The urban boogie: a heuristic dance to transcend alienation in High Streets

El boogie urbano: una danza heurística para trascender la alienación en las High Streets

Pieter Marthinus De Kock

University of Lincoln, UK

pprojexio3@gmail.com

Abstract. In the context of visual relationships that we hold dear to our surroundings, we «need theory to direct us to significant relationships and networks» (Beauregard 2016, 00:40:00). We also need to understand more about the role of heuristics in our urban. This study focuses on how the transaction of an intangible service or product may be compared to how we experience the urban; that through interaction we neutralize alienation because «the things we make make us» (Berleant, 1997, p. 11). There is something to be said for how we transact and consume surrounding visual elements. An urban boogie is a dance of heuristics that transcends conditions of urban alienation. We must understand more empirically about how our urban functions; through physical and digital transactions in everyday assemblage if we are to understand the thing that we make, called a high street.

Resumen. En el contexto de las relaciones visuales más apreciadas que mantenemos con nuestros entornos, «necesitamos teorías que nos dirijan hacia relaciones y redes significativas» (Beauregard, 2016, 00:40:00). También necesitamos saber más acercad del rol de los heurísticos en nuestras ciudades. Este estudio se centra en cómo las transacciones de un servicio o producto intangible pueden ser comparadas con nuestra experiencia de lo urbano; que, a través de la interacción, neutralizamos la alienación, porque «las cosas que hacemos nos hacen a nosotros» (Berleant, 1997, p. 11). Hay cosas que decir sobre cómo transaccionamos y consumimos los elementos del entorno visual. El "urban boogie" es un baile de heurísticos que trasciende las condiciones de la alienación urbana. Debemos saber más empíricamente sobre cómo funcionan nuestras ciudades, si queremos comprender estas cosas que hacemos, a las que llamamos "high street".

Introduction

This is the second in a trilogy of papers; each of which are self-contained and can be read independently of the other two. The previous paper looked at high streets as visual markers of our social (De Kock, 2019b). This paper goes on to focus on the effects of deterritorialization, primarily through processes of alienation. The third paper will look at how markers of high streets can become physically and digitally savvy through the process of localization. The terms high streets and main streets can be regarded as the same thing and are used interchangeably.

This study is situated at the junction between territorialization and reterritorialization of our high streets or main streets. Deterritorialization is a disintegration of an assemblage into parts and can be defined as "any process that takes the subject back to the state it had prior to the creation" (De Landa, 2016, p. 22).

This paper seeks to unmask the paralysis caused by alienation in a high street. Alienation (argued here to be caused by lack of legibility; occurring when surroundings cannot be read) can be seen as a network of misinformation. It is manifest in the subjugation of urban artifacts to a process of deterritorialization. Alienation is the ultimate capitulation to a twilight of abandoned meaning. But this study also looks at factors that breathe new life and reactivate the heuristic urban dance that territorializes space.

Alienation is a problem that straddles two major ontological processes relied on in this paper, namely ecological perception (Gibson), and ecological rationality (Gigerenzer). Information, according to Gibson's direct or ecological perception theory «is structure that specifies an environment» (Michaels & Carello, 1981, p. 9). Structure in our environment can be said to be represented by two unique kinds of

information which this study will look at in more detail: urban information theory and urban information field (Figure 1).

If information exists as «patterns of energy that specify for [us][…] the objects, places, and events of [our][…] environment» (Michaels & Carello, 1981, p. 158), then it follows that patterns of energy specify our environment in a metaphorical sense. How do we negotiate our way around these patterns of energy? The argument that this study adopts is that we use fast and frugal heuristics, because they are perfectly «adapted to the structure of information in the environment in which they are used to make decisions» (Gigerenzer & Todd, 1999, p. vii). Gibson's analysis is correct in that what we see, experience, and how we act is inseparable from our environment (Michaels & Carello, 1981). The fire of life then is a heuristic dance around patterns of energy.

Why is this important? It can be argued that we live for no other reason than to navigate our way around patterns of energy. If that sounds unconvincing as an empirical hypothesis then the argument can defer to the great philosophers about the meaning of life. And some of the recent arguments that focus on our meaning in the urban, or more precisely, evidence of the lack of meaning. We can think here about not only «how much information a scene contains» (Ellard, 2015, p. 113) but what kind of information is held. This ties in with the vast resource of well documented urban theories offered by Sitte, Lynch, Jacobs, Alexander, Hillier, Gehl, and many others; but which by all evidence, have generally been ineffective in shaping against the poor quality of our modern-day built environment.

In a world of uncertainty, decision tree heuristics are often used by people 'on the fly' without realising it, to narrow down choices open to them (Gigerenzer & Todd, 1999). What happens when one of many contributing causes of alienation may simply be a result of lack of choice? This is evident in recent urban discourse (Curl, 2018; Sussman & Chen, 2017; Sussman & Hollander, 2018) and is problematic for effective functioning of decision tree heuristics. This study looks more deeply into various aspects of alienation introduced in the first paper. It also offers potential solutions by highlighting the relationship that can be said to exist between alienation, sustainability, and heuristics.
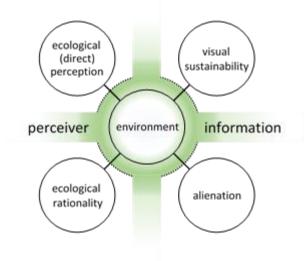

Figure 1. Urban information theory vs urban information field. «Information is the bridge […] a failure to consider both parts of information – information *about* an environment *for* […][a person] – is to miss the very essence of the concept of information» (Michaels & Carello, 1981, pp. 38-39).

Alienation and information

Shannon's information theory is not too great a leap in theoretical terms to serve as an effective analogy about the information content contained in a construct like a high street. It speaks to levels of alienation or physical rejection of space. Especially since there is this idea advanced that «cities should be understood by the flow of information, not just by their physical form» (Arthur van Bilson, 2005, p. 169). There is also the idea that buildings is data (De Kock, 2019c) in a world of data (Carta, 2018, 2019); that the physical form is in fact a flow of information. At its best, an urban dance or boogie that transcends our individual thoughts. We can be said to transact with urban meaning through the rhythms of fractal-like information. More importantly however, is what is contained in the two kinds of information focused on in this study.

Urban information theory

The first, *urban information theory*, is information theory but with an urban twist, because «We frame our objects by eradicating vast swathes of information» (Peterson, 2013, p. 2). But that does not mean we do not need vast swathes of information, because the permutations of which 'slices' of information we use are endless. Thus, it can be argued we need the information to be available within milliseconds, and it must be the right information; information that is not alienating. The analogy of messages is important to understand. The messages sent and received in our urban must make up a durable interesting, coherent, and vibrant conversation.

Urban information theory is most easily understood by an analogy with Shannon's information theory and, in mimicking Shannon entropy, it can be said that a high street exists in our urban as «an ensemble of messages» [1]. The importance of this analogy lies in «the probability of occurrence of individual elements in the message[s]» (Ellard, 2015, p. 112). As Ellard describes:

> So how do we use information theory to quantify the appearance of a streetscape […] Think of yourself walking along such a street. As you take the first step, you see on your right a wall of frosted glass and on your left a busy street. Take another step. There's nothing new. Step three. Nothing changes. For a span of about two hundred steps, you could have predicted what you would see next based entirely on what you have just seen. Nothing has changed. No information has been passed and your nervous system is completely unaroused and uninformed, much like the receiver of a phone message containing nothing more than words like *and* and *the* (Ellard, 2015, p. 113).

It can be said that a person's understanding of the urban is diminished when value is lost for several reasons. Through a lack of diversity or a predominance of similarity or triviality. An example of this would be, not only in 'big box' large footprint, high bulk, blank wall configurations, but also in diversity of uses and in the clustering effect of alienating uses such as betting shops, liquor outlets, or even charity and 'touristy' shops. The result is that many struggling high streets often look very similar to each other these days; high streets one could say that «function like airports in which the same shops are always in the same places» (Rem Koolhaas quoted in Ellard, 2015, p. 123).

Visual sustainability, which sits at the opposite end of the spectrum to alienation, thus seeks to overcome this idea of incoherence in our built environment; of incomplete sentences and conversations that cannot be held for very long. Instead visual sustainability looks to a dialogue that endures over time. In an urban comprised of interesting and diverse sentences that link up with sentences in nearby conversations. And the conversations converge to form meta conversations, underpinning the social. *Urban information theory* can, it is argued, be loosely associated with one dimension of ecological rationality, which explains «the adaptation of mental processes to the *structure* of information in an environment» (Gigerenzer, 2000, p. 58).

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[1] Santa Fe Institute, *Complexity Explorer*. https://www.complexityexplorer.org/explore/glossary/159-shannon-entropy

Urban information field

The second kind of information is called *urban information field*; and is based on the laws of optics in urban space (Salingaros, 1999; Salingaros & Coward, 2005; Salingaros & Mehaffy, 2006). This can loosely be associated with the other dimension of ecological rationality: of «the adaptation of mental processes to the *representation* of information» (Gigerenzer, 2000, p. 58).

The *urban information field* is coined and championed by Salingaros et al. but it can be argued tacitly too by others; the argument being shaped differently but meaning the same thing. For example, in how «systems can be fooled and may break down when stable, long-term properties of the environment to which they were adapted change» (Gigerenzer, 2000, p. 59). This has the same effect of the alienation felt if the long term stability in information we seek is not there, or we «cannot connect to surrounding surfaces, then we find ourselves in an alien environment, and our most basic instincts drive us to leave it» (Salingaros, 1999).

The idea behind an urban information field is that «informational content of surrounding surfaces» is relayed to human consciousness (Salingaros & Coward, 2005, p. 41). In ecological perception, that the «richness and accuracy of perception are due to the richness and accuracy of the information available» (Michaels & Carello, 1981, p. 19). While, in terms of information exchange in the urban, it can also be loosely related to visual semiotics (Barthes, ~~Pierce~~ Peirce et al.) an urban information field functions especially well because (poaching a phrase from another study) it «limits the task of verbalization and instead foregrounds the intuitive aspects of making meaning of visual messages [information]» (Lobinger, 2017, p. 7). Even as we are be forced to leave hostile spaces, in direct perception theory we leave, only to seek out and engage with other environments that contain more information. We are thus «not passive recipients of information, but active, purposeful obtainers of information» (Michaels & Carello, 1981, p. 15).

Verbalisation becomes insignificant in a high street when observing non-linear unpredictable complex systems and in fact it can be said that «the presence of observers alters the state of the system by increasing the information content, thus making the urban space more useful» (Salingaros & Coward, 2005, p. 42). Information that is useful therefore generates people (interaction produced by people); and people in turn generate information that is useful.

These two kinds of urban information, information theory and information field, can through the affordance of use and meaning, disperse the insidious growth of alienation from our high streets where we are «frustrated by surfaces that have material size, but which do not provide information, [and] the reaction is one of stress» (Salingaros, 2005, p. 56).

Physical alienation of the high street

The process of uncontrolled «rapid urbanization and further fragmentation within urban sprawls have a major impact on an individual's social functioning and their interactions with others» (Bhugra et al., 2019, p. 15). Stress has been related to levels of what Salingaros et al. refer to as fractal loading, «which implies the coexistence of different but related things at different levels of scale… that each high-level exchange also carries with it simultaneous exchanges on many smaller levels» (Salingaros, 2005, p. 174). Fractal loading is important to understand when discussing alienation in the high street. Just as a lack of diversity of uses creates alienation, our physical environment is an inseparable component of the success of a high street.

> Fractal loading has the crucial feature that removing the largest level of scale leaves all the other smaller levels of scale intact. It is thus possible to learn the rich and complex visual language [of high streets][…] By contrast, in a non-fractal deterministic environment lacking all lower levels of scale… every movement is a chore, with nothing new to learn[…] [which] reaffirms the importance of having a variety of information exchanges that can be achieved by physical movement. (Salingaros, 2005, p. 175).

Our high streets can also be described by how «The diversity of land uses created a synergistic environment that was walkable and a great place for social interaction —a place to see and be seen»[2]. This richness and resilience of information is evident in the «physicality of space» (Vaughan, Griffiths & Haklay, 2015, p. 24). The lack of physicality has been evident in policies, in how abstract concepts of segregation such as 'environmental rooms', 'traffic corridors', and 'big box retail' have all obfuscated meaning and created urban conditions «in which the traditional high street had no place»; creating silos of top-down thinking and privatization of public space (Jones et al., 2007, p. 3).

Whether in the form of a retail park (where an 'internal street' is surrounded by a sea of parking) or in streets with abnormal setbacks and/or missing buildings, if «the building façade is not continuous, the street, as a place, disappears» (Jones et al., 2007, p. 35). Except of course when common sense prevails, enabling a continuous significant building component to frame both sides of the street; providing «a clear delineation between public and private space and a sense of enclosure» (Jones et al., 2007, p. 3).

The physicality of high streets can also be affected by the «boarded-up shops and dusty windows» (Preskey, 2019[3]) reflecting the visual trauma of social and economic rejection and alienation. These images endure, not as objects of power in themselves, but for their multiplier effect. There is this sense that, just as people are more resilient in the face of poverty if they look after themselves, that this is equally true of our high streets. We should avoid the onset of a sense of alienation by paying attention to the physicality of our high street.

Some ideas deserve traction. One such idea (BBC News, 2019[4]) is the proposal of implementing a strategic plan or process of consultation between owners, lessors and lessees, the local authorities and local guardians to avoid visual blight from affecting our communities. But the solution is arguably more nuanced than the retrospective dialogue around managing damage from 'non-use', after the fact. Misguided or politically expedient attempts to apportion blame also jeopardizes finding real solutions. For example, in the US:

> The purge of name-brand stores is real, but brick-and-mortar stores also continue to open around the US at a steady clip. Many of these are dollar stores, but they also include new brands that are merging e-commerce with physical stores. The reasons behind retail closures and dying malls are complex, and go well beyond the rise in e-commerce. A retail reckoning is long due, and many chains suffer from too much Wall Street debt. (Steuteville, 2019)

To counter alienation, high streets should be able to physically expand or contract in a linear sense without losing their identity. That fringe uses be encouraged that slightly blur the boundaries of use and ensure that a high street functions properly regardless of its extent. And wrapped within that special quality are wide ranging types of assemblages mentioned throughout this study, such as continuous facades, doorways, street width, economic sustainability, sociability, etc. The ability to change the physicality of its space by innovative means, for example introducing stronger residential offerings during economic downturns is as important as the longevity of a high street's intangible descriptors.

Alienation and intangibles

We can draw parallels with Laughlin's theory of emergence (Chicago Humanities Festival, 2010[5]) and describe how a high street is made up of physical laws. But a high street produces much more through its 'organising principles'. These are principles described by Laughlin, and De Landa, of thresholds in natural

[2] Sharon Woods of LandUseUSA Urban Strategies, quoted in Robert Steuteville (2019, August 26). *A brief history of retail and mixed-use* [Text]. CNU. https://www.cnu.org/publicsquare/2019/08/26/brief-history-retail-and-mixed-use

[3] Natasha Preskey (2019, August 15). *A love letter to my hometown high street*. BBC Three. https://www.bbc.co.uk/bbcthree/article/ceb1b635-8864-4f0d-abb9-38870e1b2ee6

[4] BBC News. (2019, August 17). Labour promises to tackle 'retail apocalypse'. https://www.bbc.com/news/uk-politics-49373799

[5] Chicago Humanities Festival. (2010). *Emergence: Where Science Meets Philosophy*. https://www.youtube.com/watch?v=usdT9FtUSAs&feature=youtu.be (00:51:00-01:12:00).

phenomenon such as the difference between water and ice. These principles can be said to also hold true for urban phenomenon. There is a threshold between a normal street and a high street which is a product of real emergence. One that transcends the meaning of a normal road or street.

If we pull a high street apart, then we are left with a collection of unrelated objects. How may intangibles combine to create conditions where a high street is 'pulled apart'? The obvious way is in its context, for example, where there is a decline in population density. Where the threshold is reached when there are simply not enough people to support the high street *in its present form*. Density in itself, whether high or low, is not a cause for concern in alienation but the intangible effect of density on economic (as well as social) viability of place is. The problem often that high streets grapple with, it can be argued, is one not only of accessibility (Jones et al., 2007) but of sustainable density. At the density of most new residential developments there are often just not enough households to support even a single corner shop. Despite this, new residential schemes are advertised with the promise of substantial nearby retail and commercial offerings.

Another way may be through mismanagement in, for example, allowing empty shops to accumulate, thereby breaking down the 'rigidity' Laughlin speaks of. The often-repeated charge that internet shopping is devastating high streets is another way of a high street being pulled apart. These distractions change the focus of our attention on to its parts, and the alienating effect of doing so that Polanyi warns us of, further exacerbate the conditions of visual alienation or being separated from the visual elements that we hold dear.

This study will build a case for countering levels of growing anxiety about the health of our high streets by adopting principles of visual sustainability; defined by the visual elements in our surroundings that sustain us, that we hold dear. That we accept conditions of uncertainty, with certainty. As Gigerenzer notes, we live in a world not of risk but of uncertainty[6]. One in which we embrace conditions that require adaptability. And because «learning is adaptive reorganization in a complex system» (Hutchins 1995, cited in McFarlane, 2011, p. 19), we should accept and learn from both growth or decline. The mantra in this study which is borrowed from Peterson, is that people aim at what they want. And for recognizing the pathways to recovery this is crucially important to understanding not only success but also systemic failure in our high streets. One of the defining criteria in combating alienating effects should be «based on what is immediately around» (Jones et al., 2007, p. 9) these high streets. That this stark economic reality should shape accessibility, density, and social sustainability.

Our most successful high streets it can be argued are responsive to how we are hardwired, and our need for redundancy and diversity in a system. We like to 'get around and do things'. The autopoietic behaviour of maintaining our high streets by plugging gaps or filling vacancies with socially unsustainable uses, simply perpetuates a deterritorialized condition state.

A heuristic dance

That «our visual world is made up of transactions» (De Kock, 2019a, p. 69) is an observation that appears to add to the conversation around the

> dual role of high streets as signifiers of communal identity and as subsidiary nodes in economic topography […][and which informs] both the tangibility of *what high streets do* in socio-economic terms, as well as the intangibility of *what they mean* to local people. (Sam Griffiths, 2015, p. 32).

Transactions exist in this scenario as exchanges of visual information. What high streets do and what they mean produces an urban boogie of visual transactions. This dance identifies the high street in the manner

[6] Gigerenzer, Gerd (2015, October 2). *Homo Heuristicus: Rationality for Mortals*. https://www.youtube.com/watch?v=Oo7sWUtApr4&feature=youtu.be

described as «both a link and a place» (Jones et al., 2007, p. xi). As long as visual transactions are taking place then the nodes through which people move remain magnetized. Deterritorialization occurs in a sense when these visual networks become demagnetized; when a threshold has been reached (along the lines of Laughlin's theory) and the visual transactions are broken.

This study proposes a hypothesis: that we can hold the network of meaning together in a high street by transactions in both physical and visual realms. «And the currency we use is meaning» (De Kock, 2019a, p. 69). Essentially, at the most basic level, we confront high street space with a simple question: Can I exchange value, Yes/No? The determination of a high street is whether it is a place that enables transaction. But of course, we transact everywhere, not only physically, and not only for money. Meaning changes and so do we. As De Landa points out, the conditions or system in which we exchange meaning can be said to be complex and comprised of assemblages (De Landa); both «as orientation and assemblage as object» (McFarlane, 2011, p. 23).

Our relationship with our urban can be described through the behavioural patterns typical of any complex adaptive systems. And just as with any complex adaptive system, we can therefore be said to exchange value in unpredictable emergent conditions made up of urban assemblages. And these assemblages when providing most value to us, can be said to be fractal-like in quality (De Kock, 2019ac, 2019c). That meaning resides in scaling and self-similarity, is much like McFarlane's description of «spatial grammar» (2011, p. 31). This adaptability then is the grammar we need to use in order to learn how to understand our urban.

McFarlane reminds us of the meaning in an assemblage; that it is not «the result of the properties of its component parts» but rather lies in «the *interactions* between components in an assemblage, and these interactions cannot be reduced to individual properties alone» (McFarlane, 2011, p. 25). High streets are specific assemblages and their meaning is entirely dependent on the interactions between their parts. Some of which are the road, sidewalks, trees, seats, sightlines, canopies, openings, doorways, windows, balconies, texture, plinths, mouldings, copings, roofs, chimneys, and neighbours.

The dynamics between transactions, assemblage and emergence create great high streets. People focus on visual transactions. Visual transactions focus on assemblage and (for McFarlane) «Assemblage focuses on emergence» (2011, p. 28). Assemblage interactions, both visible and invisible, produce what De Landa describes as qualitative phase changes. And these produce conditions for emergence in what Laughlin describes as self-organizing principles leading to condition states he defines as 'rigidity'.

These assemblages provide the extended meaning that Polanyi celebrates. And in our urban we attend not to the parts (alienating effects) but to the whole. So that just as with riding a bicycle for the first time, we attend to the meaning in our high streets, naturally, effortlessly; without being drawn into individual parts or components. In isolating and attending only to the parts we risk breaking the experience of emergence from the whole assemblage. And as the assemblages scale up, themselves becoming parts, we shift our attention to each whole in turn, thus speaking the language of tacit knowledge.

The question of understanding how we may «compare the transaction of an intangible service or product, with how we experience our urban» (De Kock, 2019a, p. 69) is key to understanding the role of our high streets. That to breathe new life into deterritorialized high streets, we adopt a strategy of «locating these transactions of meaning and wrapping them up in a concept that we'll call visual sustainability» (De Kock, 2019a, p. 69).

Just as the urban relies for its success in the heuristic of relationality (Beauregard, 2016[7]), visual sustainability appears to rely on the heuristic of information exchange. That in aiming at what we want we

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[7] Beauregard, R. (2016, January 7). *Robert Beauregard: Alexander von Humboldt Lecture: 'Buildings, Cities, and Material Semiotics'.* https://www.youtube.com/watch?v=VI9WPqHOIe4&feature=youtu.be

appear to adopt all the characteristics described by Gigerenzer, of a «fast and frugal approach» (Gigerenzer, 2000, p. 166). That in order for us to manage the data out there «our brains employ a veritable Swiss Army knife of tips, tricks, and short cuts» (Ellard, 2015, p. 59). Historically data out there in our urban was «the result of intuition, traditional rules of thumb» (Salingaros, 2005, p. 42). And it can be argued that this has not changed.

We use space. Lefebvre's concept of experiencing space through use (2011) can be reconciled with Griffiths's rationalisation around ancient truths, emergent from «persistent morphological structures that might pre-date the built environment itself». A high street acts today as an interface; «a perpetuation of locality […] extending the presence of the community backwards and forwards in time» (Griffiths, 2015, p. 32).

Space has always been used in an emotionally laden way even before the presence of buildings; and still is. Consider the landscape where walking tracks that define and are defined by surrounding natural and man-made landmarks. How the accumulated meaning locates these landmarks for a myriad of real and imaginary reasons. In this sense then, meaning was/is sustained through cycles of change and carried forward, just as physicality was/is.

Our participation and interaction with these assemblages we know as high streets determine the extent of our power to form and shape things and events around us. Which is why it will be argued that visual sustainability is such an important concept. We cannot allow levels of alienation in society to exclude us from a collective sense of ownership, authorship, and guardianship over our urban.

Previous case studies reveal how there is a deep-seated meaning in «how readily intelligible street networks impart an intuitive expectation of likely patterns of spatial co-presence between people» (Griffiths, 2015, p. 40). This can be analysed by way of a concept of condition states, evidenced by transitions between one state of existence and another. So, for high streets it may be said that as urban armatures they vacillate over time in both meaning and physical condition. That we should acknowledge this natural cycle. High streets become busy, important and meaningful. They also become less so. These conditions change over time. Cycles of activation, disconnection, and reactivation are all indicators of a natural rhythm. Our urban is a musical score, made up of an infinite set of condition states.

Non-living entities in Actor network Theory create similar urban conditions. The way we visually read our streets; the intelligibility of not only streets but also their buildings, activate these non-living condition states. We intuitively grasp the meaning and visual richness in assemblages of buildings and streets; how non-living entities produce living meaning. Which unlocks the cyclical nature of our urban. Whether strong or weak it is «the agency of the built environment in simply continuing to make things happen» (Griffiths, 2015, p. 41) that is important. And because these transactions have value, the virtual community exists because «people were here yesterday and are likely to come again tomorrow» (Griffiths, 2015, p. 40).

While historical attachment and memory are embedded in our urban, and for community-oriented environments these are arguably coalesced into the local high street, any attempt to focus on historical meaning is impossible beyond a certain point. Not only is memory impossible to adequately describe and convert into factual information, but also because as Hockney describes it, «each person's memory is a bit different, we can't be looking at the same things»[8] (2018).

For this study the contents of memory are less important than the memory. Memory is an important virtual actant. Your memory may not be my memory but the fact that we are able to declare that memory as priceless and irreplaceable, is what counts. That landmarks are important mnemonic devices is enough.

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[8] David Hockney (2018). *The art of seeing*. https://www.youtube.com/watch?v=Cdqch3-D94A&feature=youtu.be (00:42:18)

Because then the built environment has meaning. And we transact in meaning. And so for Griffiths «the *meaning* of the high street is less the point than the affordance it sustains» (Griffiths, 2015, p. 48). This realisation results in a hierarchy of informational triggers that are specific to individuals. Memory then can be said to be less important than meaning and meaning can be said to be less important than affordance. Interaction in our high streets is all about affordance. And affordance creates the music; while we dance.

Discussion

In the introduction to this paper, information is argued to exist as «patterns of energy» which specify our environment (Michaels & Carello, 1981, p. 158). The argument was extended to declaring information in high streets in terms of a heuristic dance. In summarising, this study has chosen three main themes with which to close the discussion about information in high streets. Firstly, in the way information is biased and how this influences spatial meaning and spatial memory. Secondly, information as a conditioning agent of urban centralities. And thirdly, as information in action.

Vertically and horizontally biased spatial meaning

The case study of Limassol in Cyprus reminds us of how high streets change character as well as shape even in once unlikely locations, such as at an urban edge. These events that create new high streets are conditional on a «centrality [that] drives the generative process and precedes the emergence of densification [in an][…] adaptive process reflective of a form of intelligence» (Charalambous & Geddes, 2015, p. 80). The adaptive 'behaviour' is symptomatic of changes in meaning, while intelligence lies of course in transactions of those changes of meaning.

Often meaning is forced on urban areas in a top-down process, through regulatory conditions such as political, zoning or traffic management. This may be referred to as vertically-biased meaning. Vertically-biased meaning creates new meaning forcefully and the meaning downstream is left to adapt or die out. This can be contrasted with meaning that is incrementally driven by iteration and negotiation in a people-centred process. This urban condition may be referred to as horizontally-biased meaning because it is self-seeding and percolates over time within communities. And so, we have two kinds of dances in spatial meaning: top-down and bottom-up.

We should look to the «major custodians […] the traffic engineer and the town planner» (Jones et al., 2007, p. 1) for relief from vertically-biased meaning because they are after all the most influential and most visible creators of urban conditions. Well documented in urban discourse have been the alienating effects of zoning and traffic policies. One such casualty has been the high street, which is normally reliant in part on contextual urban attractors that stimulate mixed use (Jones et al., 2007, p. 2).

The following point raised in the Limassol case study is an important one:

> the issue as to whether there is such a thing as 'spatial memory', whether once an element of the system has established a certain status, or perhaps an ideal level in the local spatial hierarchy, it then develops a resilience – an ability to retain some of its spatial properties in the face of significant growth and change. Such a concept could be key to further an understanding of urban development and of how high streets can have the ability to sustain a mixture of land uses and movement patterns through time. (Charalambous & Geddes, 2015, p. 100).

Spatial meaning leads to spatial memory. We have touched on spatial memory in the discussion on alienation, loss and mourning. It is important because it speaks directly to the concept of deterritorialization. Memory can be said to territorialize space while a loss of memory leads to deterritorialization. The Limassol case study also points out how spatial quality (memory) imbued with meaning attracts business which increases the sense of vitality.

> […] the analysis has shown that the spatial configuration of the two high streets in the context of the wider area (high choice values at various scales, supporting a mixture of movement through and to the area) is a key factor in their ability to support a mixture of land uses through time. (Charalambous & Geddes, 2015, p. 102).

The success of two streets within close proximity, both acting as high streets, is an important lesson in laws of attraction; of deterritorialization and reterritorialization; of an underlying tension in a network that is flexible enough to be able to harness all the positive qualities of the concept of «adaptive centrality» (Charalambous & Geddes, 2015, p. 103).

Centrality

The precedence set for this study by previous research case studies (Jones et al., 2007; Vaughan, 2015) is most valuable it appears, when considered in the context of centrality. In a case study looking at Tripoli's districts there are some interesting ideas around «the high street within the wider street network […][and] focus on *the scale of street characteristics*, considering whether differing spatial/morphological starting points have influenced the subsequent adaptation of the street» (Remali, Porta, Romice & Abudib, 2015, p. 105, emphasis added). Spatial meaning and spatial memory can be said to produce intensity levels of centrality. The more meaning and the more memory, the greater the role played by centrality in the mind's eye.

Centrality also draws on complexity theory which then feeds into the notion that it is a prerequisite for the 'health' of any high street (Remali et al., 2015, p. 105). The authors use a hybrid of space syntax theory called Multiple Centrality Assessment (MCA) which instead of «visibility and accessibility, using sightlines and step-distance measurements» focuses instead on «centrality values and economic activities» (Remali et al., 2015, p. 105). Which highlights the multiple ways to empirically measure the 'health' of an urban node or high street.

Centrality «goes beyond proximity» (Remali et al., 2015). Brenner (extended urbanization theory) and McFarlane (relationship building assemblages) subscribe to similar ways of thinking about what it is we are attached to and where these constructs are in space and time. This aligns with visual sustainability theory which is focused on why we latch on to certain elements, what we latch on to, and for how long (De Kock, 2019a).

Information in action

The idea that architecture is information, that we only look at architecture when we need to, is aligned with the idea that «non-human, inanimate objects possess agency and activity […] that they carry information» (Easterling, 2015, p. 29). And it is also relevant to the idea of urban music. Because as Remali et al. concede, there is more to the analysis than centrality. They cite additional powerful influences such as «local aspects related to the architecture of the street front, namely diversity, permeability and transparency of the building façade» (Remali et al., 2015, p. 105).

Their case study also acknowledges previous research, including work by Jacobs, Whyte, Appleyard, and Gehl, that focuses on 'safety and sociability'. But nowhere in the literature is there any mention of visual sustainability. This is no doubt implicit in the melange of representation for the greater good. But the fact is that modern-day sustainability is rarely, if ever, addressed. Nor is there acknowledgement of a concept of visual sustainability; that there is data in our objects that we need to access; that we depend on for our survival.

Visual sustainability in high streets may draw on any of the number of methods covered so far. Or it may look elsewhere, for example, to intensity levels of fractal-like information, where fractals exist as data (De Kock, 2019c). This method, of information in action, appears to be ideally suited to the tools used by Gigerenzer; as short-cuts to new theories, and also known as the «tools to theory heuristic» (Gigerenzer, 2000, p. 36). This in the real-world is known as ecological rationality and «draws on people's natural environments, *past and present*» (Gigerenzer, 2000, p. 57, emphasis added). It is based on the definition of ecological rationality which can be stated as: «the study of how cognitive strategies exploit the representation and structure of information in the environment to make reasonable judgements and decisions» (Gigerenzer, 2000, p. 57).

Information in action looks to the individual parts that will be making up the whole, from which the extended meaning is identified. A good way to look at high streets is that they exist as «significant features» (Remali et al., 2015, p. 106). In other words, they exist to us as physical objects, and contained within each object is the movement, connectivity, social interaction, and economic interaction.

The Tripoli case study lends itself to the study of deterritorialization and reterritorialization of space. Each historical intervention reflects a top-down process. There is a measure of consensus that the most successful intervention in terms of visual responsiveness and adaptability is the Old Town, which is «heavily based on highly central and densely social main streets» (Remali et al., 2015, p. 128). Lessons can be learned from this case study: that «not for the sake of nostalgia […][the study seeks to] identify essential structuring principles that can be revived, adapted and perpetuated to enhance social life in the contemporary built environment» (Remali et al., 2015, p. 129). The aim must be to adopt these principles wherever deterritorialized space exists in our high streets.

Conclusion

In the context of a visual world of tacit knowledge, it has been argued that in an uncertain world our visual negotiation of space is heuristic; in a manner described by Gigerenzer as 'fast and frugal' (2000). We like to 'dance quickly' and delight in navigating around information that has been described as «patterns of energy» (Michaels & Carello, 1981, p. 158). We orient ourselves in space with intent, through use, utility and affordance.

The visual richness of our surroundings is like the air that we breathe. We do not account for it, until we need to. We are unaware of our dependence on each 'visual breath' taken, but we are dependent on our visual world as much as we are dependent on the air that we breathe. It is the same as quantitatively attempting to describe and prove the existence of air, of oxygen without referring to indirect evidence or phenomenological experience to adequately convey the meaning. This is equally true in our visual world, that to prove the existence of the urban boogie of visual sustainability we will have to call on indirect and experiential evidence.

Ecological rationality is an area of great potential for future research into the creeping phenomenon of alienation in our urban. It also strengthens the concept of visual sustainability as it is predicated on asking the right questions in the context of uncertainty (Gigerenzer, 2000, p. 57). It constitutes «the link between mind and its environment» the importance of which has been likened to «two married people who have to come to terms with each other by mutual adaptation» (Gigerenzer, 2000, p. 57). That as a married couple, people and their urban, have become «estranged […][and the] aim is to get this couple corresponding again, even if they cannot be coherent» (Gigerenzer & Todd, 1999, p. 22).

The precedence set by many of the case studies (Jones et al., 2007; Vaughan, 2015) show how meaning shifts around, and the reason for this it can be argued, lies in how assemblages can adaptively «territorialize, deterritorialize or reterritorialize» space (McFarlane, 2011, p. 27). The importance of understanding this phenomenon of territorialization in high streets should be clear. High streets are patterns of meaning and therefore susceptible to new meaning. We are perhaps too used to a stable historical cliché for our meaning of a high street; forgetting how unstable these constructs once were and still are. Territorialized from empty space, many have experienced some form of deterritorialization and reterritorialization.

High streets, like meaning, move around. Their life is an urban boogie. They can survive in weakened states. And some die. There is something ecologically appropriate about high streets because they exist and should be able to adapt to changing conditions; reconstructing themselves over time, each time a little differently. They not only differ in character, but also according to their context. The historic high street of any village is different from the high street in any modernized suburban sprawl; which is again different from an inner-city suburban high street.

A high street is like a dance and no dance is ever the same. If the fire of life is a heuristic dance around patterns of energy then as custodians it would do well for us to remember that every high street should be an urban boogie unlike any other.

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