ATLAS, UMA APOSTA ATLAS, A BET
E O DISPOSITIVO-ATLAS AND THE ATLAS-DEVICE
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**Abstract**

What is the concept behind the atlas? Would it be a mythological titan? A collection of images and maps followed by enlightening explanations? This article targets to conceptualize what an atlas is supposed to be, and to reposition its function by removing it from the category of a merely consulting "product-object". Furthermore, this work quests to present the atlas as an interactive device, making it an operative and collaborative method of acquiring knowledge, in order to contribute to the debate on the construction of information. By questioning the atlas limited and exploratory nature, consisting of data mainly selected by its developers, the new atlas presents itself as an instrument of analysis, perception, exchange and epistemological formulation. Different arrangements –or "nebulae"– are captured, decoded, correlated and recorded through the atlas. Thus, rather than a unidirectional relationship, thinking and doing by the atlas means to establish an interaction through which the reader assumes the role of creator and protagonist by engendering new angles and narratives about a given object. Referenced in Aby Warburg's emblematic work, the *Atlas Mnemosyne* (1927-1929), and the interpretations of historian and philosopher Georges Didi-Huberman, the text aims to point out how the creative thinking and interactive use of a digital platform –*New Cities' Atlas* (prototype)[1] – can be formulated, tested and replicated by other scholars, researchers, managers, and those interested in producing information and knowledge.

**Keywords:** Aby Warburg, Atlas, Digital Platform, Methodology, Creativity

1          **Deviant restlessness**

In order to understand the usage of a work composed of selected excerpts, such as those classified as Catalogues, Collections, Encyclopedias, Atlas, among others, this article deviates from what is conventional towards the unknown. Through unexpected paths, it intends to review and contribute to a better perception and utilization of the aforementioned materials. This research presents an epistemological inflection brought out of personal restlessness. Emerging from the "The Atlas of the New Cities in the Republican Brazil", a research project (CNPq) developed with the "Landscape, Project, Planning - Labeurbe group", from the School of Architecture and Urbanism, University of Brasília, Brazil, the work addresses the question: "What is an Atlas?". Besides gathering 270 exemplars of the "New Cities"[2] urbanistic typology cases and data, implemented all over Brazil between 1889 and 2019, the work theoretically deepens the concept and applicability of the atlas. We chose to deviate from the concept of an atlas as a "product-object", forging ahead into randomness to be freely conducted by the "atlas-device" by means of actions that have opened new doors and possibilities, as it will be demonstrated in this article.

A key element to the aforementioned shift was the work Atlas Mnemosyne, or Bilderatlas, or Atlas of Images, designed between 1927 and 1929 by the German philosopher and historian Aby Warburg (1866-1929)[3]. The Mnemosyne project aimed to capture "mnemic waves" from the past, stemming from visual formulas displayed on panels, in which a montage of images would provide the observer the opportunity to interlace relationships, structure meanings and to create new narratives: a means of identifying the mechanisms of cultural transmission, as defended by its creator, in other words , it is a tool that allows some distance for reflection, in which memory helps to connect elements to our thinking, as José Emilio Burucúa and Nicolás Kwiatkowski point out,

> Distance can be understood in a spatial sense - we move away from an object to see, describe and represent it better –or in a temporal sense– which often gives us an inaccurate or contradictory memory, and the scientific analysis and judgment of History. Throughout our evolution, various limits in distance have been established by us, humans, the largest of which corresponds to modern technology and science, the shortest, is magic. Religions and Analogical knowledge would stand between both. Our Paleolithic ancestors created the technological limit along with the magic limit. The first led them to produce the bow and arrow, to raise animals, and finally to cultivate the land.The second ensured them the recovery in their psychic and social harmony when faced with death and calamity. Regarding the end of life, modern people have preserved the boundaries of magic as a minimal, necessary, and restorative expression. The paradox is that, in the present state of our communications technology and immediacy, we risk abolishing any distance between the world and us. In the light of this phenomenon, we may be ignoring what we could become. (Burucúa; Kwiatkowski, 2019, p. 12, our translation)[4].

Therefore, we must distance ourselves from our objects to read and interpret them throughout space and time, technology and magic. We must produce knowledge through them from what is new, improvised, unusual, and unexpected. To avoid the risk caused by a lack of "boundaries" between researcher and research object –in a blinding proximity–, given the speed and amount of information, the Warburguian Atlas appears as a possible alternative. As theoretically defined by professor and researcher Paola Berenstein Jacques:

> The Warburgian Atlas is an "anachronistic object" [...], a mutant visual object, basically composed of different images as well as details of images or various clippings, which are always interchangeable, mutable. The very shape of the Atlas, which "carries" various maps - much like the Titan "carried" the globe on his shoulders - already assumes some kind of visual montage or, to quote Didi-Huberman, a "visual form of knowledge". The Atlas would also be a way of thinking in terms of displacements, a way to think in terms of associations, pluralities, constellations, nebulae, heterogeneous montages, in terms of "elective affinities" as Goethe would say, or yet, in terms of "constellated images and montages" as the organizer of a Portuguese anthology of the Warburg texts, Leopoldo Waizborg, pointed out. (Jacques, 2018a, p. 59, our translation).

The Warburguian Atlas emerges as a methodological contribution to establish an alternative way of looking at our objects and extracting new information, understandings and narratives from them. When facing our repository of interests, whatever its components can be, such a means becomes an important tool in both interpretation and fabrication for reading and making purposes. We are then referred to a renewed and updated notion of the "construction of information" concept, an exploratory field through which other perceptions, opinions, and visions about a given object can be produced collectively and collaboratively, being democratically accessed and disseminated –a new stance in the scientific research.

For a better understanding of Warburg's seminal work and also to make it reverberate in contemporary applications, the present work is structured into three sequential parts. The first one, "The atlas", entails a framework of bibliographic sources by which we can qualify an object and how it is currently constituted and used. In the second part called "A Bet", in order to qualify a particular meaning for the atlas, we refer to the German historian's (Aby Warburg) work, mainly through the interpretative view of the French philosopher and historian Georges Didi-Huberman and also in light of the architect and urbanist Paola Berenstein Jacques theoretical-methodological constructions, thus, defining a new possibility. Finally, in "The atlas-device", we show the handling and use of a specific instrument for a new "interactive and knowledge-enhancing atlas", as the *Chronology of the Urban Thought*[5]. [Cronologia do Pensamento Urbanístico] digital threshold. It is also noteworthy that the modus operandi adopted to describe the understanding and applicability of this universe can be found at the end of each part, when the operationalization of a digital platform prototype, *New Cities' Atlas* portal, is exposed.

## 2        The altlas

> Atlas's huge body turned to stone. His beard and hair became forests, his arms and shoulders, cliffs, his head a ridge and his bones the rocks. Each part swelled to become a mountain, and (as the gods wished) the sky, with all its stars, rests on its shoulders. Thomas Bulfinch, O livro de ouro da mitologia, 1999, p.145

The origin of the Atlas takes us back to Greek mythology and its heroic or plotted fables conspired by gods, demigods, creatures and titans, such as Atlas, who was condemned to bear the weight of the globe and the skies as a punishment for having confronted the gods. His geological features and enormous strength are known worldwide –from "an ocean (Atlantic), up to a mountain range (Atlas, North Africa), an anthropomorphic architectural column (Atlantis), a legendary underwater island (Atlantis)" (Jacques, 2018a, p. 56, our translation). Likewise, in his comprehension he became a sage, "a great expert in the world and the sky geography, a precursor for geographers and astronomers, [...] an epistemic genre in the field of cartography (Atlas)" (Idem, p. 56, our translation).

The atlas as a collection, presented as we currently know it, reminds us of the Renaissance, when Gerardus Mercator (1512-1594), in the sixteenth century, uses the titan's symbolic figure as the cover of his map books (New Encyclopædia Britannica, 1985). The collection of images, graphics and essays became frequent during the Encyclopedism in Enlightenment, gathering information on particular subjects such as boundaries, climate, oceans and rivers, economics, geology, populations, and so on - originating from different panoramas, starting from a more specific prospect to a generic one, from a local to global overview, or vice versa. It is an illustrative and instructive genre, a "visual form of knowledge", usually enjoyable for reading, whose purpose is to systematically or problematically –and even poetically, taking the risk of being mistaken [...]– offer our eyes a whole multiplicity of things gathered by "elective affinities" (Didi-Huberman, 2010, video, our translation). A scientific genre that has gained ground in many fields, such as Life Sciences and their endless atlases of medicine, psychology, biology, etc., and even other fields. In Urbanism- our field of interest- we have identified some productions and their uses.

Mario Morini's anthological *Atlante di Storia dell'Urbanistica* (1963) comprehends urban plans, emblematic buildings and prominent characters in the production of urban space, starting from the Ancient Egypt to Howard and Tony Garnier's theories of the atlas being an urban manifesto. The recent and curious workpieces *Atlas of lost cities* (2014), by Frenchman Aude de Tocqueville, and *Atlas of improbable places* (2016), by Englishmen Travis Elborough and Alan Horsfield, presents unusual common sense places as a rich field to be explored, revealing itself in different and forgotten elements. Italo Calvino's famous work *Le città invisibili* (1972) –an eccentric, playful and rambling atlas "duet" edition– connects the aforesaid productions. Moreover, in Paul Knox's pretentious piece Atlas of Cities (2016) –a partial radiographic atlas of our cities by which the author sought to portray the contemporary urban universe on five continents– four fundamental functions have been verified in the cities along with thirteen types of stipulated settlements. The atlas trilogy organized by Rebecca Solnit and Jelly-Schapiro, *Nonstop Metropolis* (2016), an exciting and alternative Atlas triad, which addresses three North American metropolis –San Francisco, New Orleans, and New York– is based on ethnographic and cultural experiences, imagery maps and informative essays being an alternative side of those cities that is not traditionally expressed in tour guides or similar applications. Professor Nestor Goulart Reis Filho's work, *Images of towns and cities in colonial Brazil* [Imagens de vilas e cidades do Brasil Colonial, 2000] is a broad iconographic and cartographic catalog of Brazilian cities, towns, settlements, and villages existing between the sixteenth and the eighteenth centuries - an atlas about our urban heritage, even without the word "atlas" on its title. Still under the same subject, the production *Luso-America Historical Atlas* [Atlas histórico da América Lusa, 2016], by the UnB professors and historians, Tiago Gil and Leonardo Barleta, is a very rich data collection about cities, towns, parishes, villages and even "tabas" [indigenous villages] in South American territory under the Portuguese Empire. A work that transposes its physical materiality and turns into a more consistent and accessible virtual version - an interactive historical atlas, signs of a new era.

Nonetheless, a limitation of handling and use can be identified in such exemplars, excepted for the digital version of the Luso-American Historical Atlas. Even though it is essentially confirmed as a collection on a particular theme, a stationery, immobile, fixed mode in which objects, images and data are presented – following its author's primarily organization– restricts the interactivity between the user and the work itself. The modus operandi is predetermined, allowing little leeway to the reader. Thus, the atlas takes the shape of what we have chosen to call the 'product-object'.

This limiting feature was, to some extent, present in the preliminary version of the *New Cities' Atlas* digital platform, presented here as an example, a model. In this version, from the homepage (Figure 1), there are five operative keys in the upper bar: 1) "The Atlas" - the research conceptualization and elucidation; 2) "New Cities" - the urbanistic typology definition of urban nucleus[6]; 3) "Team" - information about the research members; 4) "Arrangements" - directed combinations proposed by the user; and 5) "Search" - an appliance for direct search. This page also holds the main icon (figure) through which you can access the map of Brazil punctuated by new cities (Figure 2).
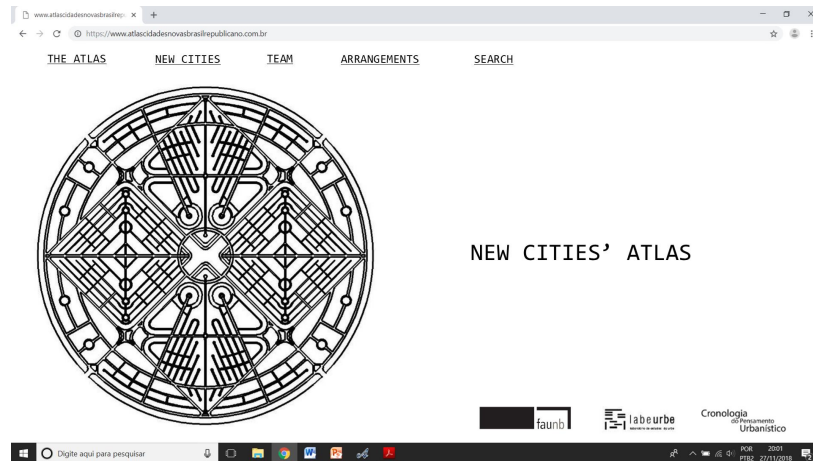


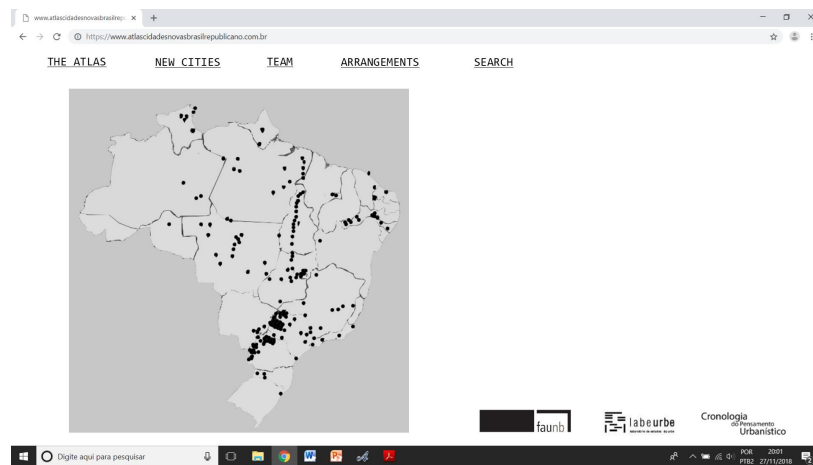**Fig. 1:** New Cities' Atlas (prototype) homepage. Source: Author, 2019.



**Fig. 2:** Access to the Brazilian map with its new cities - 1889-2019 (prototype). Source: Author, 2019.

This map also operates as a search engine through which a cursor indicates the name of the new city. Clicking on a point, such as Tangará da Serra, Mato Grosso State, an image opens up: the map with the new city original urban plan boundaries in its foundation, disregarding its expansion (Figure 3). Following the study by Divorne, Gendre, Lavergne e Panerai (1985) on the French bastides, the intention is to have an understanding of each new city's projected layout. For each city, there is a box that can be opened when desired, with the six attributes - the six genes of the new city - containing basic information: Entrepreneur, function, region, professional, design or date (Figure 4). There is also a link to the entry on the *Chronology of the Urban Thought* website (http://www.cronologiadourbanismo.ufba.br).

**Fig. 3:** The image of the selected new city shows up Tangará da Serra, highlighting the original layout (prototype). Source: Author, 2019.



**Fig. 4:** Image of the original nucleus with data table that qualifies the cores as a new city and link to the entry (more information) in the *Chronology of the Urban Thought* (prototype) portal. Source: Author, 2019.

This version of the Atlas site contains a filtering dispositive that allows establishing preliminary correspondences, by either entrepreneur, function, region, professional, design or date or by mingled combinations of these attributes (**Fig. 5**). For example, the user wants to know which new cities were designed by engineers between 1950 and 1960. After filling in the search data, the portal reveals the exemplars found among a list of 270 cataloged cities. As stated by Cláudio de Moura Castro: "Data collection, arising either from today or yesterday, is only the beginning." (Castro, 1978, p. 312-313).



**Fig. 5:** "Arrangement" device enables a directed combinatorial search (prototype). Source: Author, 2019.

Despite such tool refers the site as a "product-object" (Figure 6) for being a predetermined searching engine guided by the user's explicit interest , this induced arrangement acts as a filter with the user's previous control and this very characteristic points to its merit. However, something else is needed in the Warburguian atlas parameter, expressly, a mechanism that allows the creation of plots without the predetermined chronological sequence understood as a "very human and unscientific mixture of material causes, of finalities and

randomness; a slice of life that the historian isolates according to his convenience, in which facts have their objective ties and relative importance (...)." (Veyne, 2014, p. 42).
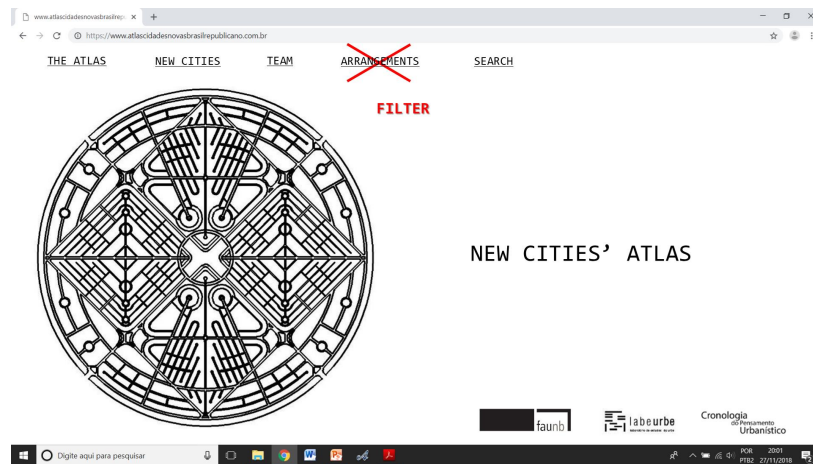


**Fig. 6:** "Arrangements" device is a filter (certainly valid!) without the pertinent aspects related to thinking and doing through the atlas (prototype). Source: Author, 2019.

Therefore, after an initial evaluation, we tried to distance from the notion of the atlas as a simple, static file, at its user's will, a physical workpiece with a predetermined organization and little interactivity, if any. This type of atlas wasn't the aim of this research. Considering this scenario, it was necessary to better understand the Aby Warburg's atlas in its attributions, meanings, and applications. The Warburgian atlas is an unfinished masterpiece that made it possible to rethink the way of conceiving and making history.

## 3        A bet

The first contact with the *Mnemosyne* project started with Christopher D. Johnson's Memory, Metaphor, and Aby Warburg's Atlas of Images (2012). Aby Warburg's atlas exceeds the standard notion of the atlas as a self-contained "object-product", presenting itself as a means of thinking and doing. A method in which the viewer is the subject who connects the relationships between the images. In this sense, the French philosopher and historian Georges Didi-Huberman was essential for a better comprehension of the Warburguian atlas. And the starting point was to watch his interview as curator of the ATLAS exhibition, "How to carry the world on your shoulders?" (*¿Cómo llevar el mundo a cuestas?*) (2010), held by the Reina Sofía National Art Center Museum in Madrid.

In this interview, Didi-Huberman raised some precepts that come close to that envisioned for the New Cities' Atlas. As he states in a specific part of the interview:

> The atlas is a form of visual knowledge. It is a synoptic presentation of differences since completely distinct things can be seen placed next to each other. The atlas is a much more visual tool than any other file can be; It is a work of montages in which different times come together; It is a shock. (Didi-Huberman, 2010, video, our translation).

Precisely, the Warburgian atlas brings the possibility of impacts and confrontations provided by links between different images, gathered not by their similarity or coexistence in the same period, but through unimaginable and so far obscure connections and by the overlap of different periods. In this sense, the exhibition held in 2010 in the Spanish capital aimed to approximate this association mode with the twentieth-century artistic production, being the history of imagination its main plot. Passing through the exhibition, there was not a particular narrative, but as many as it is possible to establish.

For this reason, unlike the limited conception we had at the beginning of this research, the Warburguian atlas shook our perception of the object, approaching the methods explored in the *Chronology of the Urban Thought* project. A scientific bet! The Warburguian atlas aims to enable narratives. Besides being a synthesis work, the new atlas is primary a working process, a medium, a constant performing process done on a table, a sustentation, in which arrangements, montages, and placements are established according to the available objects. As a result, it always produces distinct readings. Thus the atlas came to be regarded no longer as a "product-object" but as a means, a tool, a way of seeing and understanding - a "motive-device".

This idea was better refined by reading Didi-Huberman's Atlas or the *Anxious Gay Science* (Atlas ou Gaia, a ciência inquieta - 2013), a book in which the philosopher scrutinizes and interprets Aby Warburg's work in the

light of other thinkers, a content that has broken with the initial ideas intended for the *New Cities'* Atlas project envisioning new possibilities and making the way forward clear.

According to Didi-Huberman (2013), the reading and the use of an atlas occur in two ways: either objectively (when looking for accurate information), or erratically, by unintentionally rambling (by allowing yourself wander through its pages). In this wise, he compares the atlas to an explosive mine composed of the sum of aesthetics and knowledge. The atlas is both a "visual form of knowledge" –an aesthetic paradigm– and a "knowledgeable form of seeing" –an epistemic paradigm– blurring any limits of intelligibility. And from this sum between aesthetics and knowledge, the atlas emerges as a method without boundaries, without pre-established certainties.

Therefore, the atlas is transformed into an instrument, a tool that opens untested possibilities whose motive-force is imagination. The atlas provides knowledge by the present imagination in the transversal knowledge, in the process of assembling, disassembling, and reassembling. Thus, the atlas is not a simple archive, or as Jacques (2018) points out in Think for Assemblies, a "simple operating methodology". The atlas is, indeed, a tool, a means of processing.

> In a certain way, it is Warburg's "methodological testament", which seems to haunt the more traditional and hegemonic ways of thinking history up to our days –in particular, the history of art– by questioning, above all, the most simplistic relations between memory and history, between Mnemosyne and Clio. (Jacques, 2018a, p. 58, our translation).

A tool that can be configured as support for meetings, such as a table, "an offering table, a kitchen table, a dissection table or a montage table" (Didi-Huberman, 2013, p. 17). An anachronistic tool in admitting and working with heterogeneous times. An empowering tool to see and read time. A tool with its own standard: the "principle-atlas", the principle of what is ephemeral, temporary and fleeting. Within this temporary principle, two possible reading paths emerge, one is denotative (searching for messages) and the other connotative (searching for montages). In short, the atlas can be understood not only as a tool but as a reading apparatus, a knowing machine, a contemplation device.

Hence, the Warburgian atlas has invented a means to overlap images inaugurating a new genre of knowledge: betting - a way of re-examining the world through narratives never noticed or imagined before. Above all, it is a way of overviewing the world due to its interchangeable nature of configuring its objects and images. For Warburg, to think is a matter of transforming shapes instead of fixing them. In brief, the Warburgian atlas is an object to be read and used objectively or erratically, tensioned by aesthetic and empirical paradigms whose understanding limits are not always clear: it is a device lead by imagination having a table as its support basis; it is concomitantly negligent and time-enhancing; a device ruled by random, by improvisation; a reading device permutable by nature and with the characteristics of a machine specially made for contemplation and knowledge-enhancing. That is, a new means to relate images, a way to read the world over again.

By countering such readings in the search for new cities, the new atlas would be support for images, new cities and their attributes and, in an innovative way, the creation of amalgams. Unlike preconceived arrangements, a new device –a key– should offer the random, the erratic, the bet. In this sense, like a slot machine (Figure 7), our objects should be aligned by randomization, performed by an algorithmic[7] system to be managed by the website operating system (information technology).
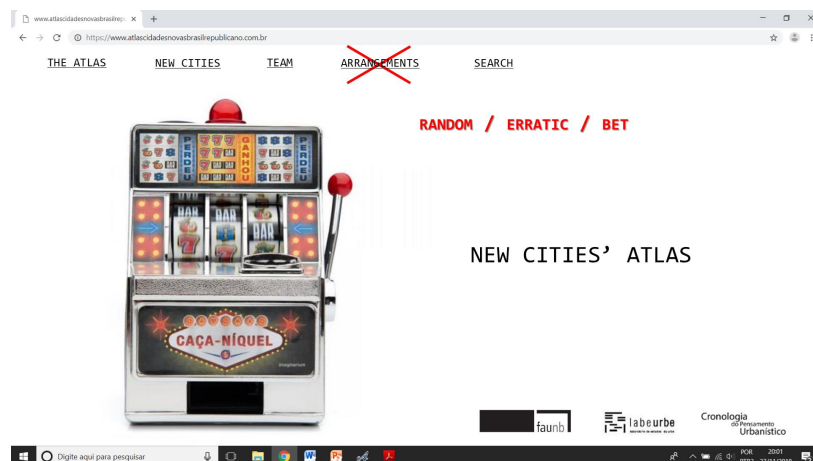


**Fig. 7:** Addition of a random process to the site – illustration (prototype). Source: Author, 2019.

In this new version, the new device adds something else to the New Cities' Atlas portal functioning by allowing the user to pay attention and/or create as many narratives as possible, beyond those intentionally set by the "Arrangements" device, stories that unfold the project's origin, the characters involved with it, the construction of these cities; stories that allow a better understanding of the urbanization process and the urbanism in our country during the twentieth century; stories that bring something new to what is already established.

However, effectively, how does this device look like and work?

## 4        The atlas-device

Once we break with the idea of the atlas being an "object-product" (a catalog), qualifying it as a "motive-device" (an instrument), it is then necessary to reveal the applicability of this thinking mode, which means, to think objectively or erratically by paths in mists; to think randomly, in an improvised way and by the imagination; to think through distinct times; to think our object in relation to others in order to arrange them on a screen and relate them through a new perspective ... all of these together in a single operative key: the "Atlas-Device" (Figure 8). Starting from this point, the flexibility present in the Warburguian atlas, allows the user to always go through new paths and experiences.
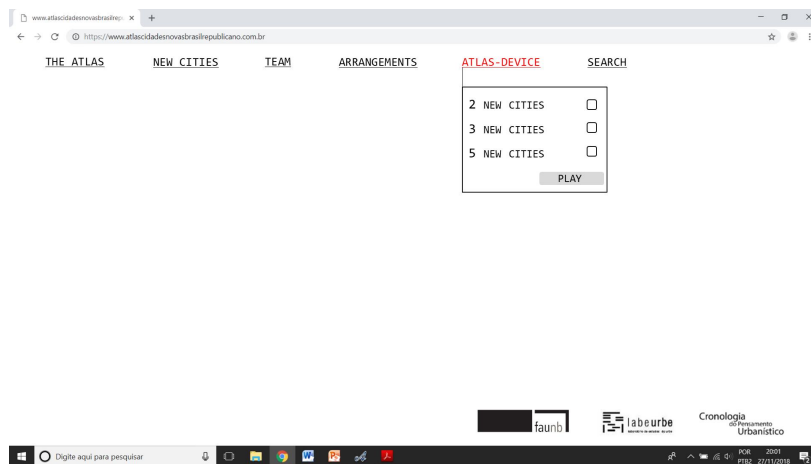


**Fig. 8:** An addition to the "Atlas-Device" with three arrangement options. Source: Author, 2019.

Through the device, the user can select one of three available options: 2, 3 or 5 new cities to be randomized and arranged. In the exemplified case, we chose 3 new cities (Figure 9).
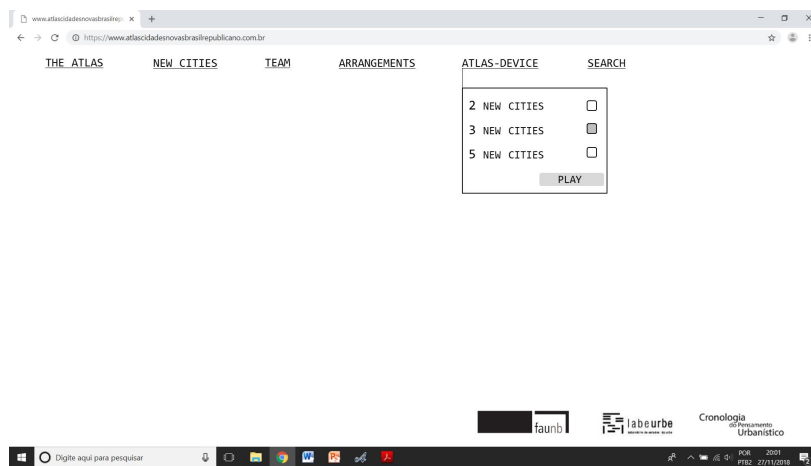


**Fig. 9:** Selection of an option for a random arrangement (prototype). Source: Author, 2019.

After randomization (Figure 10), the system arbitrarily offers the user three new cities contained in its archive (Figure 11), from which biographical data of each case can be obtained as well as the possible narratives that can be constructed with them - to do it through the atlas. It is up to the Internet user to access such information from each city image and, along with their personal repertoire, establish links, connections, approximations, correlations, impressions, distortions, ruptures, discrepancies to what is exposed on the "table". On the same screen, there is a space to write the narrative text. Thus, in this constellation, the most distinct steamy forms can be captured, recorded and deciphered.
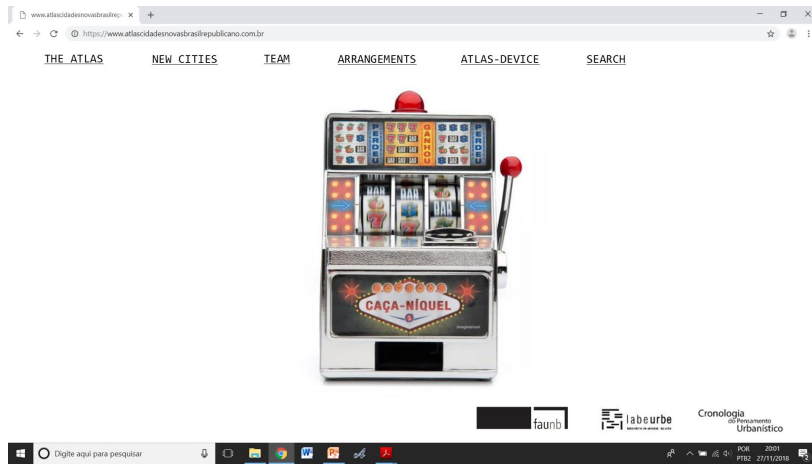
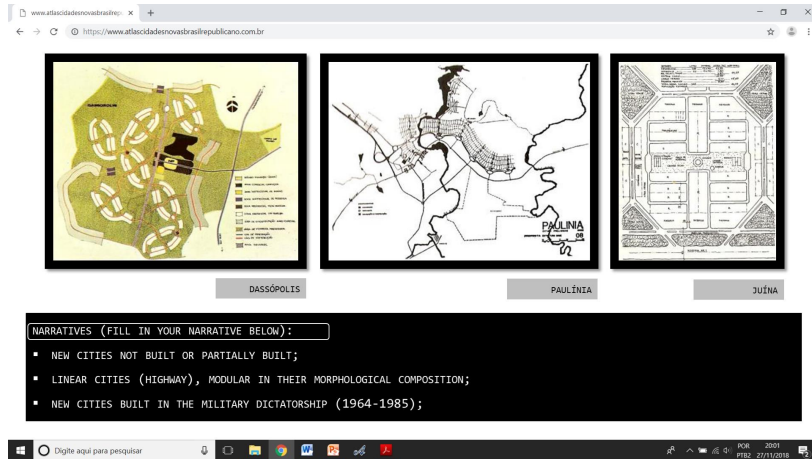**Fig. 10:** Random algorithmic system activation - illustration (prototype). Source: Author, 2019.



**Fig. 11:** The presentation of the arrangement of three new cities (with accessible data by clicking each image), by which the user can write his observations on the blackboard (prototype). Source: Author, 2019.

Together with the elaborated narratives, it is up to the portal moderators to verify these texts and disseminate them on the homepage of the site (Figure 12). The texts are available to the public since it is possible to access the narratives about a certain new city - in case they have been already made - by selecting the "Search" device, allowing a greater understanding of the exemplar. In this way, the system is complete, with the atlas acquiring its full application: to be, simultaneously, a search and informative object, an interactive instrument and a knowledge driver.
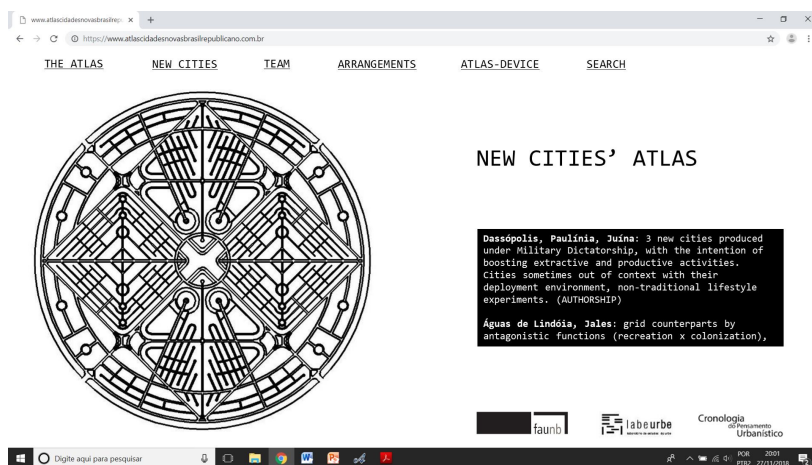


**Fig. 12:** *New Cities' Atlas* homepage with narratives created from the "Atlas-Device" (prototype). Source: Author, 2019.

The website –or table– *New Cities' Atlas* will not be used to establish a definitive classification, exhaustive inventory, or catalog –such as a dictionary, an archive, an encyclopedia, a conventional atlas– to determine the cases of a typology. Instead, it will be formulated to collect segments, pieces, and parcels of the new cities' universe, respecting the multiplicity, the heterogeneity, to give readability to the relations highlighted (nebulae). A table to play the game, as described by Didi-Hiberman, on which we can:

Understanding the atlas as a means –not an end– leads us to a work of "infinite natural history", an "atlas of

> Shuffling and distributing the cards, disassembling and reassembling the order of the images on a table to create heuristic "almost guessing" configurations, capable of glimpsing the work of time on the visible world: this would be the basic operative sequence for any kind of practice which we call an atlas. (Didi-Huberman, 2013, p. 55, our translation).

the impossible", by which we intend to collect the cases of new cities originated in Brazil, starting from 1889, in order to establish endless debates, narratives, and referrals with them, no endpoint, no closure. We will shed light on the information that couldn't be found in Brazilian urban historiography by being the collectors of these new cities and their attributes. We intend to create conditions to "reconfigure the order of places" (Didi-Huberman, 2010, video), in which there is not a unique way to tell the history of new cities in Brazil. It is necessary to reconfigure the space, to redistribute it, to disorient it. To set up the New Cities' Atlas is to enable the re-reading of urbanism and Brazilian urbanization from at least 270 exemplars already found.

## 5        Final considerations: a replicable model

Researcher Albert von Szent-Györgyi Nagyrápolt (1893-1986), a Nobel Prize winner in Physiology in 1937, once described that creativity is about seeing what everyone sees and thinking about what no one has ever thought. Creative thinking, a quite noticeable subject in recent years, is precisely about finding alternative solutions to new problems or challenges. Defensors of creative thinking consider that new initiatives show up only when the traditional patterns and linear paths are abandoned and new possibilities can be checked.

The *New Cities' Atlas* works precisely with this possibility. What is more, it behaves as a replicable, adaptable model that can be used by any similar study. It is a path for its absorption of the succession of events (facts) and images (data) to be thought through the atlas and then shared on digital platforms. It is a random process with no defined or stipulated beginning, middle or end, with exponential possibilities of arrangements to tell the story of the new cities or of any other especulated object. A means of managing and providing knowledge, determined by the clash of nebulae. It is the knowledge acquired added to other steamy forms that may arise from it (Pereira, 2014).

By questioning the atlas traditional role of a limited exploratory material consisting of its developers' previously selected data, the new atlas is presented as an instrument of analysis, perception, exchange and epistemological formulation. It is an atlas in which the most distinctive arrangements –or "nebulae"– are captured, deciphered, associated and recorded. In this sense, thinking and doing through the atlas, rather than a unidirectional relationship, establish an interaction through which the reader assumes the role of creator, the protagonist in the generation of new looks and narratives about a given object.

Thus, thinking and doing through the atlas constitute, therefore, the construction, preservation, and diffusion of information –actions substantiated by academic research and an alternative analytical method. A process in constant realization and, therefore, unfinished, that aims at the enlargement of memories, textures, knowledge. It is the Know-How to be practiced collectively (researchers) and collaboratively (Internet users) and, with this, a way of strengthening the links between academia and society, through information technology and online communication.

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**1** "New Cities' Atlas" digital platform is currently under development and temporarily unavailable for public access.

**2** The concept of "New City", particularly developed by Trevisan (2009), is about urban nuclei: 1) undertaken by the desire of the public power and/or private initiative and materialized in specific actions; 2) that seek to comply, at least initially, one or more dominant functions; 3) implanted in a previously chosen site; 4) from an urban project; 5) elaborated and/or developed by a defined agent - eventually qualified professional; and 6) within a given deadline, including a reasonably precise foundation time. These are six attributes that define the DNA of a new city, used to identify reproduction produced over time.

**3** Abraham Moritz Warburg was born in Hamburg, Germany, on June 13, 1866, in a family of bankers. He studied the History of Art, Religion, and Culture at the University of Bonn (1886-1888) and extended his studies in the cities of Florence (1888-1889) and Strasbourg (1888-1891). In 1895, he made a thrilling trip to the USA when he got acquainted with Hopi ethnography. He married Mary Hertz in 1897. Between 1908 and 1914, he has been acknowledged among art historians and received the support of Fritz Saxl. World War I has had an emotional impact on Warburg, leading to a mental breakdown in the postwar years. In 1922, historian Gertrud Bing joined the team and, with Saxl, assisted Warburg in the great Mnemosyne project (1927-1929; unfinished). Aby Warburg died at 63 years old on October 26, 1929, in his hometown. (Burucúa; Kwiatkowski, 2019).

**4** Translated from Spanish: "La distancia puede ser entendida en un sentido espacial –nos alejamos de un objeto para verlo, describirlo y representarlo mejor– o en un sentido temporal –el que nos otorgan la memoria, a menudo imprecisa o contradictoria, y el análisis y juicio científico de la historia. Los seres humanos hemos establecido varios umbrales de distancia a lo largo de nuestra evolución. El más amplio corresponde a la tecnología y la ciencia modernas. El más estrecho, a la magia. Entre ambos, se ubicarían las religiones y los saberes analógicos. Nuestros antepasados del Paleolítico crearon tanto el umbral tecnológico cuanto el mágico. El primero los llevó a fabricar el arco y la flecha, a criar animales y, por último, a cultivar la tierra. El segundo les garantizó la recuperación del equilibrio psíquico y social al enfrentar la muerte y la calamidad. En este punto concerniente al fin de la vida, los modernos hemos conservado el umbral de lo mágico en una mínima expresión, necesaria y reparadora. Lo paradójico es que, en el estado actual de nuestra tecnología de las comunicaciones y la inmediatez, corremos el riesgo de que toda distancia entre el mundo y nosotros sea abolida. Ignoramos en qué podríamos transformarnos ante ese fenómeno." (Burucúa; Kwiatkowski, 2019).

**5** This research is part of the works carried out by the Chronology of the Urban Thought group, which involves the participation of researchers from the Brazilian Federal universities of Bahia, Rio de Janeiro, Brasilia, Minas Gerais, Rio Grande do Sul, the State University of Campinas, University of Sao Paulo and UNEB. For more details, please access: http://www.cronologiadourbanismo.ufba.br/.

**6** The New Cities typology is a successive praxis in the history of urbanism, composed of intentionally created urban nuclei. In long term, it can be traced over as a field of reading and interpretation of thoughts, trajectories, speeches, and representations of cities materialized in space and time, as continuity cases, rupture or exceptionality and also in diverse political, economic, social and cultural contexts.

**7** Algorithm: "The process of calculating, or solving a group of similar problems, which **generally and unrestrictedly** establish formal rules for obtaining the result or solving the problem". (Aurélio Dictionary, CD-ROM, highlighted by us)