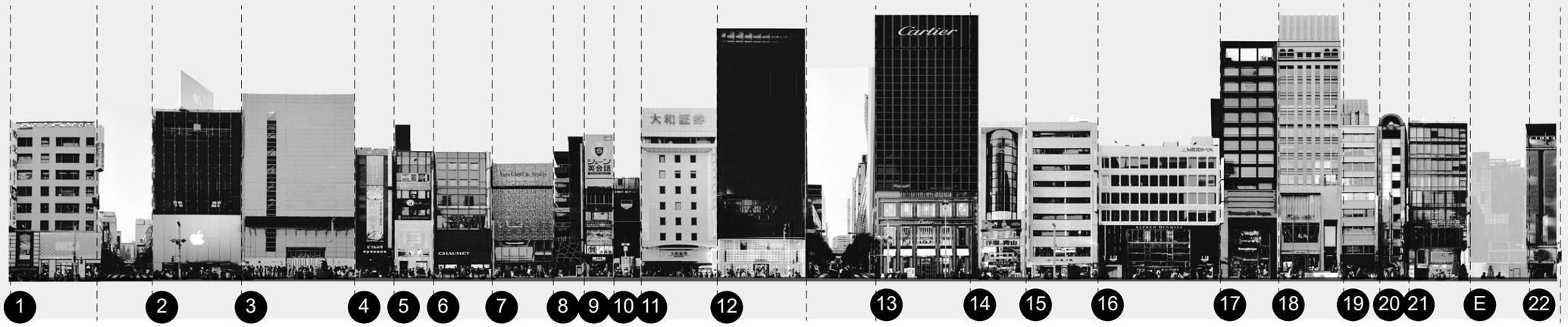
DISTRICT Shinjuku								
District code	Building #	Image	TYPE OF PROSTHESIS				Note	Sheet
			a. Crown	b.Arm	c.Billboard	d.Kanban		
SHN.	1				1	3		1
SHN.	2		1	1	3			1
SHN.	3		1	1	4	5		1
SHN.	4					5		1
SHN.	5		1	3	1	7		1
SHN.	6		1	1	1	5		1
SHN.	7		1	1		3		1
SHN.	8		2	1	2	2		1
SHN.	9			1	1	3		1
SHN.	10		1			8		1
SHN.	11		1	3		8		1
SHN.	12				3	2		1
SHN.	13		1			5		1
SHN.	14					6		2
SHN.	15			1		4		2
SHN.	16		1	1	1	9		2
SHN.	17			1		10		2
SHN.	18		1			2		2
SHN.	19		1	1	1	7		2
SHN.	20			1		2		2
SHN.	21		1	1		1		2
SHN.	22		1			4		2
SHN.	23							2
SHN.	24		1	1		8		2
SHN.	25		1	1		1		2
Total # of prosthesis			17	20	18	110		
Total # of all prosthesis						165		
Total # building						25		



SHINJUKU SPECIMENS

GINZA

Total number of buildings 22



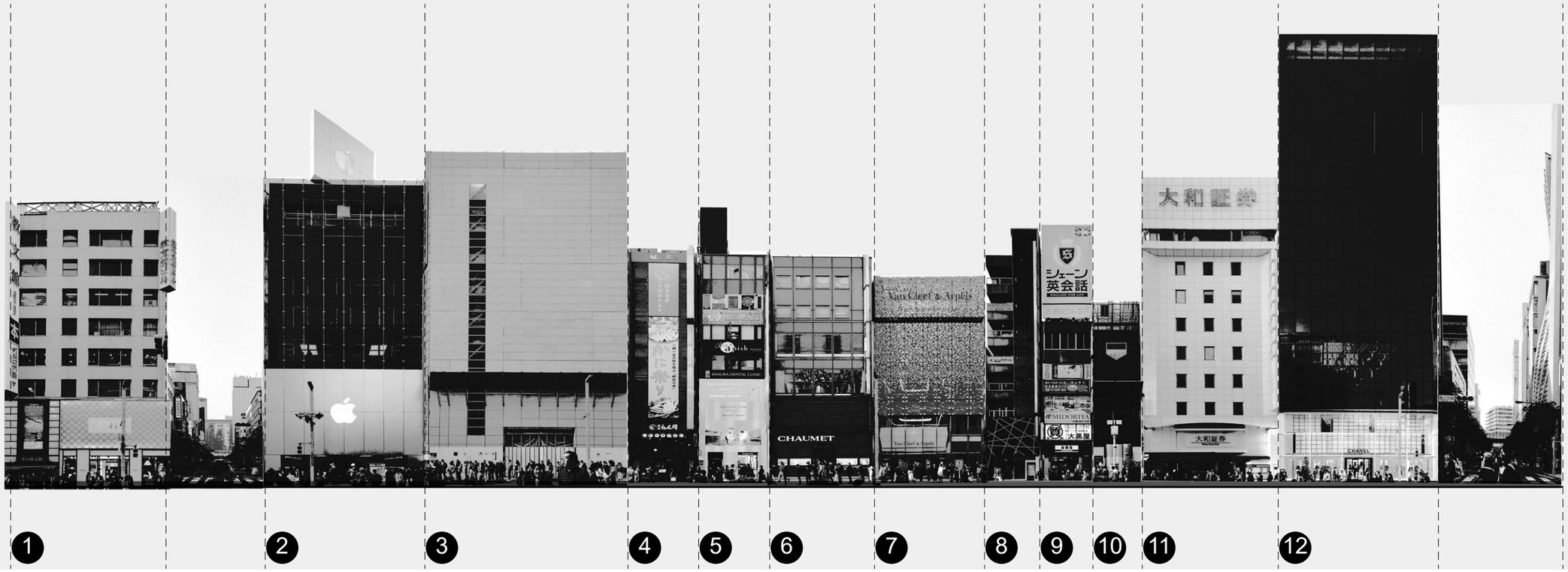
GINZA SPECIMENS

SPECIMENS

KEY MAP

full section

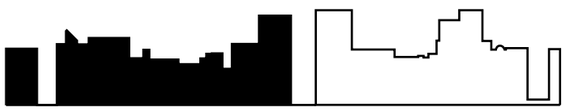
GINZA 01.



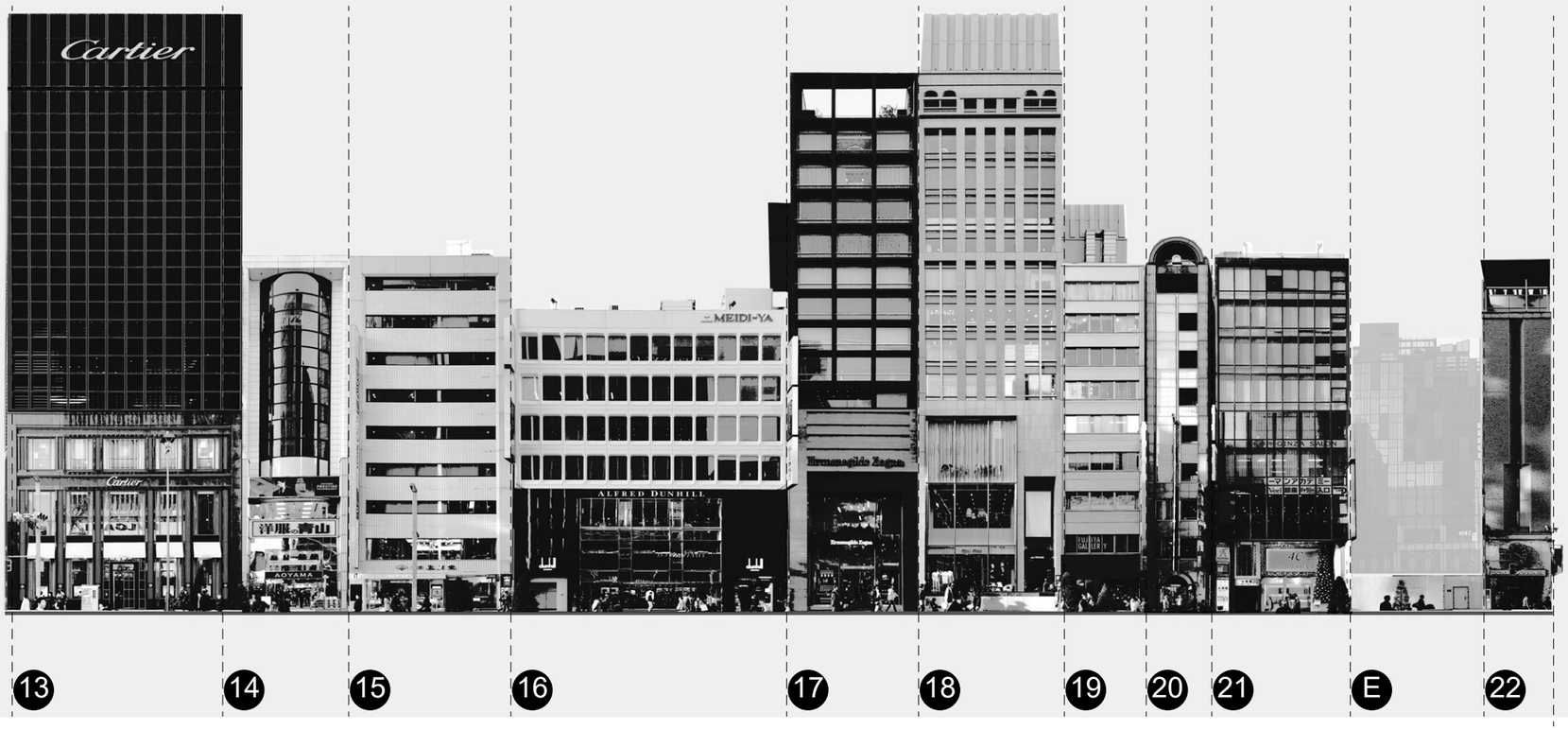
GINZA SPECIMENS - PART 01.

SPECIMENS

KEY MAP

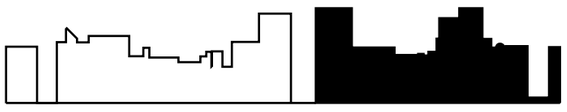


part 01.



SPECIMENS

KEY MAP



GINZA

Total number of buildings 22

GINZA SPECIMENS

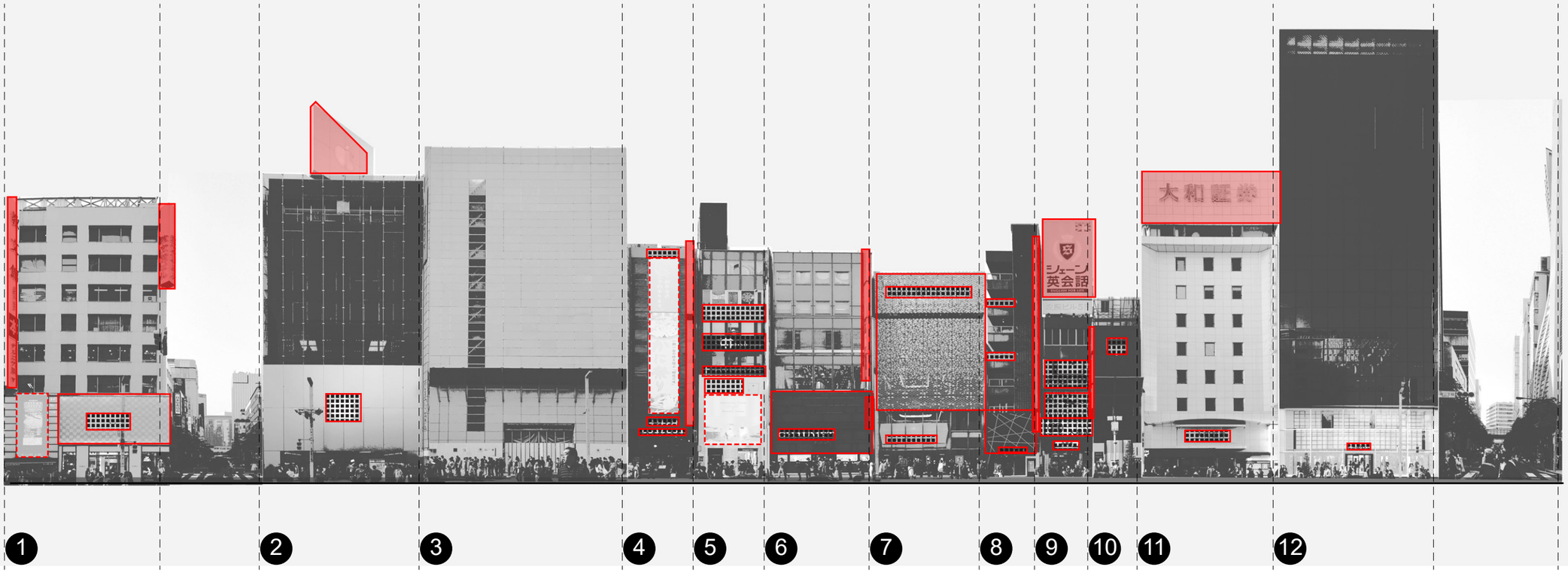
PROSTHESIS LEGEND

a. Crown	3	
b. Arm	14	
c. Billboard	5	
d. Kanban	43	

KEY MAP

full section

GINZA 01.

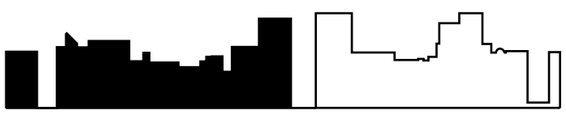


GINZA SPECIMENS - PART 01.

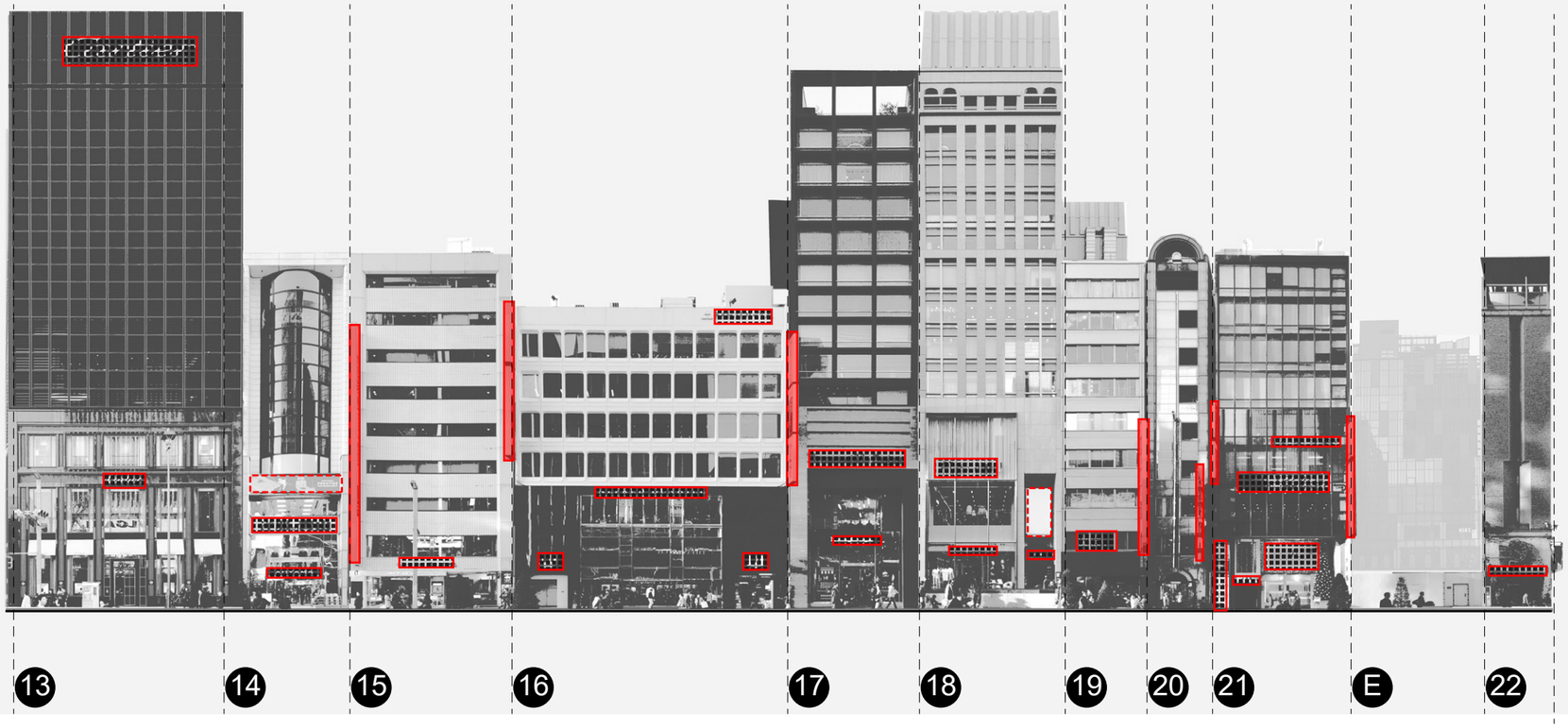
PROSTHESIS LEGEND

a. Crown	3	
b. Arm	7	
c. Billboard	3	
d. Kanban	22	

KEY MAP



GINZA 02.

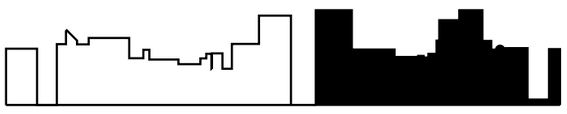


GINZA SPECIMENS - PART 01.

PROSTHESIS LEGEND

a. Crown	3	
b. Arm	7	
c. Billboard	2	
d. Kanban	21	

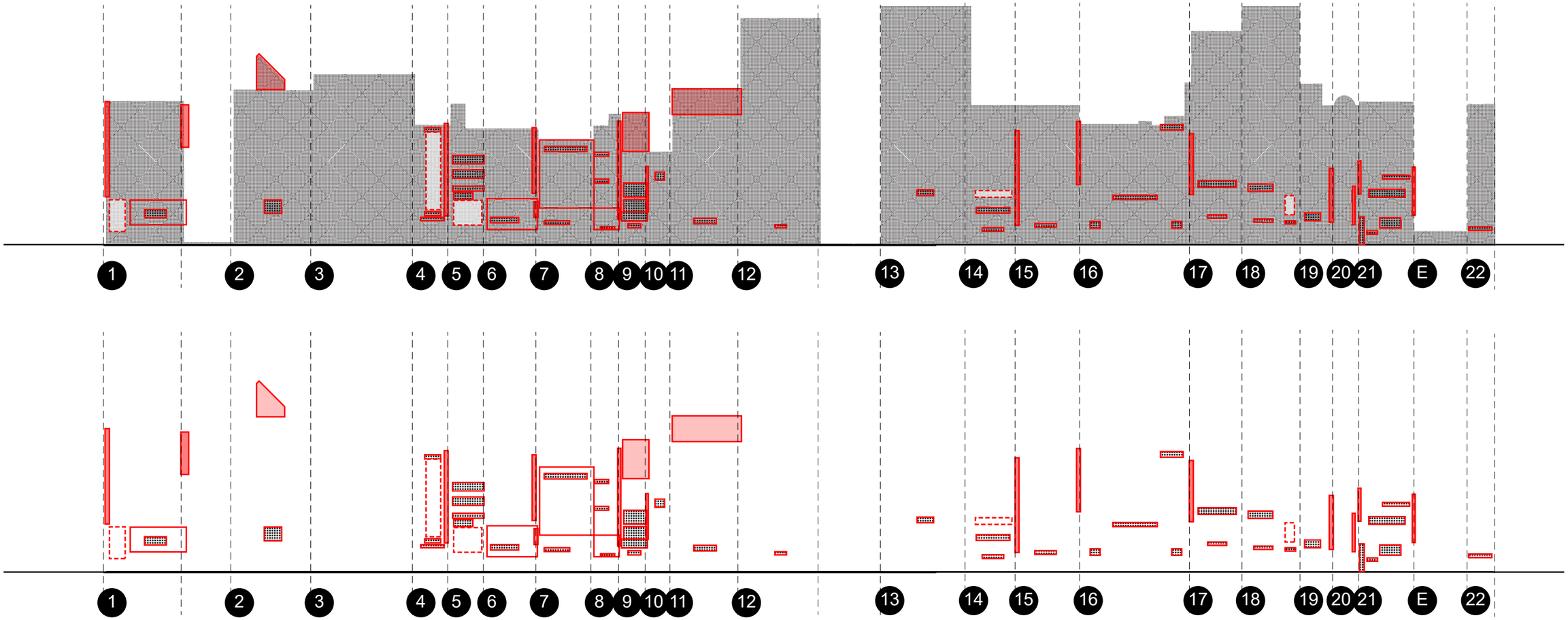
KEY MAP



GINZA

Total number of buildings 22

Total number of prosthesis 65



PROSTHESIS LEGEND

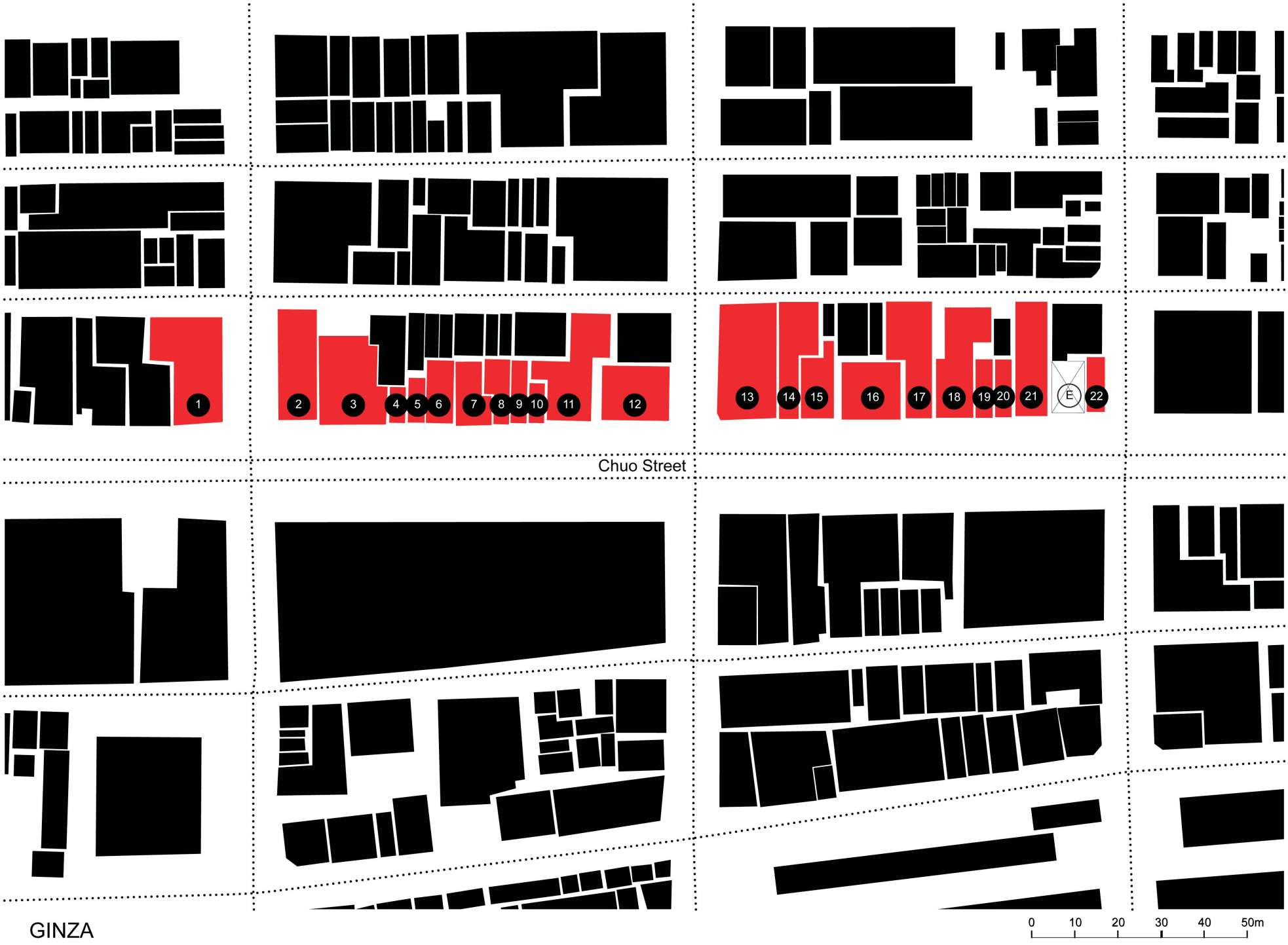
a. Crown	3	
b. Arm	14	
c. Billboard	5	
d. Kanban	43	

KEY MAP

full section

90

GINZA SPECIMENS - PART 01.



GINZA - Key map

Chuo Street
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
EE
22
N
GINZA - a.Crown
1
2
3

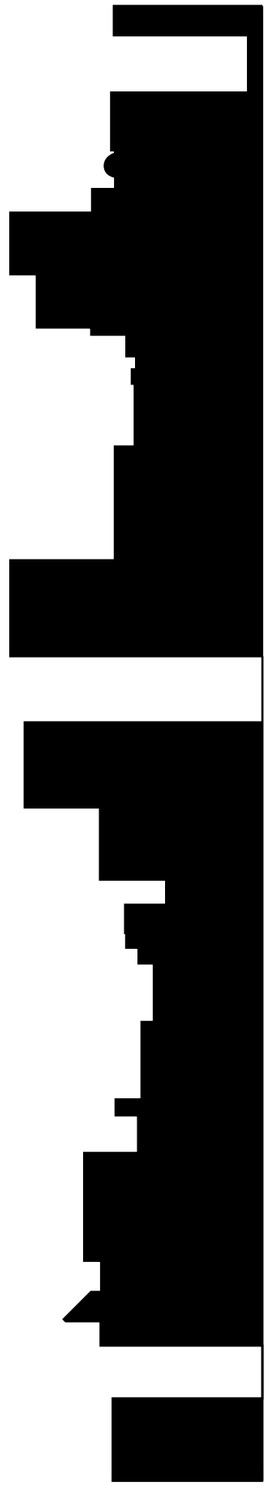
Chuo Street
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
EE
22
N
GINZA - b.Arm
1
2
3

Chuo Street
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
EE
22
N
GINZA - c.Billboard
1
4
8

Chuo Street
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
EE
22
N
GINZA - d.Kanban
1
5
10

DISTRICT Ginza

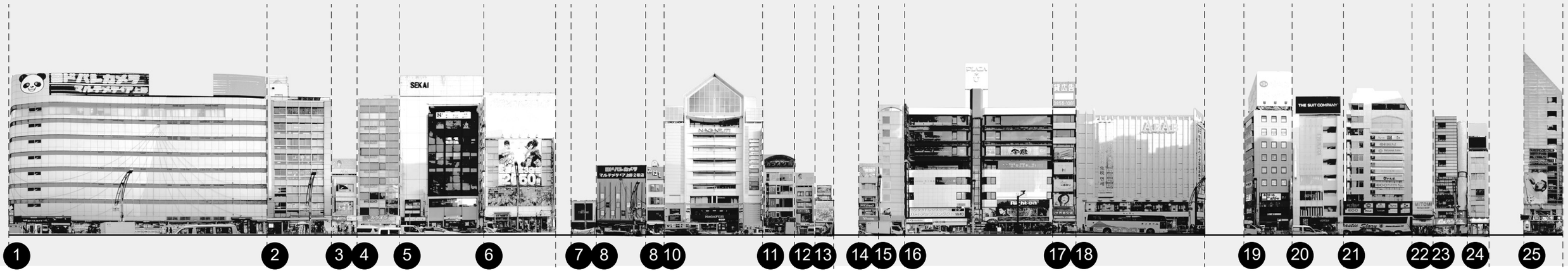
District code	Building #	Image	TYPE OF PROSTHESIS				Note	Sheet
			a. Crown	b.Arm	c.Billboard	d.Kanban		
GIN.	1			2	1	1		1
GIN.	2		1			1		1
GIN.	3							1
GIN.	4			1	1	3		1
GIN.	5				1	4		1
GIN.	6			2		1		1
GIN.	7					2		1
GIN.	8			1		3		1
GIN.	9		1	1		4		1
GIN.	10					1		1
GIN.	11		1			1		1
GIN.	12					1		1
GIN.	13					2		2
GIN.	14				1	2		2
GIN.	15			1		1		2
GIN.	16			2		4		2
GIN.	17					2		2
GIN.	18				1	3		2
GIN.	19			1		1		2
GIN.	20			1				2
GIN.	21			2		5		2
GIN.	E							2
GIN.	22					1		2
Total # of prosthesis			**3**	**14**	**5**	**43**		
Total # of all prosthesis						**65**		
Total # building						**22**		



GINZA SPECIMENS - PART 01.

UENO

Total number of buildings 25



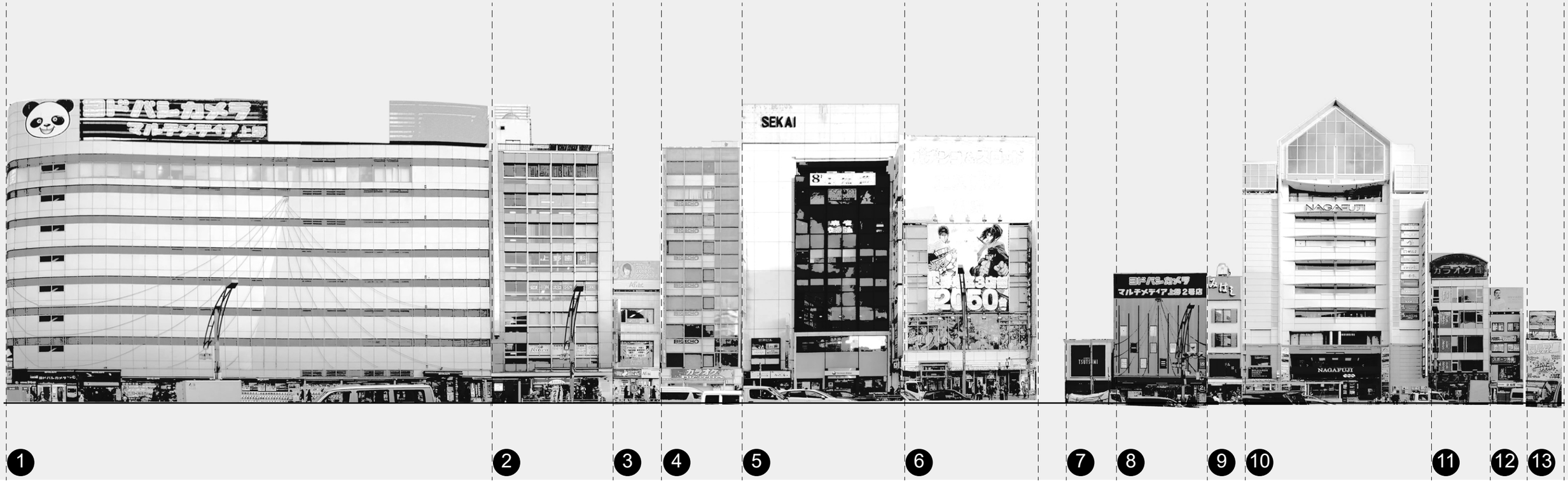
UENO SPECIMENS

SPECIMENS

KEY MAP

full section

UENO 01.



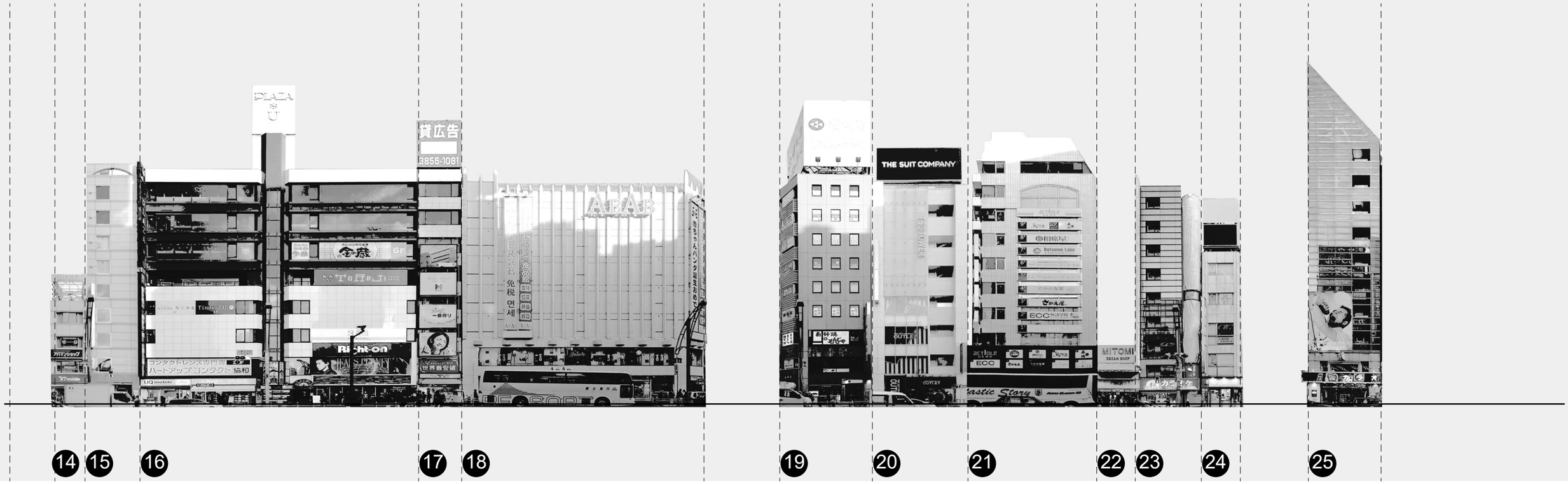
UENO SPECIMENS - PART 01.

SPECIMENS

KEY MAP

part 01.

UENO 02.



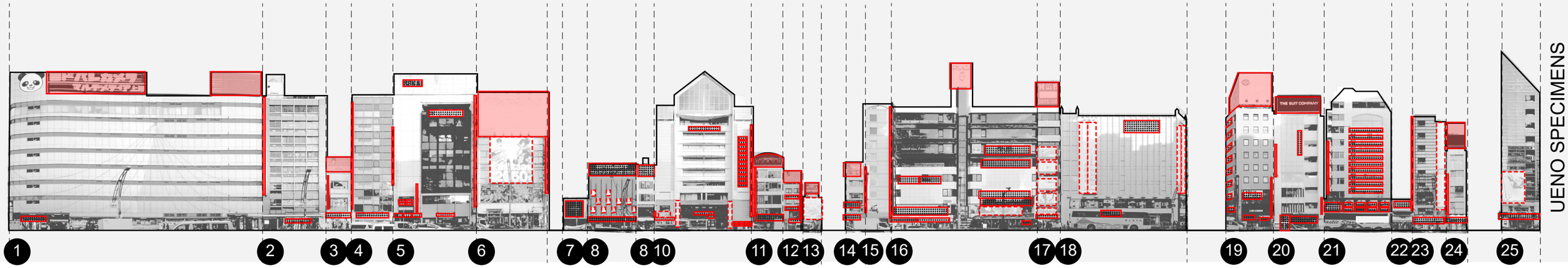
UENO SPECIMENS - PART 02.

SPECIMENS

KEY MAP

UENO

Total number of buildings 25



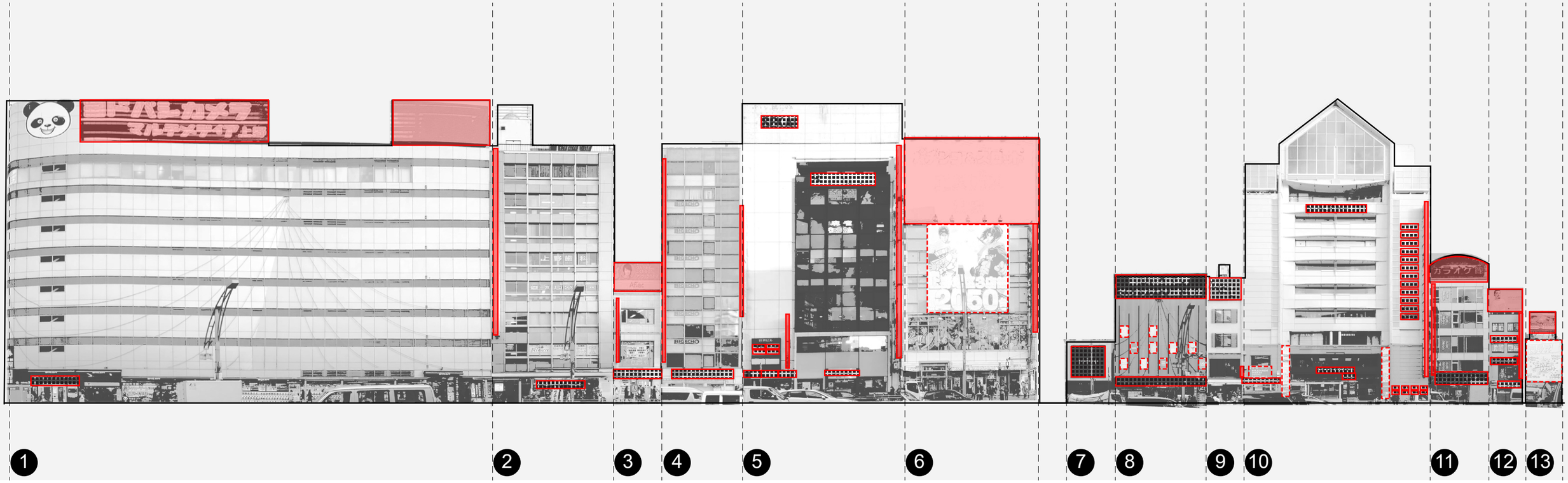
PROSTHESIS LEGEND

a. Crown	14	
b. Arm	20	
c. Billboard	12	
d. Kanban	98	

KEY MAP

full section

UENO 01.



UENO SPECIMENS - PART 01.

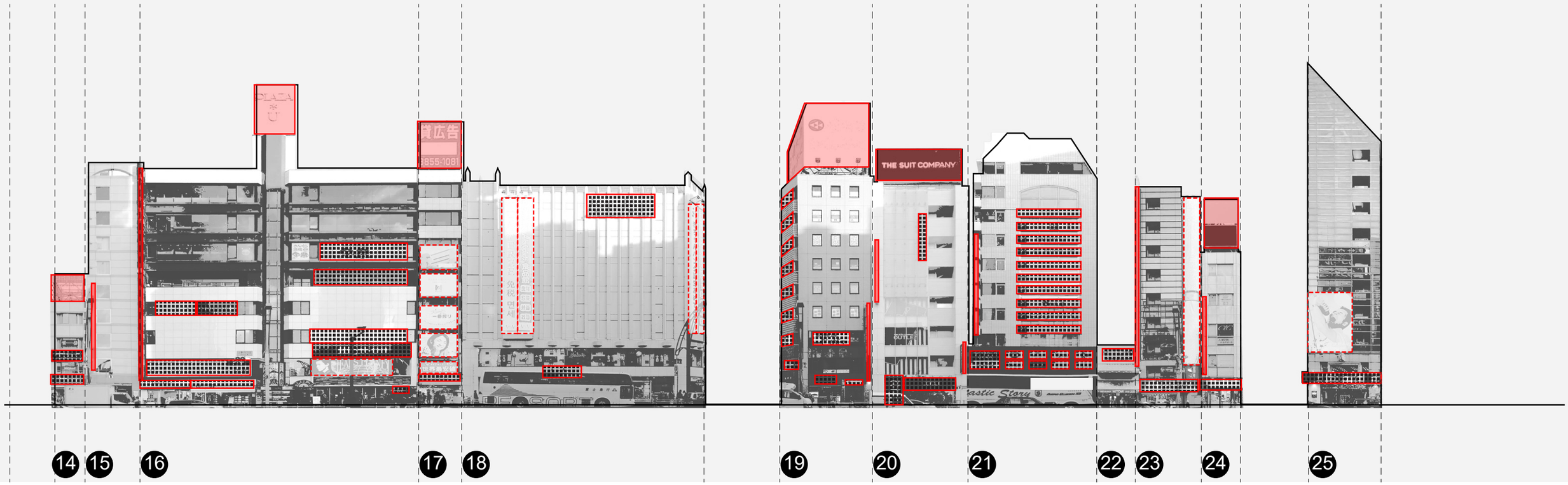
PROSTHESIS LEGEND

a. Crown	8	
b. Arm	12	
c. Billboard	15	
d. Kanban	46	

KEY MAP

part 01.

UENO 02.



UENO SPECIMENS - PART 02.

PROSTHESIS LEGEND

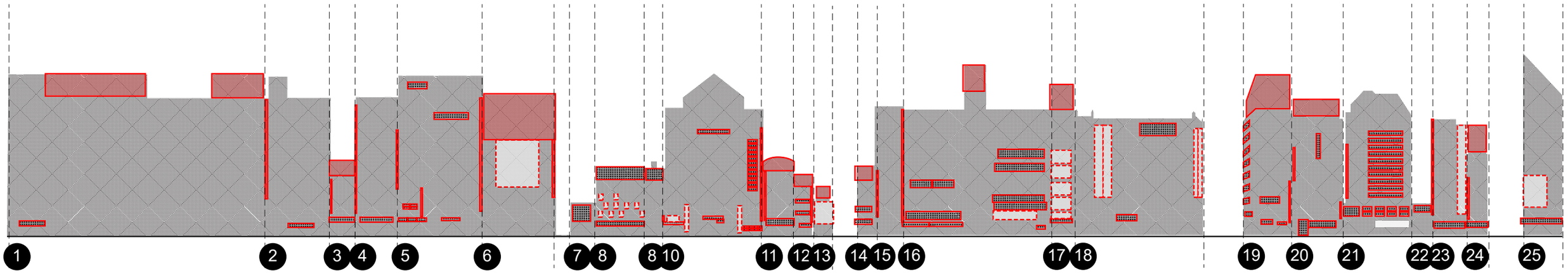
a. Crown	6	
b. Arm	8	
c. Billboard	12	
d. Kanban	52	

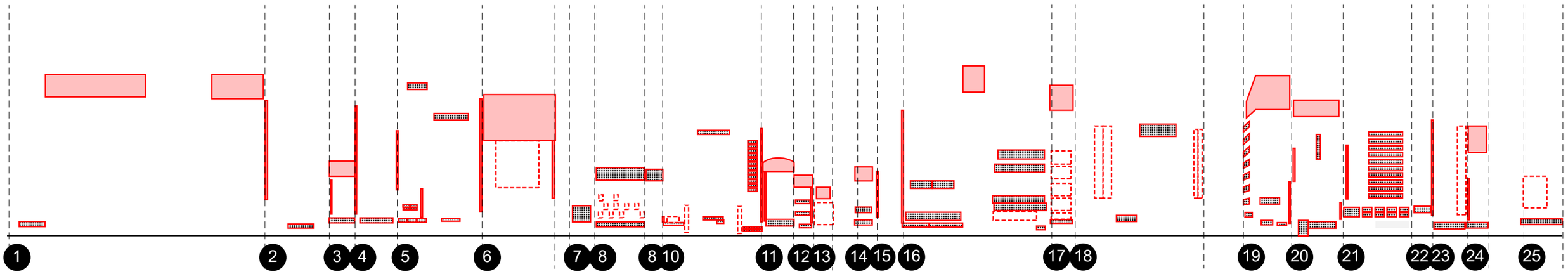
KEY MAP

UENO

Total number of buildings 25

Total number of prosthesis 159





PROSTHESIS LEGEND

a. Crown	14	
b. Arm	20	
c. Billboard	12	
d. Kanban	98	

KEY MAP

full section

UENO - Key map

UENO

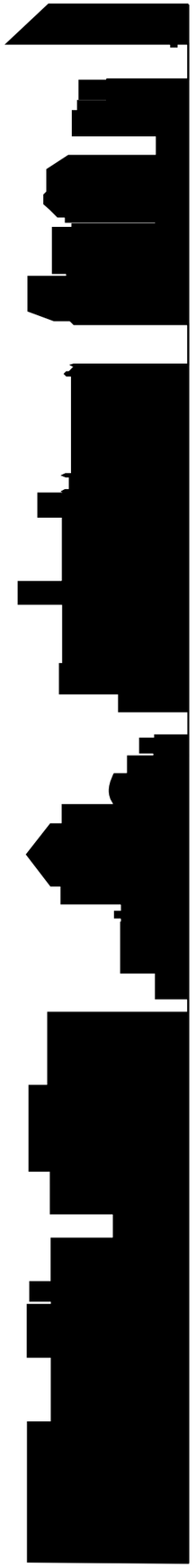
Ueno Station
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
10
5
1
UENO - d.Kanban

Ueno Station
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
8
4
1
UENO - c.Billboard

Ueno Station
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
3
2
1
UENO - b.Arm

Ueno Station
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
3
2
1
UENO - a.Crown

DISTRICT Ueno								
District code	Building #	Image	TYPE OF PROSTHESIS				Note	Sheet
			a. Crown	b.Arm	c.Billboard	d.Kanban		
UEN.	1		2			2		1
UEN.	2			1		1		1
UEN.	3		1	1		1		1
UEN.	4			1		1		1
UEN.	5			3		10		1
UEN.	6		1	1	1			1
UEN.	7		1			1		1
UEN.	8			1	10	2		1
UEN.	9			1		1		1
UEN.	10			1	3	23		1
UEN.	11		1	1		1		1
UEN.	12		1	1		3		1
UEN.	13		1		1			1
UEN.	14		1			2		2
UEN.	15			1				2
UEN.	16		1	1	1	10		2
UEN.	17		1		5	1		2
UEN.	18				4	2		2
UEN.	19		1	1		11		2
UEN.	20		1	2		3		2
UEN.	21			1		19		2
UEN.	22					1		2
UEN.	23			1	1	1		2
UEN.	24		1	1		1		2
UEN.	25				1	1		2
Total # of prosthesis			14	20	27	98		
Total # of all prosthesis						159		
Total # building						25		



SHIBUYA

Total number of prosthesis 119

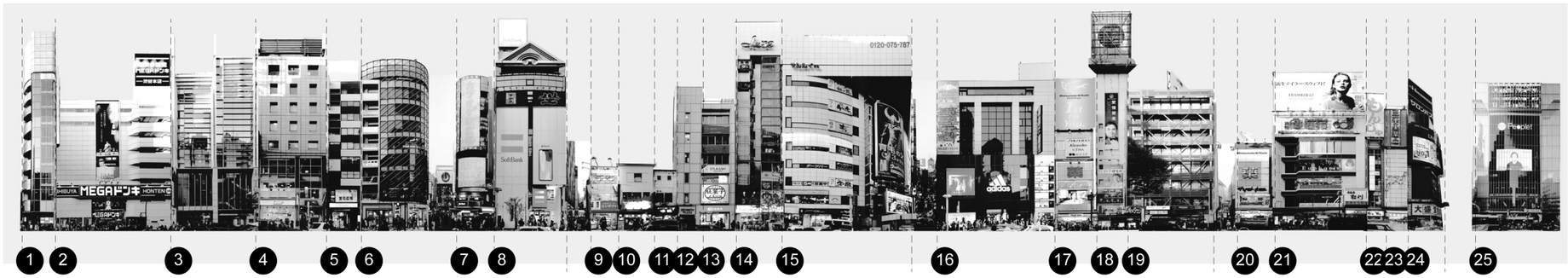
Total number of buildings 25

a. Crown 15

b. Arm 12

c. Billboard 24

d. Kanban 68



SHINJUKU

Total number of buildings 25

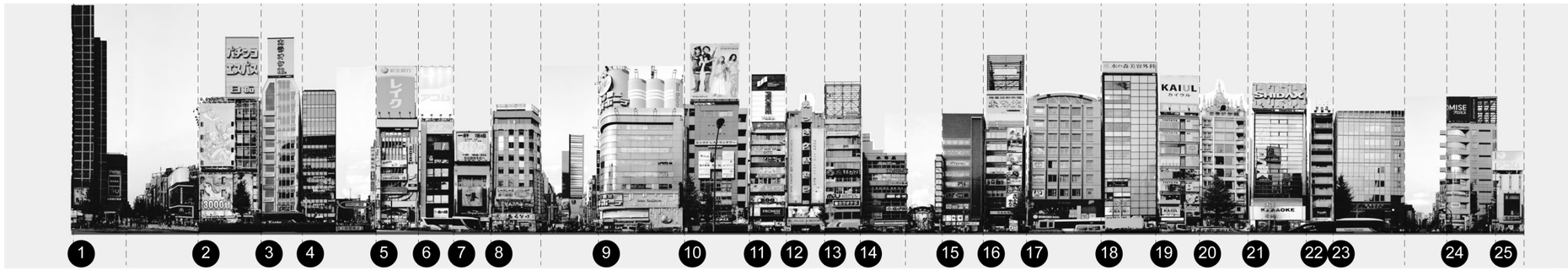
Total number of prosthesis 165

a. Crown 17

b. Arm 20

c. Billboard 18

d. Kanban 110



GINZA

Total number of buildings 22

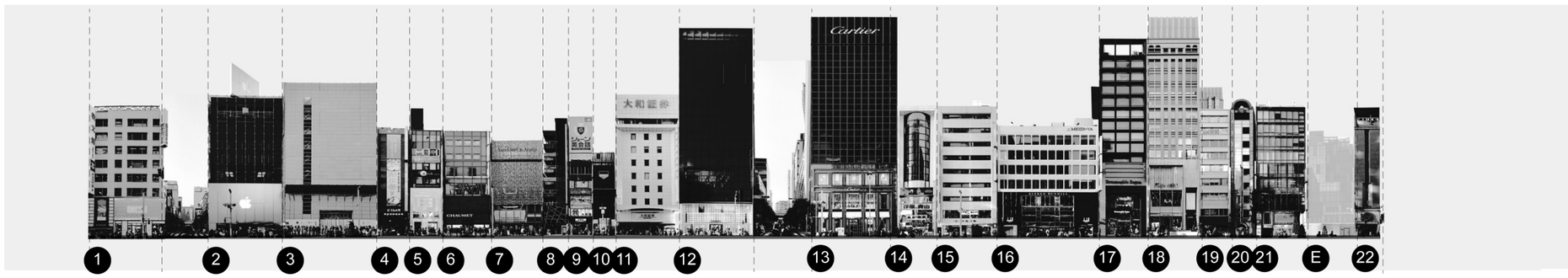
Total number of prosthesis 67

a. Crown 3

b. Arm 14

c. Billboard 6

d. Kanban 44



UENO

Total number of buildings 25

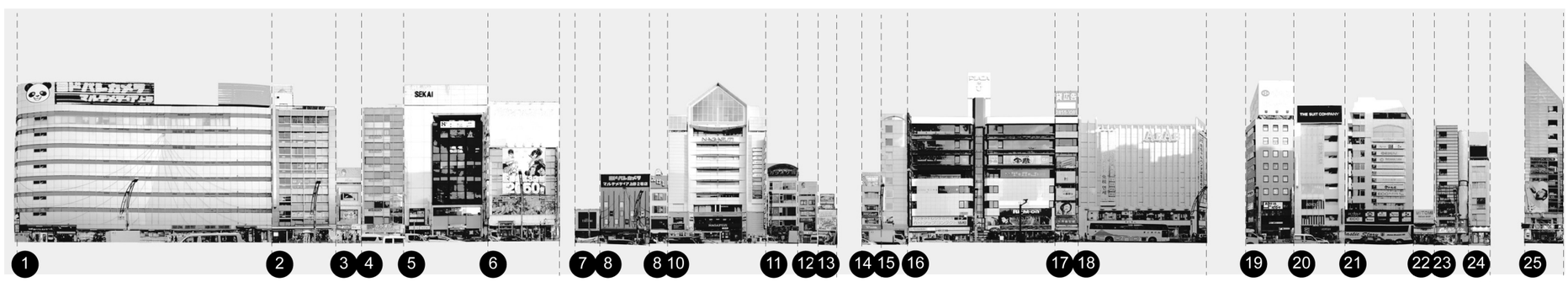
Total number of prosthesis 159

a. Crown 14

b. Arm 20

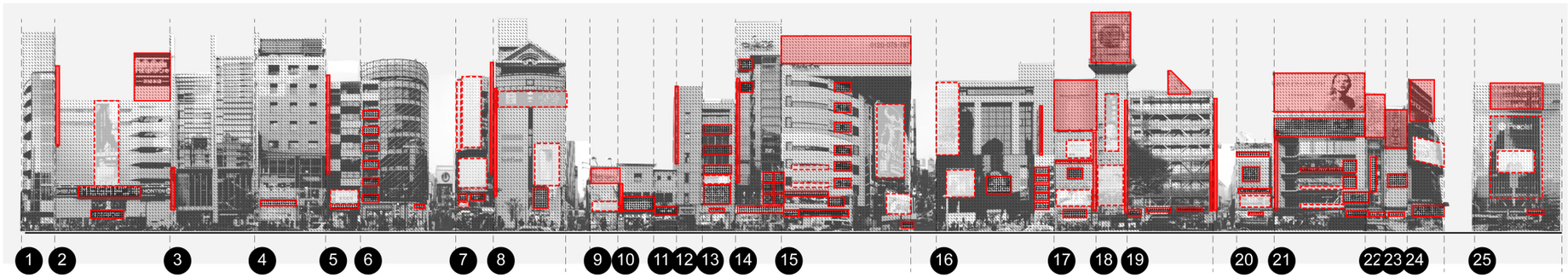
c. Billboard 12

d. Kanban 98



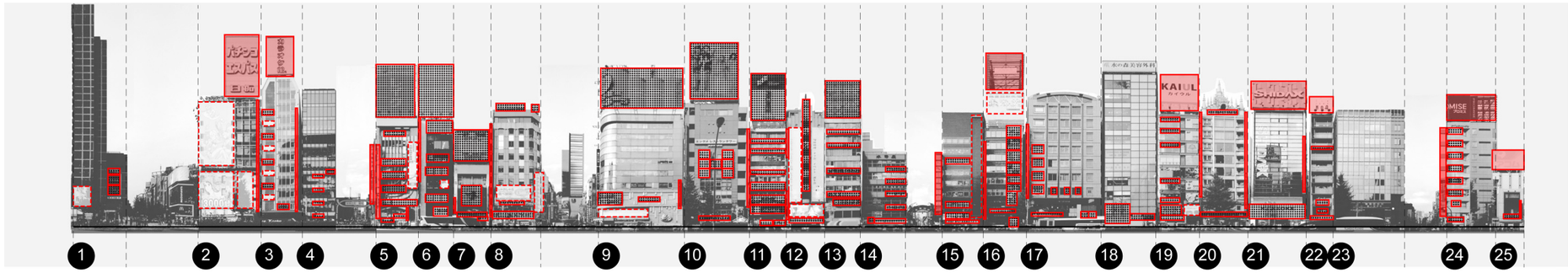
SHIBUYA

Total number of prosthesis	119
Total number of buildings	25
a. Crown	15
b. Arm	12
c. Billboard	24
d. Kanban	68



SHINJUKU

Total number of buildings	25
Total number of prosthesis	165
a. Crown	17
b. Arm	20
c. Billboard	18
d. Kanban	110

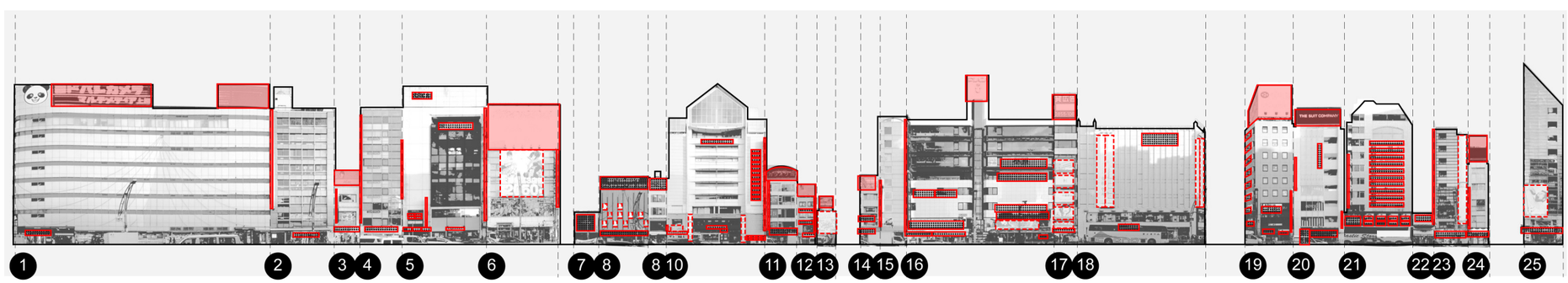


GINZA

Total number of buildings	22
Total number of prosthesis	67
a. Crown	3
b. Arm	14
c. Billboard	6
d. Kanban	44

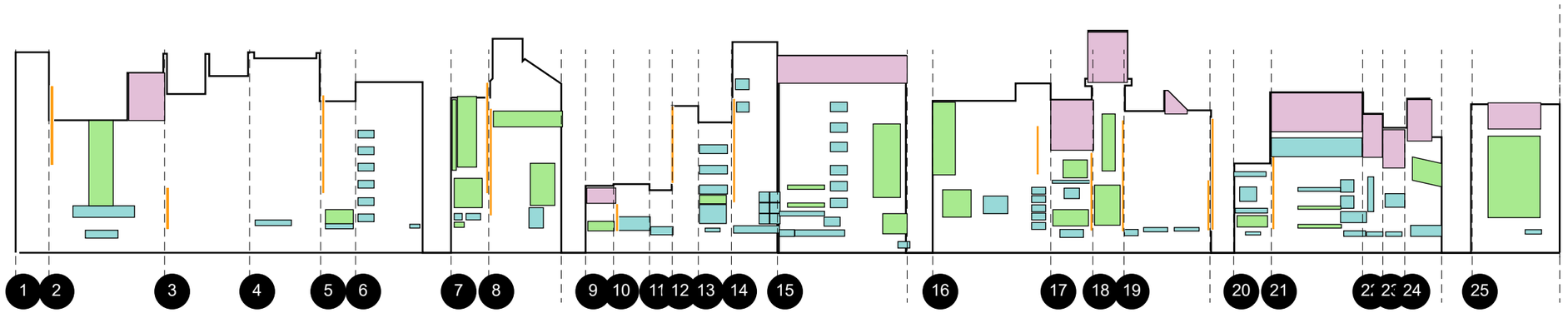
UENO

Total number of buildings	25
Total number of prosthesis	159
a. Crown	14
b. Arm	20
c. Billboard	12
d. Kanban	98



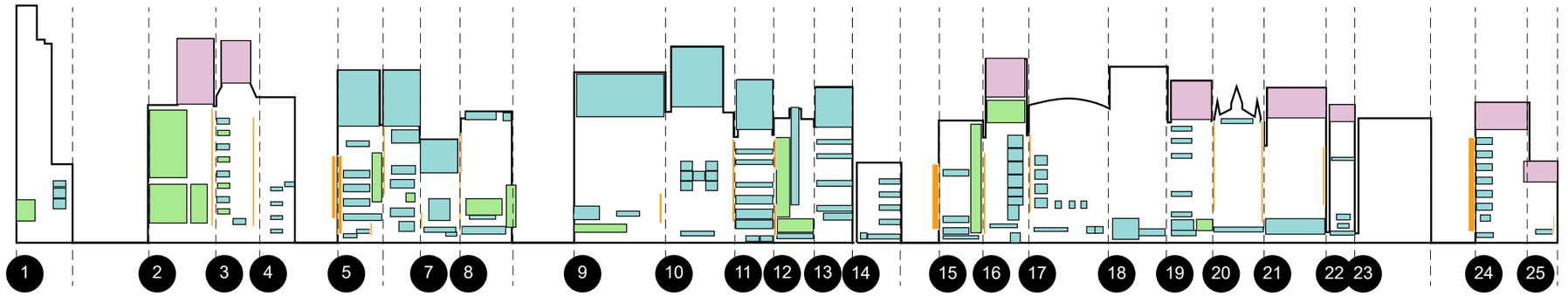
SHIBUYA

Total number of prosthesis	119	
Total number of buildings	25	
a. Crown	15	
b. Arm	12	
c. Billboard	24	
d. Kanban	68	



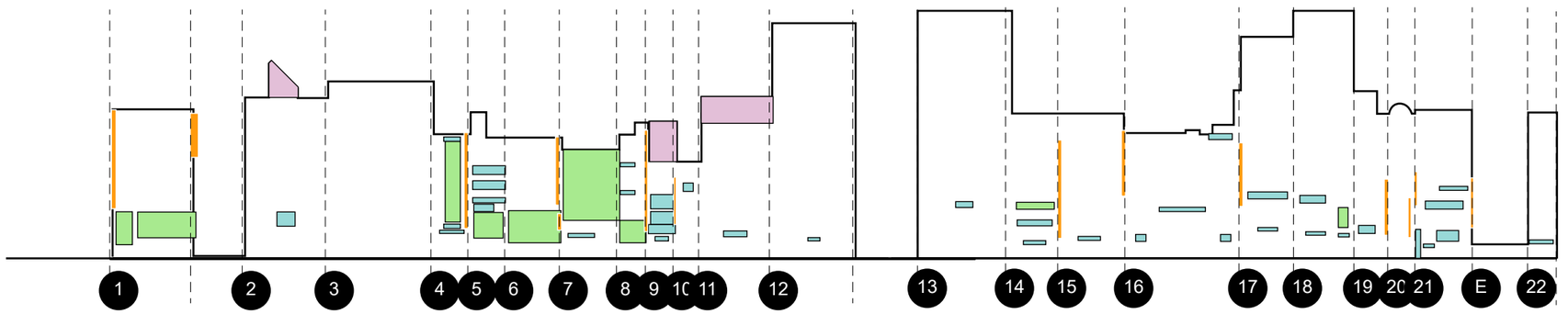
SHINJUKU

Total number of buildings	25
Total number of prosthesis	165
a. Crown	17
b. Arm	20
c. Billboard	18
d. Kanban	110



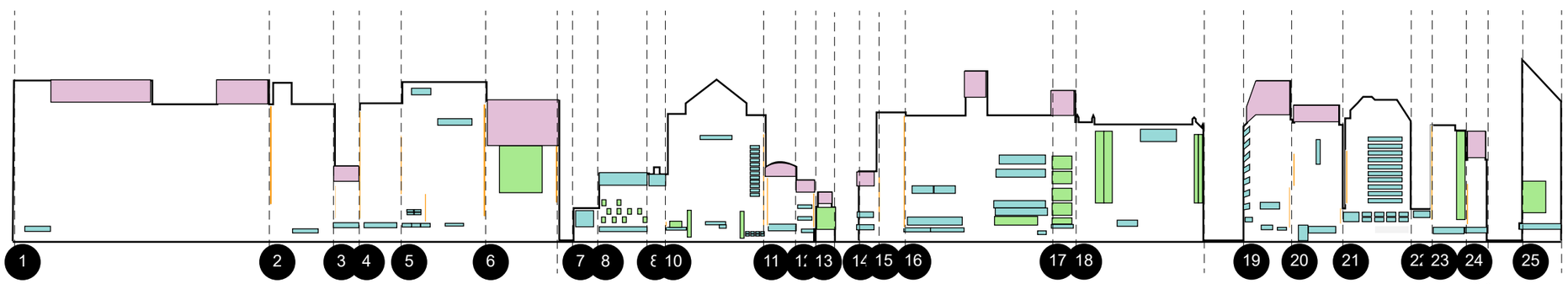
GINZA

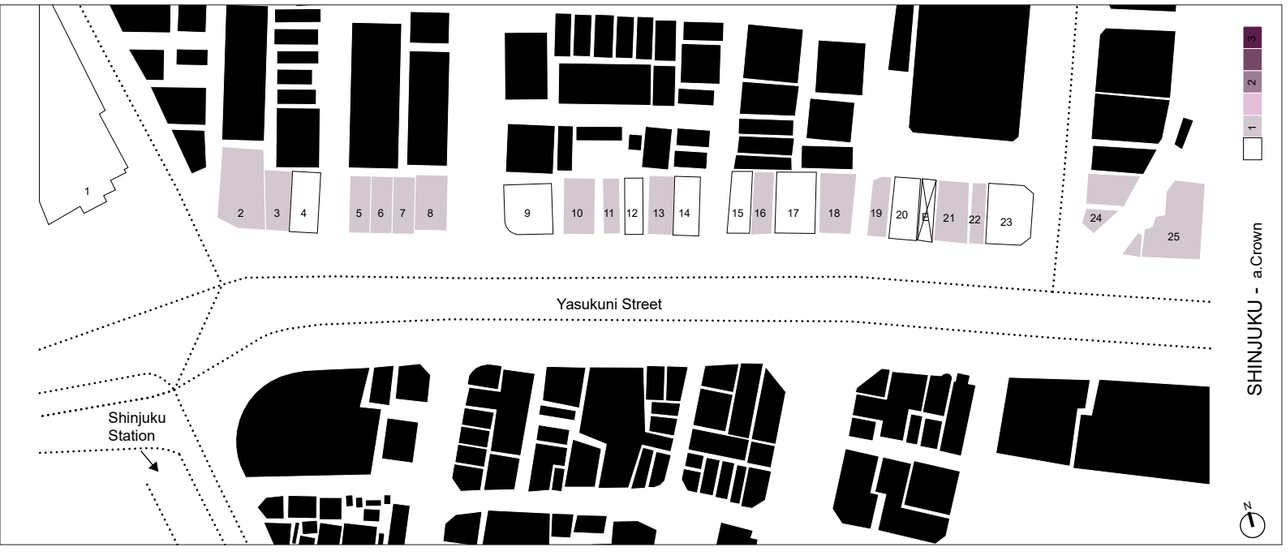
Total number of buildings	22
Total number of prosthesis	65
a. Crown	3
b. Arm	14
c. Billboard	5
d. Kanban	43

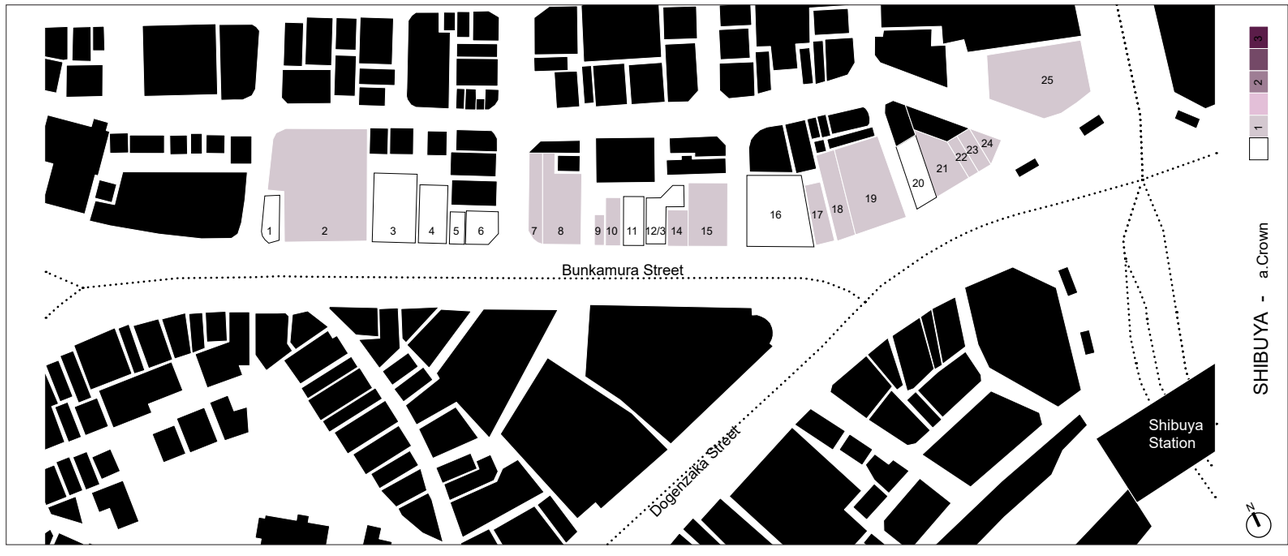


UENO

Total number of buildings	25
Total number of prosthesis	159
a. Crown	14
b. Arm	20
c. Billboard	12
d. Kanban	98

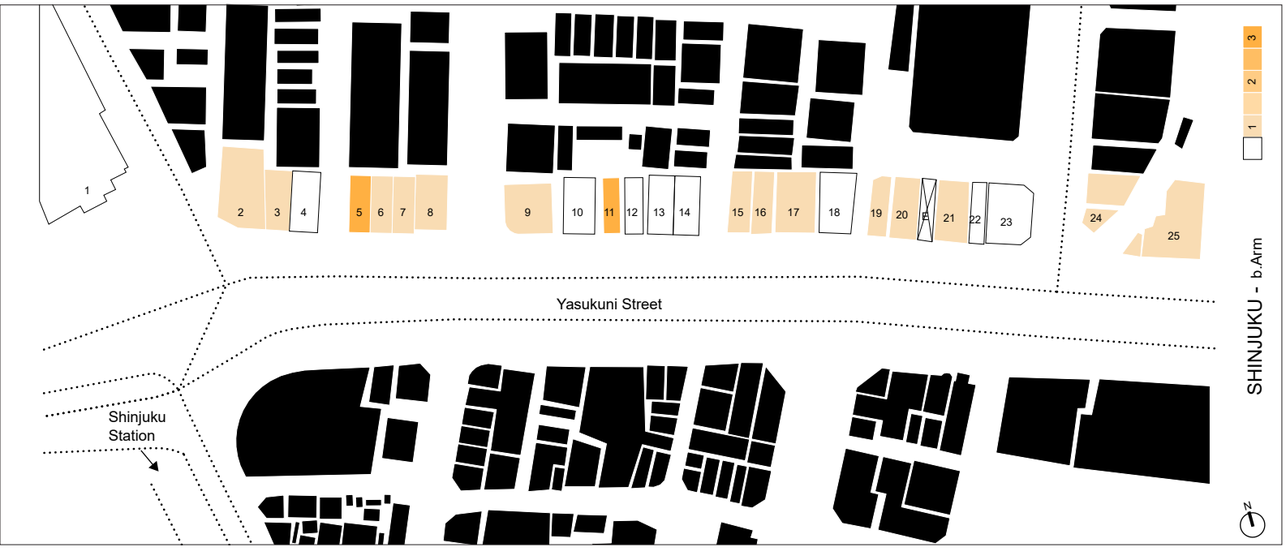


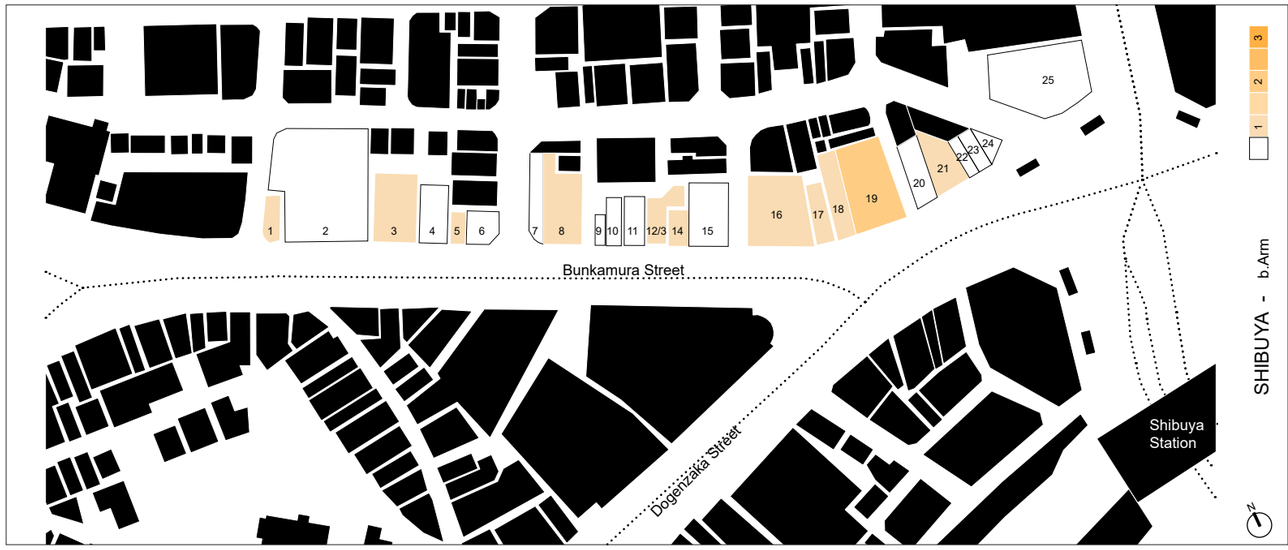

SHINJUKU - a.Crown
Yasukuni Street
Shinjuku Station
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 E 21 22 23 24 25
1 2 3
N


SHIBUYA - a.Crown
Bunkamura Street
Dogenzaka Street
Shibuya Station
1 2 3 4 5 6 7 8 9 10 11 12/3 14 15 16 17 18 19 20 21 22 23 24 25
1 2 3
N

GINZA - a.Crown
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 E 22
1 2 3
N

UENO - a.Crown
Ueno Station
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1 2 3
N

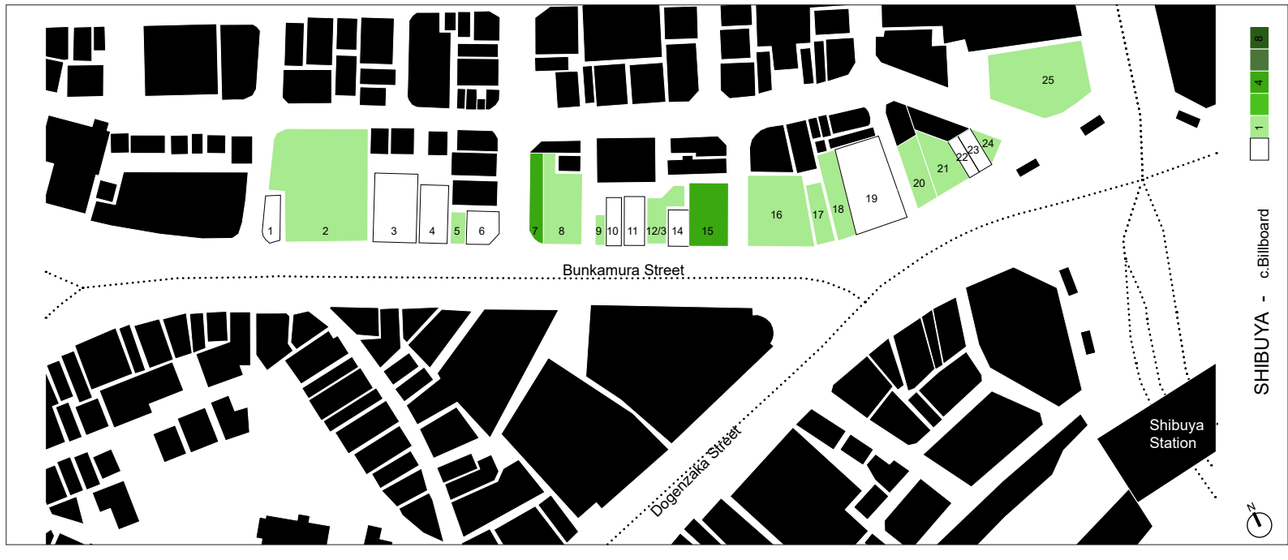

SHINJUKU - b.Arm
Yasukuni Street
Shinjuku Station
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 E 21 22 23 24 25
3
2
1
N


SHIBUYA - b.Arm
Bunkamura Street
Dogenzaka Street
Shibuya Station
1 2 3 4 5 6 7 8 9 10 11 12/3 14 15 16 17 18 19 20 21 22 23 24 25
3
2
1
N

GINZA - b.Arm
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 E 22
3
2
1
N

UENO - b.Arm
Ueno Station
Chuo Street
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
3
2
1
N

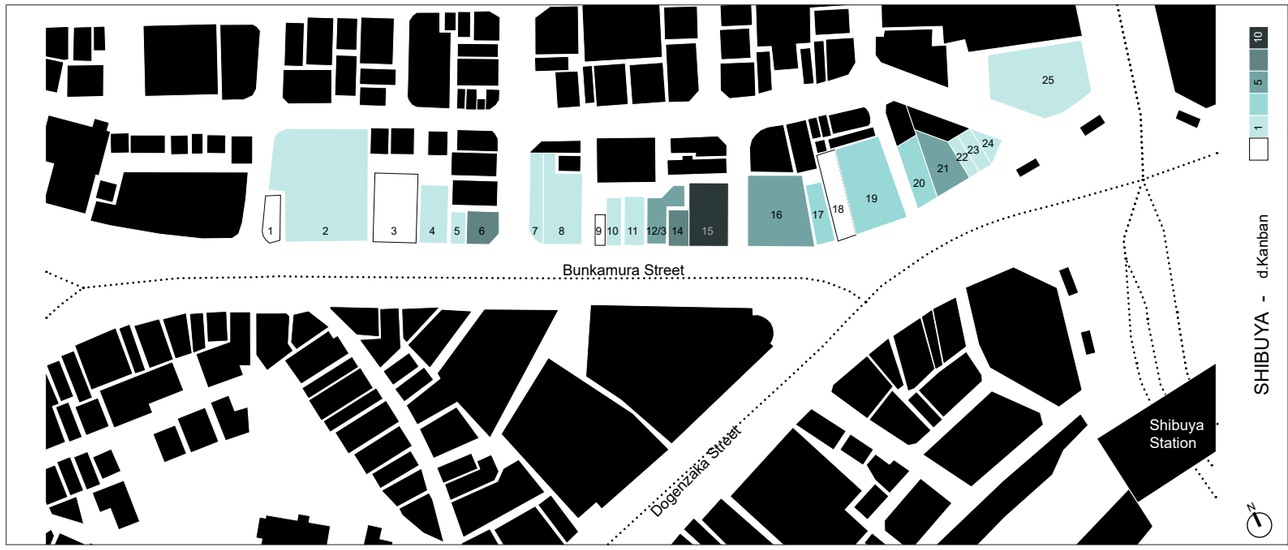
SHINJUKU - c.Billboard
8
4
1
Yasukuni Street
Shinjuku
Station
N

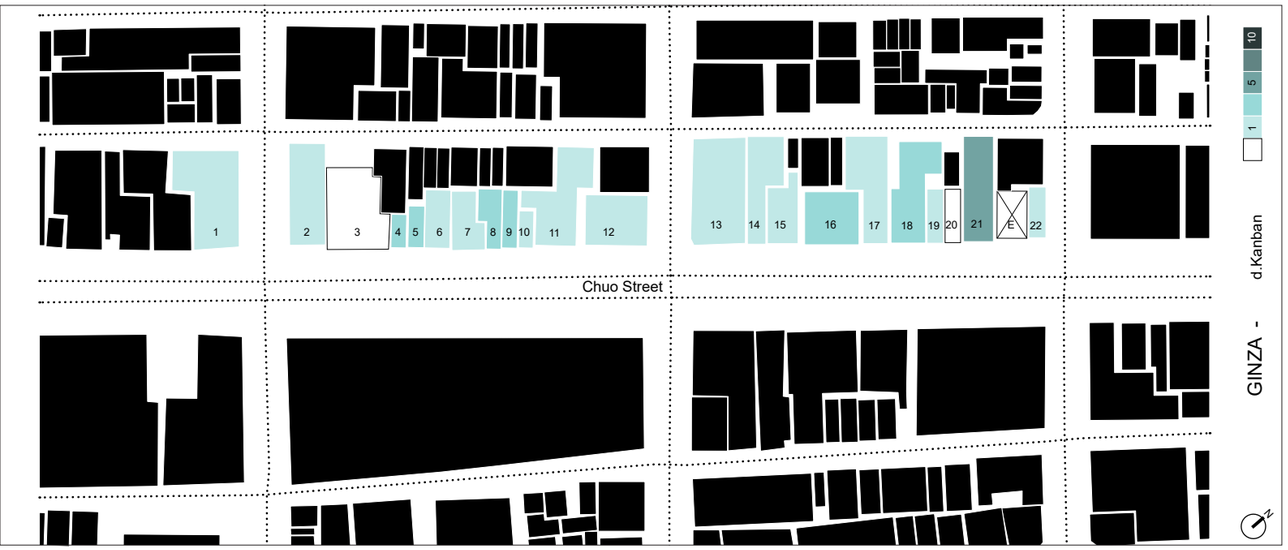

SHIBUYA - c.Billboard
8
4
1
Bunkamura Street
Dogenzaka Street
Shibuya
Station
N

GINZA - c.Billboard
8
4
1
Chuo Street
N

UENO - c.Billboard
8
4
1
Ueno
Station
Chuo Street

SHINJUKU - d.Kanban
10
5
1
Yasukuni Street
Shinjuku
Station
N


SHIBUYA - d.Kanban
10
5
1
Bunkamura Street
Dogenzaka Street
Shibuya
Station
N


GINZA - d.Kanban
10
5
1
Chuo Street
N

UENO - d.Kanban
10
5
1
Ueno
Station
Chuo Street
N

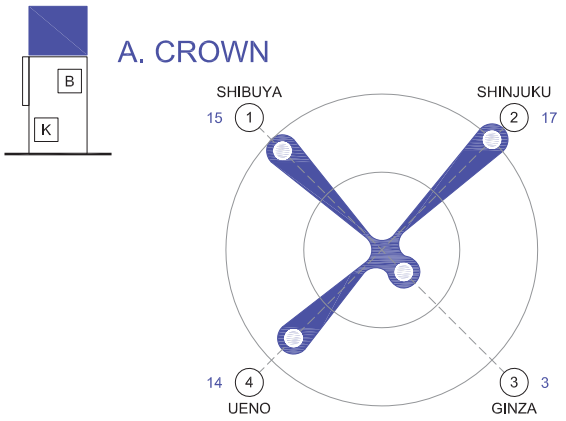
Results by Typology

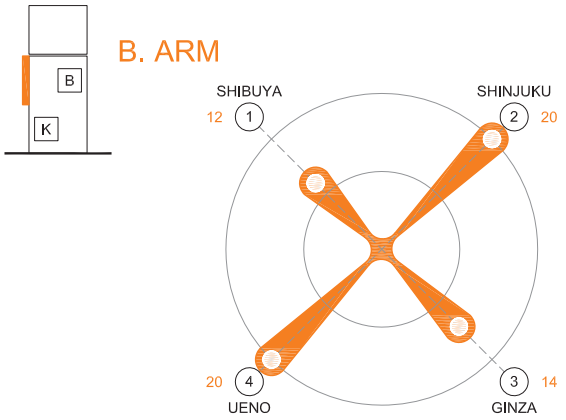
After all the data collection we can summarize results in two directions; one regarding typological intensities in the four evaluated areas, and the other by area, from the combination of all the signboard categories that were established.

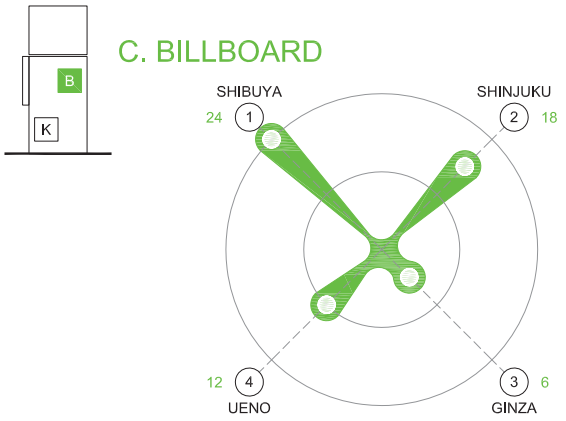
Results by typology throw significant differences in some cases and similarities in others. The first typology Crown is more intense in Shinjuku, Shibuya and Ueno, but rarely observed in the area of Ginza. It is relevant to comment that for this particular typology size and position within a larger scale should be taken into account, but for this research we are omitting other aspects as topography and visibility from higher structures. However we can read that Shibuya is from the four study cases the city of crown signboards above all the others.

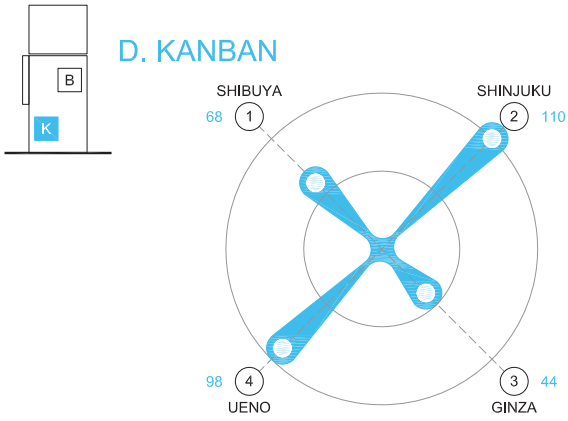
The second typology Arm, presents more intensities in Shinjuku and Ueno but it can be observed with some less intensities in Ginza and Shibuya equally. It is an element that is more or less rhythmically distributed along the street in the four cases, but mainly observed in older and smaller structures than in newer and larger buildings with less amount of tenants.

The third and fourth signboard typologies, Billboard and Kanban respectively, throw very







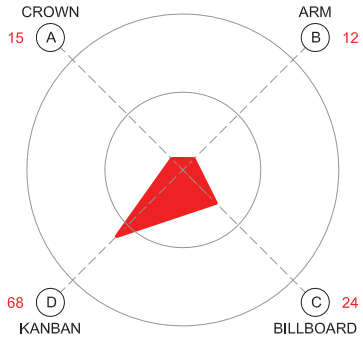


different results even if their features are essentially similar. Billboard typology is highly observed in Shibuya with some less intensity in Shinjuku and Ueno, and finally with very low intensity in Ginza. Kanban is observed with high intensity in Shinjuku and Ueno but very little in Shibuya and Ginza.

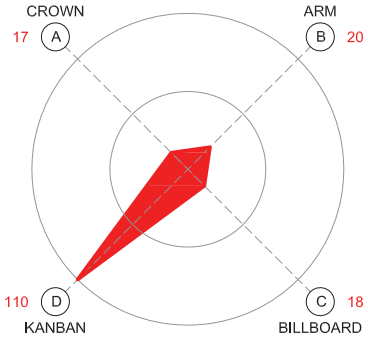
Results by Area

Probably for the sake of our initial assumptions results by area allow us to confirm some of our subjectivities about the identities of the chosen places. It is a fact that the four areas are mostly kanban oriented, however intensities vary. From these observations we can read that Ueno and Shinjuku are very alike regarding the categorization that we established. Ginza also has a similar shape but with lower intensities. The most different from all is Shibuya whose number of billboards are the highest of the four. Still Shibuya and Shinjuku are very similar in the overall intensities, followed by Ueno and with Ginza showing the lowest intensity of all but a trend to become like Shinjuku or Ueno.

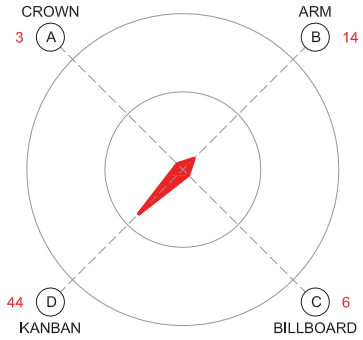
1. SHIBUYA



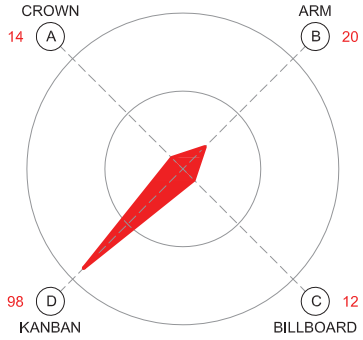
2. SHINJUKU



3. GINZA



4. UENO



REFERENCES CHAPTER 6

1. Cybriwsky, Roman A. *Historical Dictionary of Tokyo*. Lanham: Scarecrow Press, 2011, p.200.

CONCLUSIONS

This research has attempted to formulate an alternative theoretical frame to evaluate the visual organization of aggregative elements in buildings regarded as prosthetic elements. This approach was initially constructed from a grounded theory methodology, making reference to diverse positions about the topic from other disciplines and within the architectural discourse, where the objects of study were several texts themselves. We also regarded the use of metaphors as a methodological approximation (a term which we introduce in the first chapter as 'metaphology') since it already implies a hermeneutical construction of new relationships through the confrontation of two terms, such as architecture as prosthesis, building as body and prosthesis as signboard as we have argued along this document. It is important to consider the fact that metaphors cannot be evaluated as absolute statements but only as propositional confrontations. Hence, our metaphorical construction aims to be not only linguistic but conceptual, and more specifically a structural metaphor. This is to say that it enables us to understand a target domain in terms of the structure of a source domain, based on a set of conceptual correspondences.

Firstly we established the metaphor between the human body and buildings, both regarded as organic components and embedded in a given environment; extending their functions through the implementation of supplementary instruments. Given the scarcity of authors who addressed directly the term of prosthetics in the architectural discourse, we identify traces of a prosthetic discourse from historians and architects such as Giedion and Violec-Le-Duc. From the fist we find relevance in his dual reading of architecture as an organism and his studies on mechanization in Western culture. From the second, we found relevance in his argument about the interest and development of supplementary instruments in the body derived primarily from warfare during the 19th Century. We recognize the first prosthetic discourse from Le Corbusier, when he elevated the machine to the same state to the architectural temple. Moreover we introduce Mark Wigley as one of the very few authors who have coined a proper Prosthetic Theory in architecture, though not intended to be a theory grounded in the urban discourse.

We have also argued about the possibility of using the term 'prosthesis' as an ideological discourse in architecture. As Wigley's Prosthetic theory remarks, the '-thesis' of the word from Greek origin establishes a philosophical 'position'. Hence we stress the possibility to find similarities in Japanese language. From this statement we also find more dynamic the use of the kanji (—義), having both a language ambiguity and conceptual duality when used either way as a prefix or suffix. This argument also allowed us to elaborate around other ideologies in the architectural discourse in Japan, a universe under which we would like to propose the insertion of the term 'prostheticism' as an alternative one.

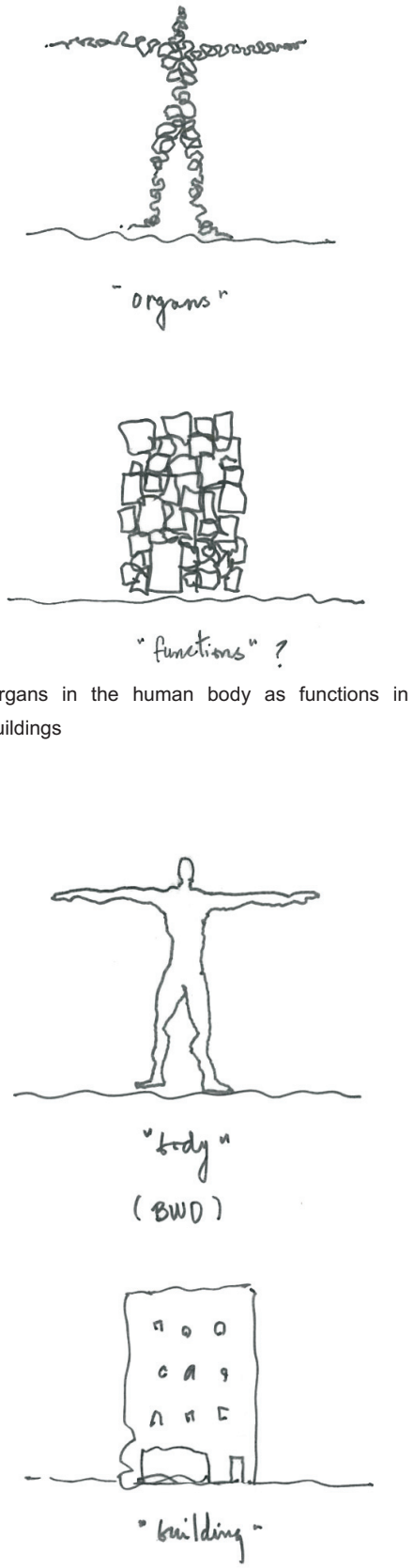
Monstrosity and eccentricity are two terms which this research considered central in the argument. Both of them are regarded as positive urban assets since they provide a unique hybrid identity to buildings. When comparing buildings with bodies and signboards with prosthetic elements attached to human body we read a re-configurative process, one that is constructed by addition and not by subtraction. These aggregations deform the image of the body as a host, conferring a new identity; a monstrous and eccentric one. The first one derives from the collection of dissimilar parts in combination with the prosthesis in analogy to a monster such as Frankenstein. The second is more from a visual standpoint, where the term is rather rooted in Japanese aesthetical preferences. A body capable to prostheticize is in our understanding monstrous and eccentric, and hence a more equipped body to adapt to a volatile environment.

The metaphor of the monstrous allowed us to argue Tokyo from a historic perspective, from the mythological, to the destructive forces that have reconfigured the city and the most recent media fascination for the monstrous. The metaphor of the eccentric helped us to root the term as an aesthetical preference, which we consider as a calculated geometrical disposition at the core of Japanese values and identity. Through the study of diverse patterns in textiles we find behavioral recurrences of how these patterns are geometrically out of the idea of Western centricity and construct their our universe from slight deviations of a symmetrical center. These geometrical studies are the base for the 'patternology' of the signboards that later we observe in buildings from the study cases in Shibuya, Shinjuku, Ginza and Ueno.

We started arguing about prosthetics from a general approach to a particular one. The idea of signboards as prosthesis was not at the beginning the central aim of this research; it was mainly the object we found coherent to exemplify how prosthetics could be materialized from an urban discourse. This is to say that prosthetics in urbanism can also be argued through other additive elements and mainly in any city. In the process, we chose Tokyo given its high mutability, not only in the short life span of buildings and infrastructure but in the smallest elements that add to them. We acknowledge and embrace the organic nature of the city, revising positions from the Metabolist group in the 60's and from other architects more recently like Yoshiharu Tsukamoto and Yoshinobu Ashihara, who also argued about this idea. This is relevant in our argument to support the notion that only by understanding the city as an organic entity is possible to insert the discourse of Prostho-Urbanism. Furthermore, Tsukamoto's arguments imply certain 'smartness' in these informal elements in Tokyo, reinforcing the possibility to regard them as part of a prosthetic city by definition.

We have coined the term 'Prostho-Urbanism' as a theoretical frame belonging to the realm of the post-human; one that allows us to reconcile ideas from the organic and mechanic theories in urbanism. This term identifies the

evolution of cities mainly through additive elements. Just as in the human body, buildings convey functions in a similar fashion as organs. Once these organs are omitted or become irrelevant for a communicative transaction, the only thing remaining is the body as a container, a notion that philosophers Giles Deleuze and Felix Guattari refers as bodies without organs (BWO). In such vulnerable state the body becomes subject of replaceable elements; prostheses that attach to these bodies in order to supplement their communicative functions. In a given voracious environment of consumption as Tokyo (or 'profitopolis', as Gordon Matta-Clark has referred to other cities), buildings become according to their visual position or number of tenants, desired bodies. These aggregations or prostheses are highly adaptive and allow buildings to sustain economically, sometimes indicating functions occurring within the building itself and sometimes only as the structure to receive larger signboards which are not directly related to the functions of the building. Prostheses in buildings don't aim to replicate the material language of the host building, and have their own architecture to convey communicative transactions. They are perceived visually as differentiated elements from the host.



Organs in the human body as functions in buildings

The body without organs (BWO) and the building without functions, both seen merely as empty vessels or container of independent functions.

We also introduced the design of signboards from Edo Period in order to show that this phenomena is not a recent trend but one rooted in a consumerist society, something that historian and architect Terunobu Fujimori categorized under the label of 'kanban kenchiku'. The design of signboards during this

period was still a unique craftsmanship, extending with creativity the identity of each shop. Such trend was gradually replaced by ubiquitous and luminous signboards around entertainment places and is gradually disappearing in newer buildings which adopt other means to communicate. In this case the digital screen has become the absolute ubiquitous communicative device; an antithesis of the previous craftsmanship kanban that was overcame by the generic.

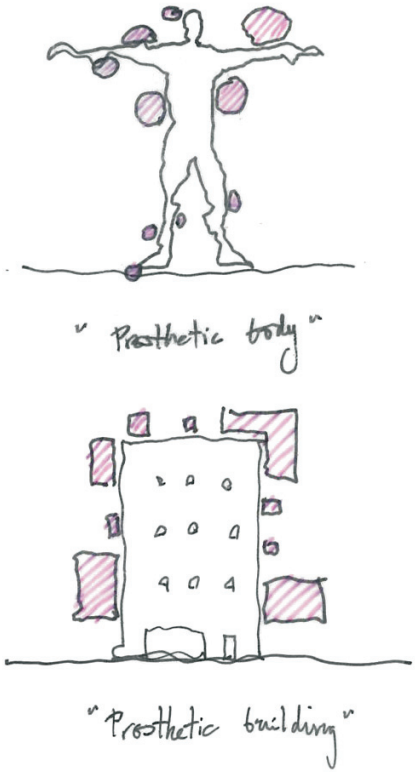
We summarize the notion of Prostho-Urbanism in five principles:

INTERSTICE. In order to receive a prosthesis, there should be a structural gap in the host body. Such interstice is physically liminal and philosophically ambiguous.

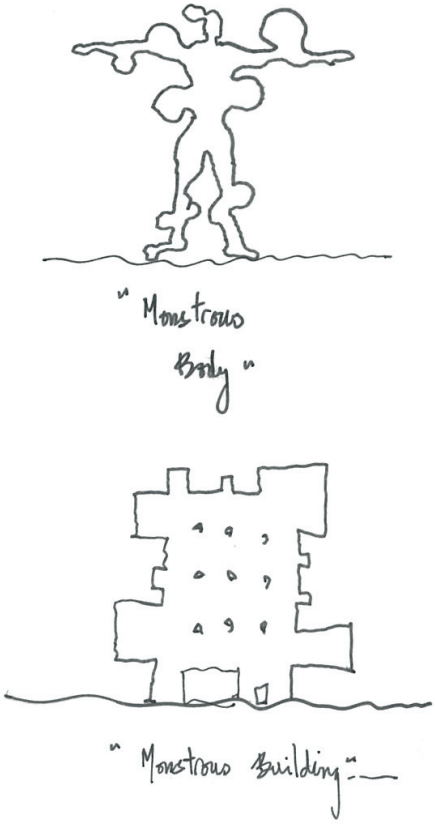
HYBRID. The implementation of any prosthetic element into a body (such as signboards in buildings) inevitably hybridizes the whole structure. The body becomes subject of several mutations in short spans of time through these prostheses.

EXTENSIVE. The prosthesis (as much as the signboard) extends the capabilities of the body. In the case of buildings, signboards don't only communicate activities occurring within the building but other events not necessarily related to the building itself (such as crown signboards). These prostheses allow the building to sustain economically, as much as other prosthetic elements such as drink machines.

RECONFIGURATIVE. Once the prosthesis is implemented in the body, the visual image is transformed into a 'monstrous' one. By monstrous I read a deviation of the original



The prosthetic body vs. the prosthetic building



The monstrous body vs. the monstrous building. Both have assimilated external aggregations as part of their new morphology.

body and a combination of dissimilar elements which are not properly design to perform together.

IDENTITY. This is the ultimate feature of the prosthesis, not necessarily intended but conveyed extrovertedly and recognized iconically from an outer appearance or visual evaluation.

We have first conducted an evaluation of prosthetic elements by intensity in Shibuya, Shinjuku and Ueno. This was in order to establish an 'Index of Prosthetability' indicating which buildings receive more aggregations. From this scanning we can conclude that older buildings and corner buildings are more prone to receive aggregations, but also that the trend in new buildings responds first to a land redevelopment (LR) policy, fusing smaller plots to configure larger scale buildings with avoid small aggregations. Another trend is the implementation of digital screens as part of the design in more recent buildings.

During the detailed observations and quantitative evaluation of signboards in Shibuya, Shinjuku, Ginza and Ueno, we found differences and similarities between each area. After recounting linearly around 22 to 25 buildings in each area, Shibuya and Shinjuku present a similar amount of crown signboards in comparison to Ginza. In this case, Ginza receive prosthetic elements as part of their original design, hence its implementation is rather part of a controlled and closed system where each building host in most of the cases one tenant. The design of signboards is Ginza could be seen as an evolution of the idea of kanban from the Edo period, which was crafted specifically for each shop. While Shinjuku and Shibuya have a similar image, the differences emerge in the particularities and variation of prosthetic typologies. In the case of Shinjuku there are more 'arm type' signboards that in Shibuya, but in Shibuya there are a slightly more amount of 'billboard type' than in Shinjuku.

Extroverted prostheses. Evaluation of signboards in Shinjuku, Shibuya and Ginza.

A glimpse to the future

Prosto-urbanism allows us to fantasize in future scenarios for a city as Tokyo. We find relevance in the fact that the evolution of prosthetics was linked to the development of new weapons and technology in close performance with the human body during the 19th Century. Today the warfare is economical, and the replacement of warriors for businessmen justifies the existence of communicative devices to trigger more consumption. As Tsukamoto acknowledges, there is already an acquired intelligence in the way buildings extend through prosthetic elements in Tokyo today, but as the trend shows it will slightly disappear in the new developments such as Shibuya and its Master plan for 2027. Luminous signboards are gradually becoming an archeological

instrument of communication replaced by digital devices.

If we take for instance the way how organisms extend, we observe how the elements and tools that adapt better to their bodies are morphologically similar, just as the mechanization of furniture that Giedion recounts in his book Mechanization Takes Command (introduced at the beginning of this research). Thinking a man extending as a building ('kanban-man') would be unnatural. It is more predicable to foresee organic elements that naturally attach to the organic shape of the human body (man-plus). If we follow the same argument for buildings, most probably they will start to resemble more to such organism, expanding and collapsing according to the spatial needs. The signboards might become an element able to be not only visually ubiquitous as the digital screen today, but also able to land from one building to another; just as universal prostheses than anyone can use. They will be capable to morph in any shape given its material qualities. The next surface in the city that might become prostheticized is the street, also communicating codes of usage for a better use between public and private space. Still, architecture and prosthesis will continue obeying to the laws of nature, being gravity the first one that will continue constraining human activity.

The ideas and remarks along this research are more than conclusive and opportunity to regard building extensions from a particular perspective. As Edward Said reminds us, “to know something is to have power over it, and conversely, to have power is to know the world in your own terms”. Hence the monster of Tokyo will continue unveiling only what we want to see, which is finally what was destined for us to see.

‘Kanban-man’ vs. ‘Man-Plus’ (aka Freud’s Prosthetic-God). The future of urban prosthetics?