Worlds and words: interrogating type and map as systems of power and embodied meaning-making.

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La interpretación de nuestra realidad con esquemas ajenos sólo contribuye a hacernos cada vez más desconocidos, cada vez menos libres, cada vez más solitarios. (Márquez, 1982, para. 7)

This paper responds to the call to move away from the centre and to design from many centres. We need to address cultural colonisation and systemisation; to counter misdirection and deceit in order to reveal – not merely the ‘centre’ but the ‘systems of the underside’: structures and systems that arise in the past and which continue to “cloud our eyes” in graphic design communication. Inspired by the works of Walter Mignolo, Arturo Escobar and Boaventura de Souza Santos, which expose the ‘systems of the underside’ and the notion of ‘ecologies of knowledge’ in order to disentangle (and free) or unlink these epistemologies that get lost in western-modes of representation; and by the calls from commentators such as Tony Fry and Donna Haraway who observe that the idea of universality remains blinkered by its own artifice and only serve to create others as its subjects, this paper interrogates cartography and typography as graphic representations of cultural systems and their consequent impacts in the construction of an epistemology for the new, colonised world. Through this critique and unveiling, we follow some story lines in order to reveal the ways that lines create an iron cage. We hope to find, perhaps even create, fractures in the systems and opportunities for pluriverses.

Designs for the pluriverse; systems; cartography; typography

1. Introduction: maps and type – the master’s tools?
For hundreds of years maps and typefaces have been mediators (J. B. Harley, 1988; Loxley, 2004) between the experienced, embodied world and the perceived, symbolic world (Lefebvre, 1991). Both—maps and type—are used to represent worlds and stories to fit and serve the standpoints and cultural envelopes (Law, 1984) of those who create them. Cartography and typography were (are?) essential tools for the European expansion over the world, and served well the purposes of colonisation as tools for appropriation and management of land and languages (Mishra & Hodge, 1991; Nietschmann, 1995). While stories of the “new world” were told and new boundaries were drawn, the stories of the peoples who already lived in conquered lands, their own boundaries and ways of seeing and understanding their countries were changed, erased and re-told by means of the same tools: Latin typography and cartographic maps.
Maps and type are powerful tools, apparently open to any uses, mere carriers of meaning (Warde, 1955). On the face of it a map as a combination of signs and symbols the describes a physical world might communicate multiple universes, for example a map which defines county, states, transport etc. can also represent Indigenous lands as well as ecological features. However, this is not the same as representing the Pluriverse. Pluriverses are convivial, dialogical and numerous – not merely an instance multiplied. They exist independent of the state and the corporations. The focus of pluriversity is on delinking—delinking from uni-versal, westernised thought and mechanisms. Delinking from the unseen systems that establish and maintain the idea that whatever comes from the centres of power have more importance and should dominate other types of thinking, creating and being in the world. To enable the Pluriverse project, we need new tools. Tools that emerge from the decolonial project, tools that emerge from the Pluriverse itself. And we need to know that those tools will not merely continue to rebuild ‘the masters’ house’. As Mignolo (Mignolo & Walsh, 2018) observes: “if another world is possible, it cannot be built with the conceptual tools inherited from the Renaissance and the Enlightenment. It cannot be built with the master’s tools”.

We believe one of these tools is decolonial criticality informed by philosophy, imagination and creativity, a kind of ‘making of as opposed to merely ‘breaking of’, and that, as designers, we need to—through our practices—be able to see and reveal the hidden systems of the underside that define and make possible the existence and propagation of what Weber once called the iron cage of modernity (Weber, 2002), and be able to see and operate beyond them into pluriversality. Segato (Segato & McGlazer, 2018) puts it more searingly:

> With its colonial preconditions and its patriarchal public sphere, modernity is a machine for producing anomalies and organizing purges: it stabilizes norms, quantifies punishments, catalogs pain, privatizes culture, archives experience, monumentalizes memory, essentializes identities, commodifies life, mercantilizes the earth, and levels temporalities. (p.204)

These systems are so embedded in our cultures and lives—mostly through design—that become part of our daily routines without ever being questioned. Mundane things like maps or the Latin alphabet are examples of those kinds of systems. The aim is not to deny the effectiveness of these tools, but to reveal how their existence as dominant systems help establish and maintain the status quo at the same time that it erases the possibility of other ways of representing and consequently, understanding land and words. Looking at maps and typography from a decolonial perspective might help us question and hopefully break the cycle of “uni-versality” (one verse, one word, one way to say and represent things — “one to rule them all”), as opposed to pluri-versality. In order to achieve this, we deconstruct the systems that lie underneath maps and typography and show examples of how it is (and have been applied) in different places and times, as well as examples of other ways to represent the world and the word, that have been “made unimportant”, forgotten or erased.

It is here that we need to be aware of the way that such systems work; their capacity to absorb, categorise and include in themselves all other ways of being. As Haraway attests in her feminist critique of science and technology, the claim of objectivity has the effect of relegating the voices of others to the non-objective; the non-scientific and therefore the potential object of rigorous study rather than equals. Universality is blinkered by its own artifice, seeking perhaps to understand and comprehend with honourable intention but caught within the iron cage of its own making. As a counter-point to this, de Sousa Santos (de Sousa Santos, 2007) recommends an ecology of knowledges. The reframing of our relationships with knowledge from the autocracy of the one to recognition of plurality and interrelationships. The turning from constraint to opportunity.

In order to disentangle (and free) or delink these epistemologies that get lost in western-modes of representation and through the process of re-telling stories of cartography and typography, we seek the small fractures in such systems that might provide different, pluriversal opportunities and escape from Weber’s iron cage in all its forms but particularly Ingold’s (Ingold, 2007, 2015)
discussion and analysis of the power of lines to change the world. We hope that finding such fractures will permit the earthquakes that will eventually expose the systems of the underside.

The contributions of this paper are threefold: (i) it provides a deeper understanding of the role of designed artefacts and the systems that underpin graphic communication design on the construction of onto-epistemologies and building of “worlds”; (ii) it demonstrates the for designers to decolonise their thinking by widening their gaze and allowing for non-hegemonic practices to emerge; and (iii) it acknowledges how far these perspectives can stretch toward the future to articulate politics that allow everyone the right to have a future (Martins & Oliveira, 2016) that matches the diverse ways of knowing and living in the planet, rather than that of the designer’s own.

2. Systems of the underside

Both typography and cartography in the contemporary era are products of the combination of material culture and onto-epistemic systems. Contemporary maps and representations of the world depend on Cartesian coordinates made concrete in the service of power (Law, 1984) and the universality of measurement (Haraway, 1991). Similarly, typefaces depend on resonant mobility within a grid, and on the systematic arrangement of elements for letter shapes to make sense when put together. Both also depend on a symbolic agreement to be understood and properly interpreted. With European expansion and colonisation, these systems were brought to various parts of the world and were imposed and adopted as a way to translate and represent local knowledges that were not represented in a system that was understandable (or controllable) by the colonisers (Verran, 1998). What this creates is a contemporary society where local Indigenous peoples around the world have been forced, for generations, to explain and represent their own ways of being and living in the planet by using tools of representation (typographic writing and maps) that were designed by the colonisers and made to fit their own onto-epistemologies, causing a continuous cycle of story-erasing. While local stories are ignored; origins in the rise of the state and roles in establishing social relations are obscured behind the notion of utility and service. This results in far more than the creation of a centre (Spivak, 1988; Thiong’o, 1993) — a notion which implies the possibility of movement away from a gravitational pull — rather it denotes an invisible infrastructure and an entangled meshwork which underlies all expression of place and culture and is much harder to untwine as it cannot be seen.

Critical to this process is the recognition that maps and type are more than surface, that both exist as material artifacts and as a result of systems and processes which use material artifacts. For example, the development of seagoing chronometers facilitated the production of maps which use lines of latitude and longitude which at once shape the depiction of the world and allow navigation across oceans. Or the matrices (moulds) that are used to cast the individual yet homogenised letters of moveable type that shapes and forms expectations (and requirements) for sharing meaning. The unveiling (Freire, 1972, 1994) of onto-epistemic threads that are woven through designed artifacts, takes lessons learned from material culture and understandings that artifacts also embody stories and meaning. Material objects are more than receptacles of cultural concepts, values and meaning making, they are part of the cultural conversation and co-creator in its dynamic. Objects and artefacts tell their own stories. As Tilley et al. (Tilley, Keane, Küchler, Rowlands, & Spyer, 2006) observe: cultural values, ideas and meaning-making are represented, reproduced and legitimised actively through the medium of cultural objects. These material culture approaches propose that artifacts not only tell stories but that these stories have ramifications on the way in which other stories are told through them. The material artefacts are both the stories and story tellers. An essential tool in these analytical approaches is to interrogate the artifact as a story-maker. To ask questions that facilitate critical awareness (Freire, 1972): What is the story of this artifact? What does this story reveal? What does it silence? Where does it come from? What other stories does it release into the world and, most importantly (Turner, 2015) whose story is it anyway?
The problem with the systems that are the underside of modernity is that they are at once visible and invisible. Their presence and claims to usefulness for all purposes and perspectives—and so their universality—have become so interiorised that while they sit in full view, they remain unperceived as story making systems, instead apparently offering untainted support for any content. In many contemporary contexts, such systems are the only language available for communication, for example when Amazonian Indigenous cultures seek to communicate their stories and presence using Google Earth mapping technologies or when the first nations object to a pipeline across their lands. There is a dreadful tension in this, as Mignolo (2018, p. 7) observes:

If “another world is possible,” it cannot be built with the conceptual tools inherited from the Renaissance and the Enlightenment. It cannot be built with the master’s tools, as Audre Lorde reminded us a number of years back, “for the master’s tools will never dismantle the master’s house.”

Whether we can ever really answer Mignolo’s call and enable the Pluriverse without the master’s tools is deeply challenging, particularly for those whose existence is threatened and there is a clear and immediate urgency. We can at least interrogate the systems and seek pivotal moments in their stories which might create fractures, foster the imagination and so enable new designing and opportunities for ecologies of knowledge. Moments where alternatives are possible and where the apparent iron cage of the system and its story can be seen, as Miyazaki’s Princess Mononoke suggests ‘with eyes unclouded’.

3. Systems that shape the world

There are many places to start unveiling the map as a story-maker and unravel its story-ing effects. Perhaps the most important is to understand what the modern western map is. The idea of map making and production of ‘useful’ spatial representation is conflated with progress and civilization. The idea of cartographic science, “naturalizes the map, and this has the effect of universalizing it; it also obscures its origins in the rise of the state; and it ignores its role in the establishment and maintenance of social relations in those societies where it exists” (Wood & Krygier, 2009)(p. 1). Universalising the map as useful and indicative of ‘civilisation’ often means that potentially other systems are encountered in terms of the cartographic map. Many of the earliest painted marks on cave walls or carvings graffitied onto stones in and around the ruins of antiquarian civilisation have been analysed as having ‘cartographic purpose’. However, without the context of their inscription, such analysis is but conjecture for understanding the system of the ‘other’, interpreted, once again, as tokens for a system that is recognizable from a perspective of modernity. As Harley and Woodward (J. Harley & Woodward, 1987) observe, map-like artifacts are powerful cultural archives, serving “as memory banks for spatial data and as mnemonics for societies without printing” (p. 1), thus imposing what Alpers (Alpers, 1983) has called ‘service to science’ and prioritizing the ideals of the European enlightenment over cultural meaning and confirming the notion of progress from the ‘map-like’ to the ‘actual’ (from the western perspective) cartographic. This also confirms an extraordinary stamp of validation on both maps and type as forms of communication of meaning and at the same time forging a connection between the two systems and the specific onto-epistemic understanding of knowledge created by the grand narratives of modernity.

The history of the modern map and the desire for accurate representation has much (all?) to do with, as Segato (2018) observes, the idea of commodification and mercantilization of land. It has its roots in the cadastral maps of the Roman conquerors of Europe that show boundaries and land ownership, and the portolan charts of the early European sailors who noted names of their way stages along a line which roughly corresponded to the shape of the coast they sailed along. A cadastral map essentially shows property boundaries, it is in essence an artifact which consolidates power and ownership. The earliest cadastral maps or cadastres are recorded in 77AD during a period
when the Roman state hoped to garner a clear record of lost rental returns from its far-flung occupied territories. While their use was less noticeable during the subsequent medieval periods which focused on more overtly narrative maps, the cadastral system itself didn’t disappear but reverted to textual descriptions such as those of Giraldus Cambrensis (Geoffrey of Wales) or the ‘Great Survey’ (also known as the Domesday Book) commissioned by William the Conqueror in 1086 in order to categorise and value his newly acquired lands. The use of cadastral maps re-emerged in the Netherlands during the 16th and 17th centuries as Europe experienced the results of its own colonial ventures and the rise of capitalism resulted in a need for artifacts which could be used to control land as a source of production.

Portolan charts, or the “first true maps” from the universalist perspective (Beazley, 1904), were produced during the seafaring empire building days of the Italian, Portuguese and Spanish. As journey artifacts designed to fulfil utilitarian purpose, they demanded a high degree of accuracy and used another storied artifact, the compass, in order to provide dependable accurate information. Such artifacts were vital in what is sometimes euphemistically referred to as ‘the age of discovery’; the period of European expansion between the 15th and 18th centuries and the rise of European colonialism. Indeed, Portugal and Spain considered them akin to state secrets as possession of a map was already equated to potential possession of the location itself (J. B. Harley, 1988). The age of discovery turned into the age of empires, and maps, as Harley attests, quickly became the means by which lands ‘belonging to no one’ (or at least no one the colonial powers recognized as equals) were claimed and conquered in the name of the colonial power, long before the actual colonists themselves arrived. Gerardus Mercator’s 1569 cartographic projection of the globe with its distorted weight on the northern hemisphere, while being a feature of the mathematical dilemmas of projecting a globe onto a flat surface, is also an act of prioritizing and positioning some countries as ascendant, literally at the top of the map, metaphorically in a controlling position in the world which is now available for exploration.

Figure 1 Double Hemisphere Sampler, 1812, United Kingdom, by Anne Hammond. Source: Te Papa (GH016925)
The cartographic endeavour of the 18th century saw the map—as we understand it contemporaneously—take form. Between 1733 and 1740, Jacques Cassini and his son undertook the first large scale survey of France resulting in the first full map of France and the first rigorous principles of cartographic production. These ‘rigorous’ principles also did much to confirm what Wood and Krygier (2009) refer to as the naturalization of the map; the idea that the process of map making is an objective process, enacted scientifically, with a transparent outcome free of cultural perspective and bias. More pertinent was John Harrison’s development of a chronometer which could keep time accurately enough for ships to discover their longitudinal positions away from any coastline and so traverse open oceans. The prime meridian was established by George Airy in 1851 at Greenwich, London, and the lines that form the grid of the iron cage elegantly drawn around the world and interiorised to the extent that they are understood as a universal system from the hand sewn school girl sampler (Figure 1) to the invisible but ever-present GPS network.

The beginning of the 19th century saw consolidation of power in colonial enterprise. Cartography and the accurate mapping of new territories was inextricably linked to the creation of territory and the claiming of resources. Where portolan charts were once highly valued in order to articulate distance and journey to parts of the world, their intent was merged with that of the cadastral to both depict location and underscore possession. The continued development of technologies to accurately represent lands also had the effect of further distinguishing civilization and progress from nature and subjectivity. Any and all land, surveyed through the same rigorous application of science and technology became potential territory to be exploited. This system of the underside was also used to map and claim the underside of the lands as well as the surfaces as William ‘Strata’ Smith and others like him surveyed the geological layers of the landscape and added a temporal dimension to the representation of space, now classified as potential territory in time as well as space (Willis, 2012), as such geological maps could be used to search for resources like the carboniferous deposits laid down in the Palaeozoic era. The global was also packaged and categorized and early Atlases made their appearance with books of maps, like Cassell & Co.’s 1893 Universal Atlas, organized by country and continent, indexed like museum artifacts, utilitarian in design, easy to explore and predicated to objective science.

To return to Harley’s dictum that maps help make sense of the universe (Harley and Woodward, 1987), what does our contemporary emphasis on cartographic science do to Australian Indigenous understandings about country, not as landscape, but as character and entity (Rose, 1996)? In Australian Indigenous stories, the landscape, country, is indeed the mnemonic and living site of inscription of meaning. As contemporary discussions about First Nation land rights attests, there are immediate clashes between the perspectives embedded in the cartographic map and Indigenous meaning making (Fox, Krisnawati, & Hershock, 2005) whereby the urgent need for communities to communicate their roots and traditions in places means they must risk epistemic violence and work with Mignolo’s ‘master’s tools’ or be lost themselves.

Here is a fracture that makes the system of the underside and the invisible visible. Indigenous visual communications of landscape are not maps as we have come to understand and accept, their service is not to an idea of science and measurement, commodifying and mercantilizing the earth as Segato (2018) puts it, but a more embodied idea of movement and connection. In her discussion of an Australian Indigenous understanding of country where western onto-epistemic terminologies such
as ‘natural’ or ‘wild’ and ‘boundaries’ make no sense, Deborah Rose Bird says (Rose, 2012): “… country exists where life flows through many species, and where recursions of mutual benefit form loops of entangled and emplaced connections” (p. 10). In this view, country is multiple, a plurality made up of people, animals, plants, stories, stones; it has beginnings and futures and what we might call ‘personhood’. The grid of the modern map becomes almost literally a cage when lines and measurements are applied effectively turning the personhood and place of country into abstract space. For anthropologist Tim Ingold, place, once constructed as meaning making, is not discrete (as in a place) but rather continuously enacted through movement between (along and through) places (Ingold, 2011). To be in place, argues Ingold, is to inhabit somewhere. Inhabiting is a process. We do not merely inhabit a home but also the pathways between home and elsewhere. As Ingold remarks (p. 34), “habitation is lineal. That is to say, it takes people not across the land surface but along the paths that lead from place to place”. This is reflected in the place - meaning making symbols (not map symbols for to call them that is to undermine the usefulness of the fracture) in Australian Indigenous imagery where concentric rings indicate a site of meaning joined to other sites moving fluidly across both land and sky.

Roth (Roth, 2009), echoing Rose, calls this clash between systems a clash between a system which abstracts and flattens and a system of complexity. Pearce and Louis (Pearce & Louis, 2008) consider both the urgency and importance of Indigenous uses of mapping technologies in the light of the richness of Indigenous place-based meaning making and reframing the languages of cartography. The lines that our tools from the sextant to the chronometer to the Global Positioning Satellite create that have been so far described as being part of that same iron cage are not exclusive tools. Lots of activities, artifacts and processes proceed along lines as Ingold’s analysis attests (Ingold, 2007) but they are less constrained and less about a body of knowledge – an epistemology – and more about process and embodying knowledge in the world. A visible place to see this would be the
fluid meaningful lines that join Australian Indigenous communities in a web of co-relations and movement. Another example in this ecology of onto-epistemology are the lines made of sticks of the Rebbelibs, Medos, and Mattangs or the Marshall Island stick charts (Figure 2). These artifacts made of sticks or coconut fibres and shells show islands, waves and sea currents, enabling the Micronesian peoples of the Marshall Islands to travel across those same open seas that the European navigators used their sea going chronometers to cross. The design arises in place as the Marshall Islands of Micronesia sit in the wider ocean currents and counter currents of the Pacific, long distance rolling current broken by the islands themselves. The lines embodied by the stick charts are directly concerned with the experience of the journey (to the extent that many charts were completely individual and only able to be read by the navigator who made them). Their design recognizes the personhood of the sea as it is expressed through currents and the swell of the waves. As artifacts the charts are made to be read and encountered rather than used and referenced. They also represent systems to communicate the world without words.

4. Systems that contain the word

We all know about how maps divided and help colonisers conquer the world, and we all know that type has its lines and grids, but it is when we put both systems together, both grids: one to divide the world and one to contain the word—that is when the sinister side of it all comes to light.

Where the modern cartographer’s science encompasses and contains the world with grids to allow for safe navigation and exploration of the globe, the typographic designer implements the labels on the surface of the world and in so doing confirms the ascendance of measurement and ownership as the lines of latitude and longitude are labelled according to their distance from Airy’s Prime Meridian and names are allocated in deference to the histories of the labeller. To communicate their messages, the typographers uses another system, one initiated in Phoenicia, implemented, immortalised and homogenised by the Romans, who also spread it around the world. A system to capture language that is so simple and adaptable that can be used to hold any language: the latin alphabet. A set of twenty-six basic phonetic characters that can translate language from its verbal form to visual. Twenty-six basic characters that can be adapted (combined, accents added) to encapsulate more sounds, and was eventually duplicated (upper cases and lower-cases) to allow for quicker representation, and combined with other symbols—to allow for grammar, logic and rhythms of speech to be visualised.

The latin alphabet spread through Europe as far as the Roman Empire reached. And it would have stayed confined to the monasteries and palaces, if it wasn’t for the success of Johannes Gutenberg in creating the printing press. Another simple system, adapted from well-known pieces of machinery, familiar and in easily available—such as the wine presses, wood carving and metal foundries. The simplicity and ingenuity of Gutenbergs’ printing machine, and the power of its products, allowed its quick spread across Europe and eventually around the world in European ships and colonisers. And with the press, another system that allowed for the easy and homogenised replication of the latin letters: they typographic grid, with its specific squares and measures to maintain the proportions and unique shapes of the letters—essential to be kept unique, so they can be identified and, therefore, read by anyone who understand the system.

In this way, type is also a system of the underside, particularly type based on Latin script and the technologies of movable type. Latin typography is only one of the many writing systems in the world but as a carrier of meaning for a series of colonial powers from the Roman conquest of Europe to the subsequent expansion of Christianity and European colonization of that same world bounded by lines of latitude and longitude. Just like the science of cartography, the ‘art’ (science) of typography is problematically duplicitous. On the one side, it has allowed us (and still does) to register and share
information about the world. On the other side, it has homogenised and in certain ways erased or made redundant many other forms of writing—past and contemporary.

The act of making a mark to create a record or tell a story and communicate meaning is an aspect of our shared humanity but stabilization and homogenization of such systems arises in the early agrarian cultures of the middle east where the notion of keeping tallies becomes important. It is then further evolved and abstracted for convenience when the Phoenicians adapted Egyptian hieroglyphic scripts to create a linear script based on a phonetic system (where sounds are illustrated rather than images) as they needed to make contact and register business with multiple nations who spoke different languages. Ideographic writing systems are unsuitable and inefficient to represent language from different cultures as each symbol is intrinsically related to its meaning, and usually the number of symbols that exist and need to be learnt is too high to be manageable. The easiest and most practical form to register multiple languages using one set of symbols is by visually representing sounds, rather than ideas. The Phoenician created a simple system for representing language sounds, using a relatively small number of symbols for that. The system proved extremely effective and was adopted by the Greeks, who adapted it to their own culture, and later by the Romans, who adapted and expanded the system, formalizing it and drawing in cursive script by officially adding lower case letters (Frutiger, 1980) and thus creating the script that annotated the aforementioned cadastral maps and actively changed the idea of making a mark to communicate an experience or story to the idea of making a mark to record, denote and delineate some kind of ownership.

This ordering of the word and subsequent ordering and recording of the world through representation is, like the story of maps, deeply entangled with material technologies and tools. Early hand-written texts and the differences in multiple copies are, according to McKitterick (McKitterick, 2003) acceptable on the part of their readers. However, what is unacceptable is variation in any tally or knowledge. It is perhaps no accident that movable type and the ability to repeat the message without variation arrived in Europe during the same decade that Colombus arrived in the Americas. Movable type is one of the prodigy children of modernity itself, being born from it and helping it grow. While the use of individual letter stamps as a system of printing had been invented a century before in China, the brilliancy of Gutenberg’s system was in its simplicity of construction - meaning that it could be easily reproduced — and on the simplicity of the Roman alphabet itself, which has a very small number of characters as compared to the Chinese writing system. Johannes Gutenberg took the elements of Chinese printing but developed the matrix or grid with its regular lines for casting and holding the letter stamps. After the spread of movable type through Europe and the colonies, technology evolved making printing faster, more accurate, and a bit less dependent on the church. Independent printers and newspapers used the word to speak for the people when and where allowed. But the shape of the letters now contained in the grid of the printing and the lines of the grid, it’s regular matrix echoed that which was at the same time encircling the world.

In Europe and in the colonies, other styles of letters were designed, but all fitting in the shapes of the roman alphabet—now conveniently spread through the world—as well as the formats imposed by the printing technology: letter blocks, lines, paragraphs, pages. Creating a cartesian grid to contain the thoughts and expressions of all peoples — or at least of those who were allowed to speak and learn the system. While some typographers and academics believe that the role of writing systems is to “endow human language with a durable visual form” (Tschichold & Bringhurst, 1991) or that type needs to be like a crystal glass of wine, just a vessel to allow for the content to come through in its full (Warde, 1955), the fact that cannot be denied is that type, letterforms, writing systems, are also part of the communication. Latin letterforms are based on principles and grids, and
work as a system and there is no decoupling from what is said to how it is said. The means are not the message, as suggested by McLuhan (McLuhan & Fiore, 1967), they are also messages in their own right, they allow for the system to be laid so that the content has to fit in and even when the content is modified, it still replicates the system. Even though each letter or typeface might be completely different from one another, there is a limit to which they can vary before they become unrecognisable, this ‘recognition’ factor, or ‘legibility’ is what makes it possible for us to read, but these systems need to be learnt, so that the ‘agreement’ is established. And that is where the underlying system resides. For instance, we can look at words in a poster. Those words can be words of protest or they can be words of advertising (content), the media is the poster, and the system is the Latin alphabet. No matter what is said in the poster, it is still being said in a certain language using a certain system of symbols. The symbols used matter. They are the invisible spreads of the systems of the underside. And they have to be acquired, to be used. Thus becoming the visible yet invisible instantiation of those self-same lines of modernity, as Ingold remarks (Ingold, 2015) they have become lines of power, deeply entangled with technologies and material cultures so that the opportunity for pluriverse is silenced.

There are other voices and other story lines, other systems, which embed their own stories, like the Vai syllabary from Liberia, dating from 1800 which already conforms to a typographic style (Mafundikwa, 2007). And less conformative pre-colonial expressions like the Incan Khipu, careful collections of knots and strings, once believed to be used only for numbers (the obvious reading from a western perspective), but might likely have been used for stories, myths, songs or other expressions unknown to us (Beyersdorff, 2005). And that sadly might never be known, because those stories were erased by the system, and somehow other stories continue to be. The beautiful thing is that the unknown can reveal the unexpected, like a writing system that is also used as a map system, such as traditional Samoan tattoos and ‘tapas’. Symbols that tell stories, represent connection to place and show the ways through the seas and back home again. Frances C. Koya Vaka’uta’s powerful talk on the significance of the tattoo stories actually inscribed on the body (Vaka’uta, 2016) which change and grow with the body, including being part of its ephemerality.

4. Finding the fault lines, towards ecologies of knowledge and pluriversality

We showed here examples of design systems that tacitly help maintain and propagate the ideals of modernity and uni-versality. When we turn back to what all these stories of artifacts and artifice might teach us about designing for a pluriverse, the first impression from our encounters with the lines that constrain and form the word and the world is that they are deeply imbricated as tools to support systems of modernity. Beyond this they manifest a terrible tension or deep irony for the colonised and the disposed. Mignolo warns us that we cannot re-build using the master’s tools but across many contexts the tools of the map and the word are the only access those whose cultures have been silenced have access to. This is the consuming aspect of those systems of the underside that de Sousa Santos warns against when he observes that one uni-versal way of knowing that understand all other ways of knowing as subjects is a form of epistemological fascism and tantamount to epeistemicide or the murder of a way of knowing (de Sousa Santos, 2009). However, Mignolo also demands that we investigate and reveal the systems that shape and form and story our experiences in order to reflect and make open new pathways. When we interrogate the systems that shape and form and take time to encounter the full story, opportunities emerge to ‘de-institutionalise’ as Mignolo suggests; to allow make spaces for emergence as Segato demands when she says the point is not to imagine a utopia but to engage in active imaginative process. This is also Freire’s (Freire, 1972) intent when he calls for reflection before and within action. It is also the essence of designing as practice.
For us as designers, it is this active imaginative process that we wish to delink and disentangle from the knots of the deeply interiorised stories and assumptions. We hope that this process has been made visible in our analysis of maps and type and the unveiling of the way that the lines of modernity, replete with its uni-versal story, are not the only story possible. So, the lines that bind the world are etched through their re-iterated presences and histories. These add up to the material conditions that position Indigenous peoples in the dilemma of having to use the master’s tools. But as the examples of other ways of using lines shows, there are other potentials, other ways and means – these are the tools that arise from the pluriverse. As the examples of the Marshall Islands stick charts reveals, tools can arise as aspects of process and can be more than artifacts that encompass outcomes. The Samoan tattoos re-iterate the same message. This is the disjunction where we hope to see fractures and fault lines. We can build a different, convivial, dialogical and plural world, and for that we do need new tools. Tools that should emerge from the pluriverse itself. To create and enable those tools we need to examine the systems and designs that help create our current world. So, in order to create a new, convivial dialogical and plural world, we need to question ourselves and our positioning as designers. We need to question Design itself and its role as a perpetrator of Modernity. We need to identify and reveal these underlying systems that maintain and propagate modernity. To discover which parts of the system need to be dismantled, which need to be transcended, and which can be appropriated to build a world that reflects the Pluriverse. For this, we need to learn to unlearn.

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