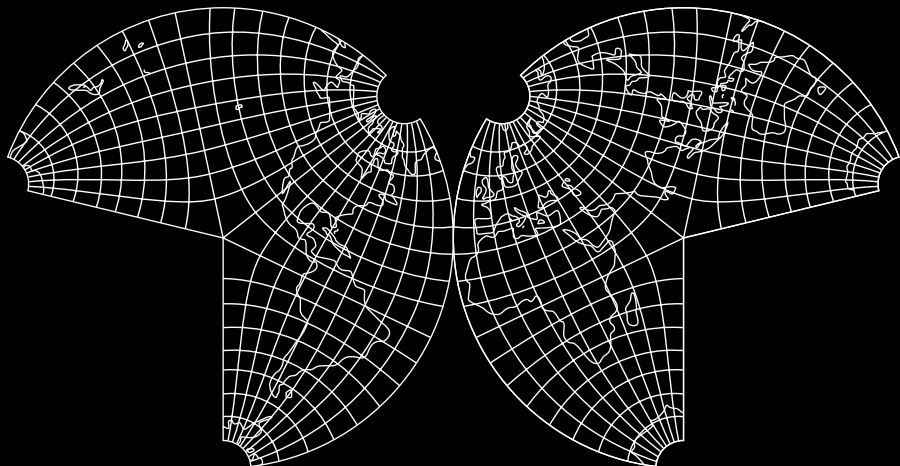


ATLAS OF INDEXICAL CITIES:



Diana
Alvarez-Marin

A Personal Search Engine for the World

Pervasive mobile computing, abundant available urban data, and established ideas of quantum physics have become our familiar, contemporary landscape. This decentralizing dynamic invokes a situation in which not only does the number of infrastructural artefacts exceed the number of users, but it also has an influence on a global, planetary scale. Can we still call the former objects, and the people who use them, subjects? Who is observing and what is being observed? How are the local and the global entangled? The role played by the observer seems to be largely absent in urban theory, even considering the Observer Effect – in which the mere observation of a phenomenon inevitably changes that phenomenon – given that urban theory remains grounded in the production of generic systems that operate with specific data, under the assumption of a pre-existent general logic to cities.

What happens when we invert this setup and assume that personal (and even ephemeral) city models can be articulated by an active observer (the citizen) and enacted with generic data as a substrate for infrastructures? Can generic infrastructures be informed as personalized instruments by and for an observer? To illustrate this question, I will proceed with an adventurous attempt for a personal search engine for the planet. This navigation instrument, proper to our time, will expose us to familiarity and otherness simultaneously: It will learn from what we know and project it on what is yet-to-know for us, turning it into something that can be “re-membered”, placed together again. Such an instrument allows us to navigate through n-dimensional spaces of the hard and soft aspects of a city – spaces, places, and events – while providing a spectrum of the most suitable articulations for a specific active subject or observer.

Unlike Google’s search engine, for which subject and context are known, this instrument can be enacted by a multiplicity of avatars, where an active subject can impersonate many personas. Each of these models is a projection from which another projection might unfold, until ultimately it constitutes the narrative of a more extensive atlas of atlases. These stories not only showcase a multiplicity of personal projections about cities, but also expose diverse ways of navigating the city as a probability space. Navigation itself affirms the brand of the active subject, her world, and her Atlas of Indexical Cities.

How might we move through cities if we have access to all of the world’s cities, spaces, places, and events? If *anywhere* is accessible, can we consider a local that is informed by a global and a global that knows any local? If any point gives us a glimpse of the globe, can we invert the world? Can we grasp the atmospheric qualities of spaces and places? Where should we go if we like temples and gods? Can these indexes tell us a story about an event that happened in Kyoto? And what would it look like in Berlin? And can we find Berlinness in Mumbai then? Can we *re-member* places that we do not know of yet by assuming, like in some sort of anamnesis, our own experience as a learning substrate?

WORLD-OBJECTS AND ALIENS

Navigating the world in this probabilistic and inclusive manner might seem like a challenge, but the ground for such a task can already be found in our cities and it is part of our everyday lives. Messages travel faster in cities, thanks to the penetration of decentralized connected devices on a granular scale and satellite technology on a global one. The French philosopher Michel Serres (2006) refers to these objects, which have an influence at a planetary scale, as world-objects. He writes, “[b]y world-objects I mean tools with a dimension that is commensurable with one of the dimensions of the world. A satellite for speed, an atomic bomb for energy, the Internet for space, and nuclear waste for time...these are four examples of world-objects.” (2006: 5-11) World-objects are part of the world and affect it simultaneously. This self-referential dynamic invokes a situation in which the number of artefacts exceeds the number of users, modifying the roles of the observer and what is being observed, thereby suggesting a new subject-object relation. ○

FIG. 1

Can we still call the former objects and the people who use them subjects? Who are the beings that use world-objects? Cities of Indexes are inhabited by multiple natures and different sorts of intelligence, even artificial ones. World-objects allow them to be physically in one space while also having access to the entire world simultaneously. For them, the Internet is a reality-producing machine that blurs the distinction between virtual and actual. They affirm their hybrid condition by stepping back and forth between these two worlds, without needing to accept a fixed ground of belonging. They move through porous spaces, between public and private, distant and close, in different intensities and to different degrees. They present their faces through avatars and brands, as they choose the way they want to talk in public spaces. Digital citizens transform their own world-objects through the use they make of them, inasmuch as these infrastructures modify their understanding of their surroundings.

They learn to behave in a changing digital public space, as it becomes relative to the articulation of moving centers. ○

FIG. 2

INSTRUMENTS OF NAVIGATION

There is nothing such as reality per se, only a continuous process of modeling interpretations of that reality. Models, like instruments of navigation, provide access to the world through approximation, in an attempt to make the infinite both finite and knowable. We can think of particular models as instruments of navigation, such as atlases, perspectives, and search engines, all of which are useful to our navigational task between probability spaces in cities.

With the abundance of available data, we might feel a little lost, adrift in an open sea. Digital technologies allow access to ‘anything’ in quick and light access (just a few touches on a screen) that, essentially, encourages rapid slips instead of deeper approaches to how to navigate the real and its plenitude of data. The breadth of the horizontal touch on the global surface of things – an extensive horizontal panorama – is orthogonal to the meticulous depth of the local – a vertical elevation. How might we synthesize the global and the local, the object and its observer?

Atlas, the Titan doomed by the gods, supports the celestial vault on its shoulders for eternity. Like a head that circulates, this vault is a model that he sustains through the architectonic play of singular figures that do not remain fixed. It is an idea of the world which itself remains inaccessible, but which it tries to grasp approximatively. Let us imagine the articulation of an atlas, one that builds itself as we navigate through the abstract space of cities. This atlas is a synthesis of views: It neither emphasizes one facet of reality over another, nor does it fix itself with one single perspective. It addresses the tension between the continuity

of reality, the discreteness of our partial representations, and their “coming together,” to try to reconstruct a “vivid model” of the world. An atlas, like any perspective or search engine, depends on an external point of projection.

We can think of models as projections that position us within a space of existence, in the same way that the Renaissance perspective positioned us within the center of the cosmos about 600 years ago. This development, more than simply being about space, concerned how we ‘viewed’ space ‘subjectively’. The physics of bodies was then replaced by a physics of light, which although projective still corresponded to Euclidean geometry. Today, with a new geometry and a new active subject, we are centers amongst many centers in a world in which we cohabit with other sorts of intelligences and with world-objects. It is no longer possible to consider a single eye as the center of the visible world or the vanishing point of infinity. We have left the visual domain of Euclidian geometry towards an invisible mathematical space of communication and relations. How, then, could a perspective of the digital come to be?

In *De Architectura*, the Roman architect Vitruve (27-23 BC) stipulates three “dispositions,” or “appropriate arrangements”, for architecture: *Ichnographia*, *Orthographia*, and *Scenographia*, which were later assimilated on to plan, elevation, and projective plane. These dispositions are substrates of the Renaissance’s perspective. In the same way, with a new geometry, could they be considered as ‘informational substrates’ with which one could think of a perspective of the digital?

While the geometry of the Renaissance is about seeing, the geometry of the digital is perhaps about something we cannot see. In 1854, the German mathematician Bernhard Riemann introduced a radically different conception of space. Riemann created the idea of a manifold, based on a notion of measurement that is only accessible self-referentially, by comparing parts and without the need for an external standard. Yet, Riemannian geometry is infinite.

tesimally Euclidean, given that a manifold can be locally described by coordinates. Linear approximations at each point of a manifold involve tangent spaces that contain all of the possible directions in which one can tangentially pass through that point. The pendular movement, between spaces of different dimensionalities, could be understood as a circular process of communication, between the derivation of tangent spaces and the integration of infinitesimal intervals.

The concept of a manifold, while spatial, does not necessarily refer to a physical space. One of Riemann's more profound ideas is that many structures can be considered as spaces in mathematics. We will explore these n-dimensional spaces as we deal with the informational makeup of the city in the following sections. Riemann's geometry works with an infinite-dimensional linear space, where any point reflects the whole world.

When one asks something to a search engine, the whole world is placed in circulation around a specific point. A request is made and all of the world's knowledge circulates around that one particular question, as a list of probable answers, in a fraction of a second. Google first assigned dynamic hierarchies on the web, considering the importance of each website in relation to all of the others and in probabilistic terms, like a huge Markov Chain. Although intention drives searches, the user's intentions here remain encapsulated within given profiles that might reduce the scope of the informational spaces they can access, conflating identity and persona in one.

Rather than creating a search engine within a given frame of what the world might mean, we will instead mimic Google's approach, while maintaining a focus on the role of an active observer in the articulation of personal models of the city. This personal search engine is about articulating ideas of the city within particular worlds. It operates like a navigational instrument, pointing in a probabilistic manner towards unknown spaces, places, and events,

about which we can talk implicitly about those that we know. With a geometry of the digital, where any point reflects the whole world, we will no longer talk about points in space, but about dimensionalities of any-space and a new level of technology to explore it.

NAVIGATION WITH A PERSONAL SEARCH ENGINE FOR A WORLD

Let us imagine, for the sake of this peculiar navigational task, the articulation of an instrument of navigation like a search engine. Such an instrument allows for navigation through n-dimensional spaces of the city – spaces, places, and events – all while providing a spectrum of the most suitable articulations for a specific observer. Rather than distances, this navigability is led by the conceptual similarity between these n-dimensional spaces. Like with any atlas or search engine, each of their models is a projection from which another projection might unfold, and so on infinitely. We will also explore diverse ways of navigating through the probability space of the city, from model to model.

A context needs to be defined first, though. We will play with millions of spaces and places, orchestrating both the granularity and vastness of World-Objects, specifically via social networks and satellite mapping. This navigational instrument will be articulated within two contexts or transient worlds. First, a generic context, covering 1,000 of the world's cities, as a selection for ichnographic recordings of cities through satellite images. Additionally, a more specific and personal selection, manifesting our interest in 50 particular cities out of these 1,000, will provide a context for orthographic recordings through geotagged Instagram images.

These selections, as their modules are arbitrary, pertain only to a personal interest or a specific question. They define a context that

can always be redefined and can be considered as space of existence for cities, like actors on stage. ○

FIG. 3

PRELUDE: SPACE, PLACE, AND EVENT

This instrument will be articulated around three main substrates: Space, Time, and Life. These substrates can manifest as instances of Spaces, Places and Events. While Space and Place are often addressed in the field of representation at the scales of architecture and the city, through maps and images, the Event pertains to a speculative space, similar to the one concerning projective perspectives. We will relate each of these substrates to a specific dataset:

- We will link space to a dataset of 400,000 satellite images from a selection of 1,000 cities around the world. These are “modules of space.”
- We will link place to a dataset of 5,000,000 Instagram-geotagged images from our personal selection of 50 cities. These are “sections of space in time.”
- An event is articulated and not given by any sort of data. It is an architectonic space in which probable events are selected and collapsed by an active subject. ○

FIG. 4

PRELUDE: SPACE, PLACE, AND EVENT

We will develop three different lexicons of elements, one corresponding to each substrate:

- For Spaces in Space, a lexicon of Space-ness S.
- For Places in Time, a lexicon of Place-ness P. For Events in Life, a lexicon of Eventness E.

Pendular movements can be performed with these Lexicons:

- A vertical movement of Encoding and Decoding: Between Spaces and Space-ness, Places and Placeness, Events and Eventness.
- And, lastly, a horizontal movement of Translation: Between different lexicons of Spaceness, Placeness, and Eventness, establishing a continuous circulation.

Space and Place are orthogonal to one another. While Space depends on a locational choice, Place depends on the choice of a specific moment that ‘cuts’ through space in time. As the Chinese geographer Yifu Tuan (1977) describes it as follows: “[w]hat begins as undifferentiated space becomes place as we get to know it better and endow it with value. (...) The ideas “space” and “place” require each other for definition (...) if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place (1977: 28).”

MODULATIONS

Google Maps offers an apparently continuous image of the world. To discretize it, we have chosen an arbitrary module that addresses a particular interest; in this case, a module of 250 meters. Different modules might give better or worse results, depending on one’s question, but this is not fixed and remains open to exploration. We now have a lot of 400,000 spaces, out of time. Conversely, we can consider Instagram images as already a unit of a module, cuts of space in time. We have now a lot of 500,000 cuts of space, in time. ○

FIG. 5

ENCODINGS

The different codes used on these images can be inadequate to address the problem of similarity. These representations will be symbolized in a higher level of abstraction. Already modulated, they will now be encoded as vectorial representations, so that any image can ‘converse’ with others through the use of the same terms and conventions. We encode these images outside of senses and sense, turning each one of them into meaningless n-dimensional vectors that are readable to machines, thereby allowing for a more abstract operational space. The materiality of these images is affirmed and they become something like intensities or recordings of light. ○

FIG. 6

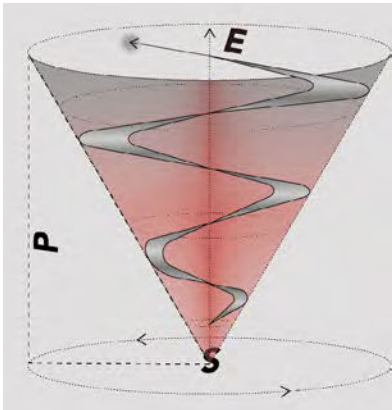
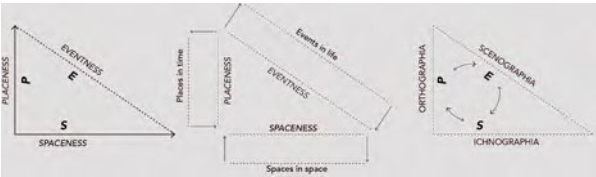
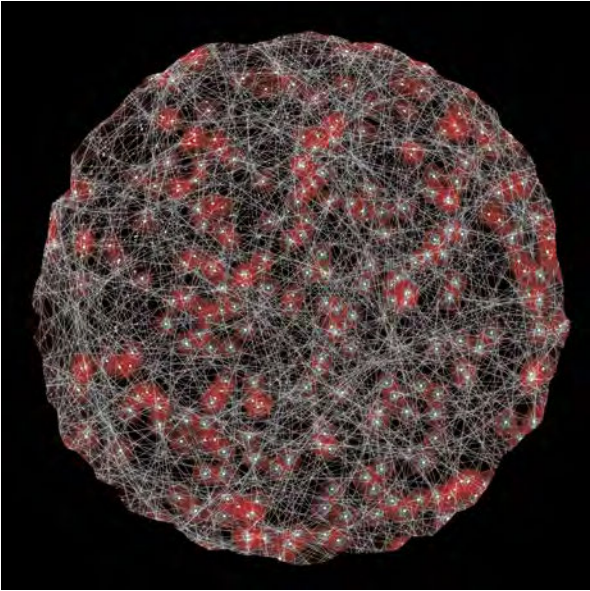
LEXICALIZATIONS

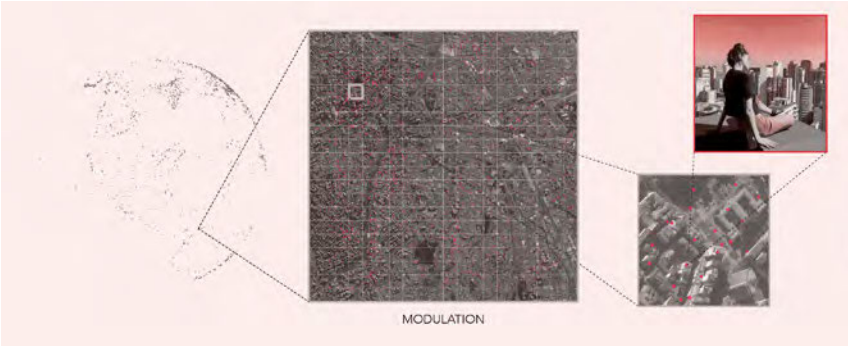
An arrangement of concepts can be indexed as a lexicon, where proximity denotes similarity, by transferring them to a space of lower dimensionality. This relationality is not given, but instead emerges out of data itself, “out of the foam.” Here, the lexicons of Spaceness and Placeness with 10,240 elementary lexemes each. ○○

FIG. 7, 8

Lexicons usually cover a particular theme or ‘way of talking’. A lexeme inside a lexicon is a base form that can encapsulate all of its possible inflexions. A lexeme can potentially integrate a set of observables that hold a certain similarity together. For instance, in English, run, runs, ran, and running are forms of the same lexeme, which can be represented as run. A lexeme is not a specific location or a thing, but rather the abstract quality of such a thing.

These panoramas remain partial, given that they offer isolated views of the city and lack an active observer. Now that we have these orthogonal substrates at the base of our instrument of navigation, how might we establish communication between Spaceness and Placeness? Spaces can host places, like cuts of space in time that can resonate within a given space.

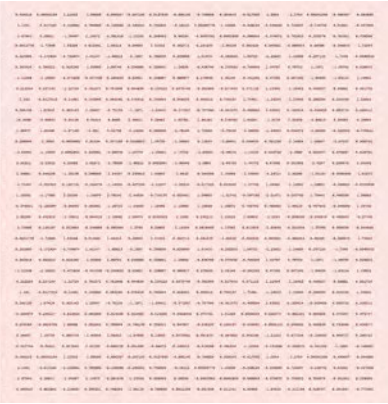




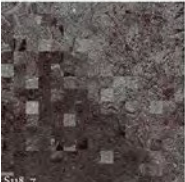
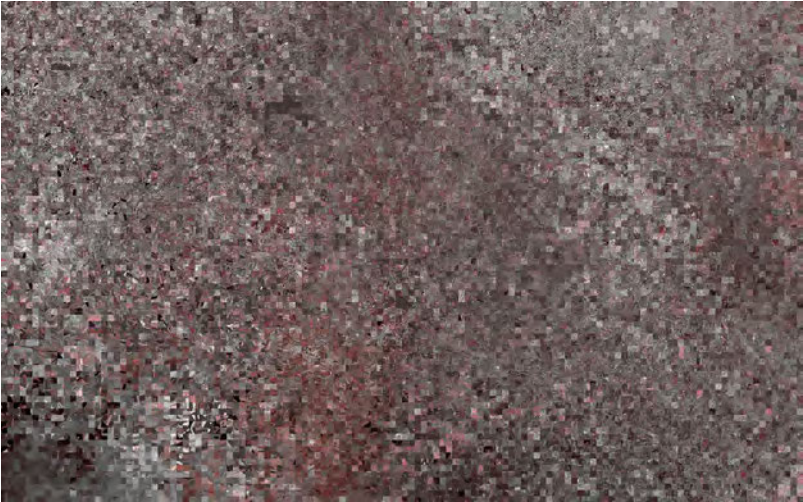
▲ 5



▲ 6



▲ 7



We refer to this bundle as a concrete locality, given that space can host various places. Any specific space or place can be symbolized by a lexeme. Certain lexemes of Placeness have a higher probability of being found together inside a certain lexeme of Spaceness. A concrete locality addressed in a lexical manner is an 'abstract locality', which can be considered as a complete graph or a graph of all possible paths between all Placenesses within a particular Spaceness. ○○

FIG. 9, 10

The vectorial encoding of an 'abstract locality' is the centrality degree of its graph or the frequency of each lexeme of Placeness within the particular Spaceness. Out of this matrix, a third lexicon will be indexed, encapsulating Spaceness and Placeness into lexemes of Eventness.

We can think of an Eventness as the quality of the resonance of actions taking place within a city's spaces: Grocery shopping in a market, partying in a nightclub, a stroll in a park. These stories might happen in a multiplicity of times and locations, as an abstract idea to which we can only refer indexically. For instance, when we think of a day at a museum, what comes to mind? Pieces of art, paintings, sculptures, benches. There is no causality in their folding together, but rather a resonance. An Eventness can be collapsed into a multiplicity of possible events, depending on the interest of an active observer.

SCENOGRAPHIC PROJECTIONS

Our three lexicons can be reindexed by considering their frequency within each city, to become tables on which cities can project faces. A city can get as many faces as the lexicons with which it can talk. We can refer to the play of these faces on scene as a "way of talking". ○○

FIG. 11, 12

TRANSLATIONS

Cities talk and gather in different and meaningful ways depending on a specific 'way of talking'. Different ways of talking can be translated into one another, in a continuous circulation from Placeness to Spaceness to Eventness and so on. We project ourselves on these tables by selecting and exploring city atmospheres that we are curious about. Our chosen moods insinuate three themes focused on Western, Northern, and Eastern European cities respectively. It might be possible to detect wide nuances between them, even within the proximity of a shared 'Europeanness'. None of these associations are known beforehand. Operability on an abstract lexical level allows these narrations to emerge through implicit relationality.

For instance, we can access a cluster of Northern cities' through representative lexemes of Spaceness. Their ichnographic projections encapsulate the most characteristic atmospheres for these cities: large green areas and forests, coastlines, and a predominant sea. This could be a narration of what Northern cities, spatial qualities or 'Nordicness' could be about. This narrative can be translated again into Placeness by its articulation with Eventness as translator, showing a story of open landscapes, warm clothing, forests, cabins, boats, and sea views.

We can ask for the Placeness of some Western European cities such as Cologne, Paris, Berlin, and Lyon. Eventness allows us to consider the spatial qualities of Spaceness that are likely to resonate with these Placenesses. In Placeness, we can obtain a clear consistency over a theme: historical landmarks, monuments, vast city skylines, night views, inner and outer architectural details. In Spaceness, we find consistency towards a predominant European city fabric comprehending boulevards, star-shaped intersections, generous public spaces, and old towns.

88

85

15

20

30

35

48

Tokyones in Seoul

These projections are digital perspectives, personal yet considering the world at large. 'Tokyones' will be then our starting point and we project our desire and intention from this abstract chosen point on a panorama. We want more of this weather, more of this flavor, like a myth retold in different tongues. The following projections are orderly deployed based on their similarity to 'Tokyones'. We navigate through projections of 'Tokyones', as one collapses a wave into particles by observing it, as collapsed events out of Eventness.

We find 'Tokyones' in Seoul, with similar concepts, like lexemes deployed in other inflexions, another weather within the same climate. Resonance is invariant, indexes remain, the food, the neon lights, the pets, and the young faces. Yet within this familiarity, something is strange anew. These concepts are instantiated in a localized manner. Food looks the same yet different, more meat, fewer noodles, more barbeque. Present, yet less significant perhaps, it gives more room to nightlife and fashionable youngsters. ○

FIG. 14

Tokyones in Bangkok

We continue navigating through this Eventness, jumping from event to event, appearing and disappearing with this magic trick, outside of time and space. Bangkok follows where small streets are replaced by proud Blade-Runner-esque viaducts and wide highways populated by motorbikes swarming around like red-eyed flies. The local cuisine has its own colors and cuts, green papaya, mango, curries, sour and sweet flavors come to one's tongue. Every night is a summer night swarming with people, sensual young androgyne faces with different features and fashions. Once again, these events can be detected as probable spaces in our transient world. Our instrument indicates the points in space where 'otherness' could take place, where 'Tokyones' of Bangkok thrives like a personal fantasy, our personal heterotopia. ○

FIG. 15

Tokyoness in Vancouver

Last stop for this climate. ‘Tokyoness’ in Vancouver pierces across the globe like an atlas does with its projections like arrows. Streets turn into covered spaces and bridges, perhaps providing shelter during the long cold winters. Burgers, pizza, and beer appear upon the table in warmly lit interiors, while large groups of people become smaller and give room to dusty morning skies and a glittering sea. People photograph themselves with the city as a background, where gleaming towers of ice rise like sharp heads wrapped in a haze.

The city’s bridges and the waterside seem to be the greatest attraction here. They will then serve as the next projection and entry point, from which we go on weaving this navigation thread into the manifold fabric of our transient world. ○

FIG. 16

Bridgeness

‘Bridgeness’, also known as lexeme E32_17, and its neighboring lexemes, is our new point of projection; bridging is what communication processes are all about after all. A new materiality of bridges is created, through its symbol ‘bridgeness’, thereby transcending particularities and grammars. From here on, we can trace what would be a climatic idea of ‘bridgeness’ in our transient world – a panorama of lines hovering wide gaps, cutting sharply between sky and water, and yet connecting domains. Straight, curved, undulating, intrepid, ‘bridgeness’ plays a special kind of music, a resonance of times, sheaves of times, and Eigen-times. At sunset, at dawn, ancient, modern, glowing on shaky reflections. We dive into this ‘bridgeness’ of the world, orderly, following those local weathers where it glows with intensity.

Bridgeness in Köln

‘Bridgeness’ in Köln or lexeme E32_17, instantiates the particularities in this town of carnival and monks. Arching over the Rhine three times, like pebbles rippling over still water. Admired from near and afar, at dawn, at dusk,

at night, shining on the shaky reflections of the river. Thousands of padlocks hang from its railings, each inscribed, painted, or otherwise decorated by thousands of unrelated couples. Not only does the padlock remain as testimony, but also thousands of orthographias or cuts in time. We cannot help but think of the thousands of tiny keys dropped over the edge, tumbling far below into the eternal riverbed of the Rhine. ○

FIG. 17

Bridgeness in London

Another perspective unfolds out of 'bridgeness' in London or lexeme E32_18. Another potential relationality where culture becomes a 'could have been' with an English air of London's ancient, yet so modern, flair. London Bridge, Millennium Bridge, the London Eye clear despite gazing through a haze. A brutalist Hayward gallery over the rolling, raging Thames of yore, where ancient Roman armies marched to shore and proclaimed: Londinium. A skyline of cranes lit up at night, and a glowing Shard in the dark sky. Pubs, bars, clubs, and glittering pavements against the sweet darkness of 'bridgeness' in London. ○

FIG. 18

Bridgeness in Florence

We will continue through the 'bridgeness' of Florence over the Arno river. A collection appears as cut-out silhouettes against the background of a Renaissance city, one after the other in a concatenation of arches and stones. Why do couples resonate with old bridges? Is it the sunset, the skyline, the river, the stones, the connection? ○

FIG. 19

Bridgeness in Auckland

'Bridgeness' in Auckland, modern and intrepid, where we make a pause and divert towards a new projection point. Transposing our navigation vector, instead of hopping from city to city, we choose Auckland as a new projection plane for a multiplicity of climatic conditions. ○

FIG. 20

Watersideness in Auckland

Transposing our navigation vector, instead of hopping from city to city, we choose and anchor a local to be the projection plane for a multiplicity of climatic conditions. A new collection of articulated weathers appear in Auckland that give us an idea of what the city might be about, depending on the way we decide to observe it. Moving not so far away from 'bridgeness' in the spectrum of Eventness, there is 'watersideness' or lexeme E32_20. They share skies and seas, yet each event preserves its own specificities. While 'bridgeness' celebrates the structure itself, 'watersideness' sparkles on spots around the seaside and acknowledges glittering nocturnal city landscapes and horizon lines between sky and sea, only remarkable by the light contrast between shades of blue. ○

FIG. 21

Concertness in Auckland

Moving a little further away across the spectrum, E22_01 explodes into a profusion of colors flickering like nervous sounds: red, blue, pink, yellow – electric lights blinking in the darkness of the night. Guitars, rock stars, stages, games, colorful flyers, ordered rows of seats, and crowds. One could almost hear that white noise in the wind, the excitement, and the ovation. Our instrument of navigation points towards, stadiums, theaters, and halls, yet without ever explicitly presenting what these spaces and buildings are about. Not a typology, not an ideotype, just a bundle of indexes expressing possible ways in which spaces and places meet.

Sunsetness in Auckland

E10_01 also known as 'sunsetness' unfolds in nuances spanning between blues, purples, reds, and oranges – a hesitation between 'parkness' and 'watersideness'. The sky opens with clouds in shapes given by a mixture between probability and wind. Some other recognizable figures appear, a sailing ship, a pier, a motorbike, all means to take us there, 'away'.

BRANDING THE ACTIVE OBSERVER

The 'at homeness' we feel with each and every one of these perspective models is a quality of awareness that is poised between the unconscious feeling of being rooted and the conscious feeling of being alienated. This process of learning is subconscious, like learning how to appreciate sushi or to like someone or to feel at home in a new city. Unsharp borders become a little sharper just by 'being there', even without a specific set of instructions. A child learns how to speak by watching adults doing so. Knowing about the grammars of language before this process would hinder this learning process.

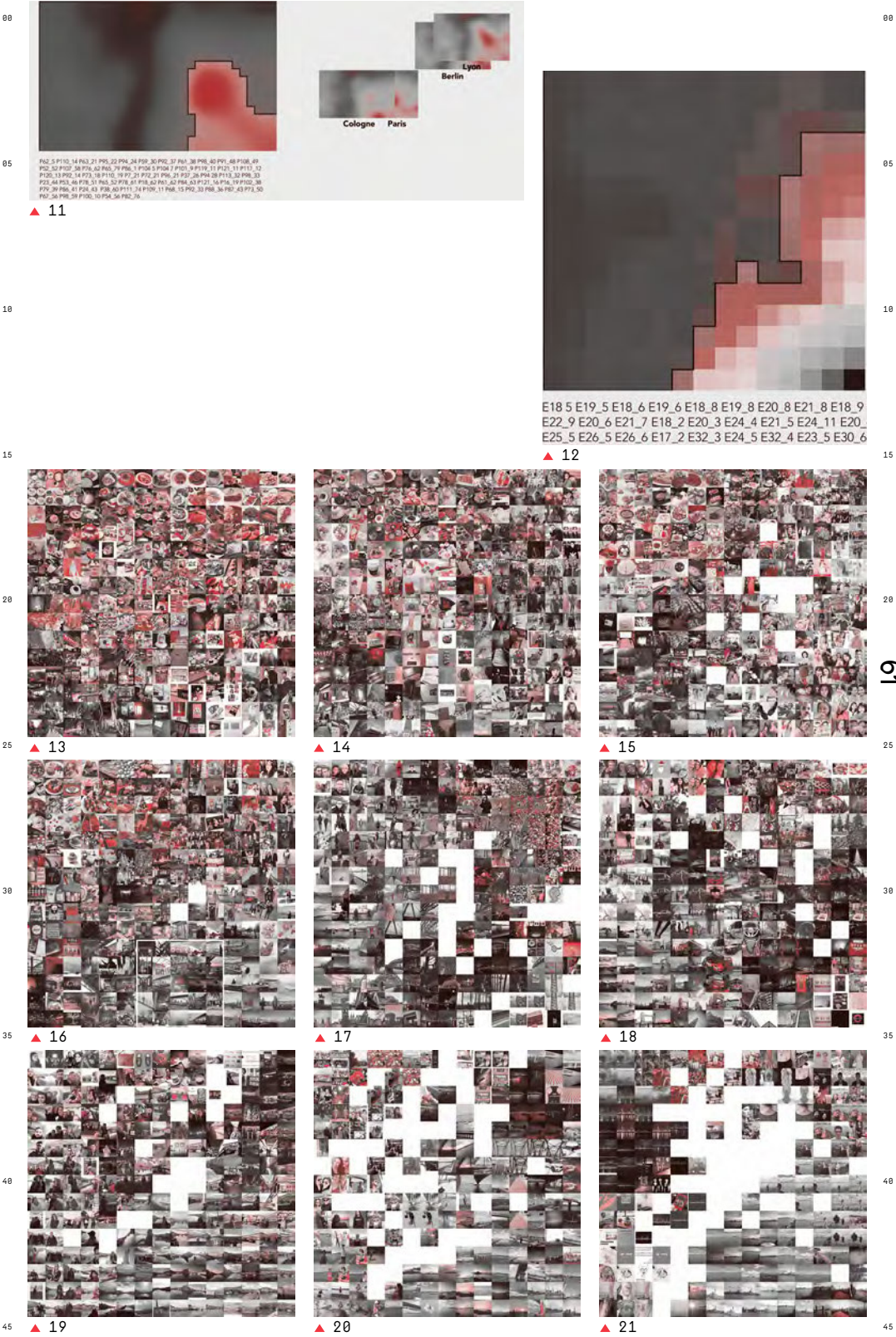
Hence, we took up the endeavor of learning to 'talk' in the digital. Mingling text and cities, we have offered navigation through the sea of urban data as a narrative articulated in lexemes of cityness. These stories defy single interpretations, grammars, and territories, taking us to unknown lands. However, the narrative is never given nor is it ever finished; it is invented anew with every point of projection one hops on, within the operative and performative character of the digital. This is precisely the character that cities, architecture, and the digital all share.

Rather than proposing an external frame of reference to which the city condition must fit generically, models articulated 'in their own terms' have been proposed. First, articulated in terms of self-referentiality in the constitution of elements or lexemes. The lexicalization of localized instances of the city into concepts addresses the problem of similarity. Second, articulated in terms of probability, such sequences of elements are not dictated by grammars or given structures, but rather emerge as a manifestation of personal agencies and the concert of living and inert things, which is culture.

Over the last decade, information technologies have exponentially developed and advanced into nearly every aspect of our lives, collapsing the boundaries of space and time.

ATLAS OF INDEXICAL CITIES





Beyond intensively and sometimes dramatically mediatized urban demographics, today the city has also taken on the dimensions of its informational makeup, through communication networks as its ground, thereby assimilating now the scale of the Earth like a glacier or an ocean, as Michel Serres prophetically described it in his world-objects. Here or there, hors-là, we are all locally connected to the global and inversely. We look at the stars and yet the stars look at us through fantastic satellites. Everywhere locally natives and globally migrants, otherness has become home. This new home demands a rediscovery of the world anew, like when Copernicus, the Renaissance mathematician and astronomer, presented a model of the universe that placed the sun, rather than the earth, at its center. Could we even imagine what this could have meant to a Renaissance mind? Perhaps nothing made sense any longer, yet they articulated new meanings and reinvented a more capacious world, trusting their intellect rather than their intuition, with a new geometry and a new subject at its center.

As we get a wider outlook, our own cityness starts appearing alongside many others. Everything can communicate with everything as long as the keys are shared, cities, spaces, places, events, and personas. One just needs to learn how to talk and choose a seat. Having domesticated that wild open sea, we can come inside without fear and say 'this is home!', yet always secure in the knowledge that we will be over and over 'aliens at home.'

→VIDEO LINK

BIBLIOGRAPHY

FOUCAULT, MICHEL, (1986):
JAY MISKOWIEC
"Of other spaces." In: *diacritics* 16/1, pp. 22-27.

MÄKINEN, JARI (2008):
"Rotation manifold SO (3) and its tangential
vectors." In: *Computational Mechanics* 42/6, pp. 907.

RIEMANN, BERNHARD (2016 [1854]):
*On the Hypotheses which Lie at the Bases of
Geometry*, Jürgen Jost (Ed.), Birkhäuser.

SINISGALLI, ROCCO (2012):
*Perspective in the visual culture of classical
antiquity*, Cambridge University Press.

SERRES, MICHEL, (2006):
ANNE-MARIE FEENBERG-DIBON
"Revisiting the natural contract." In: *CTheory*,
pp. 5-11.

TUAN, YI-FU (1977):
Space and place: The perspective of experience,
University of Minnesota Press.

VITRUVIUS, THOMAS, (1999 [27-23 BC])
NOBLE HOWE,
MICHAEL J. DEWAR
Vitruvius: Ten Books on Architecture, Cambridge
University Press.

