DESIGN FOR BELONGING: THE CORRELATION OF BELONGING, IDENTITY SHIFTS AND MISMATCHES WITHIN INCLUSIVE SYSTEMS.

Adela GLYN-DAVIES
University of Derby

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ABSTRACT

With the increased involvement of designers in matters of public discourse, local communities and policy making [1-3] – parameters of inclusive design have moved more prominently into the roles of leading frameworks utilised by practitioners [4-6]. Following on from the *Social Turn* [7] the imperative to challenge values and attitudes to design [8] and its societal contribution was further demonstrated, resulting in a push for communities to take part in the creative process to produce positive engagement and environments for all [9]. Inclusive design aims to generate solutions to disaggregate and remove barriers to involvement and eliminate separation [10-11]. The term *accessibility* is often mentioned as a descriptor or enabler of a design becoming inclusive, yet accessibility alone does not generate cultures of participation, relatability, or true inclusion. The preposition that accessibility points in a system's periphery count towards the design being deemed inclusive, is one of the main issues within enquiries of system imbalances [8-11]. Whilst designers focus on generating accessibility points catered to as many needs as possible, what remains is a vast neglect of what happens to the people once they are inside the system. Lacking relatability and processes of active exclusion push people's established and shifting identities into places of othering. Far beyond just inclusion, a design that considers one's intrinsic need to belong, could generate the acceptance of an individual as a part of the system and affirms their full identity to produce greater motivation to progress [11-12] This emerging awareness of cultivating belonging within inclusive design raises considerations for solutions that target urban, migrant communities, where matters of identity are accentuated [12]. This paper will present propositions towards a Design for Belonging, operating on systems thinking practice and explicated through visual data mapping, which in the context of this particular study - focusing on experiences of people with complicated migration/immigration or refugee background.

MIGRATION AND IDENTITY SHIFTS FROM A SYSTEMS PERSPETIVE

Migration is a process of social change where individuals leave one geographic area and temporarily or permanently move to another [19,20]. The reasons for migration are multifaceted and often a result of complex circumstantial factors such as personal or professional development, education, joining family, economic struggle, political disorder, or war [20 & 39]. Whilst migration presents multiple difficulties to movement and settlement, it

also affects personal wellbeing through socio-cultural adaptations to new environments [30, 31].

Because of these adaptations, often described as acculturations or assimilations, migrants undergo identity shifts that aim to generate belonging [40]. Throughout identity shifts, migrants experience intrinsic adaptations to the new system, which depending on the level of accessibility, inclusivity, and openness of the system, can cause positive or negative affiliations to a new environment.

Identity shifts that happen because of migration are predominantly stress-driven [20] and often leave the individuals struggling with their wellbeing, as healthy formations of belonging require positive interactions with their new environments - something opposed to the overwhelming majority of experiences [39]. These shifts are a direct consequence of migrants facing bureaucratic barriers to participation within the system or being met with mistrust, lack of patience, cultural insensitivity, social dismissal, or othering [41]. These affect an individual's self-confidence and lead to feelings of rejection and inferiority, which subsequently builds up complex psychological detriment [42].

Whilst negative interactions can often lead the discourse in migrant experiences, efforts have been made to design positive interactions to help migrants build a sense of trust, belonging and relatability. These are generated through mobility, accessibility, participation, and actualisation in a system [39]. In the development of these positive points of interaction, designers have increasingly played an important role in problem-solving activities, leading to new services, products, or environments to help generate a more welcoming, inclusive, and accessible system for migrants.

INCLUSIVE DESIGN AND ITS OMMISSIONS

In 2006, the Commission for Architecture and Built Environment (CABE) published a document of principles and attributes of inclusive design. In this work, inclusive design is described as design that aims to create places and services everyone can access [10]. The primary aim of inclusive design is to democratise and enable equal participation in everyday activities. This approach to design recognises that the cause of separations and exclusions are mismatches in the design process i.e., a lack of active user participation and testing throughout the process development [10, 13]. Although inclusive design aims to remove barriers to participation before a mismatch can be generated, often these efforts remain an aspect of the process itself and decrease or vanish upon the proposal's realisation, leaving the participants in a space that is accessible but not relatable in the long term [14]. The necessity for long term relatable design is linked with people's intrinsic need for belonging [14].

In inclusive design, belonging has been mentioned in the context of classroom environments or private and public sector HR policies [15], however, it has not yet been developed into an active form of design that is beyond inclusive but progressive and sustainable. John Powell describes belonging as the following:

> *"Belonging means more than just being seen. Belonging entails having a meaningful voice and the opportunity to participate in the design of social and cultural structures. Belonging means having the right to contribute to, and make demands on, society and political institutions."*

From this, it is evident that a driving element of belonging is participation, contribution and even the right to challenge. Therefore, inclusive design that does not generate this, does not move towards belonging and is questionably, only partially inclusive, or not truly inclusive at all [14, 16].

CORRELATIONS BETWEEN IDENTITY SHIFTS AND BELONGING

For designers to develop inclusive structures that actively promote belonging, it is crucial to understand how belonging is generated and what happens to an individual's identity in the development of it. In Peter Weinreich's work 'Analysing Identity' [17], the amalgamation of lived and shared experience, historical parameters of value and cultural norms are what constitutes the development of an identity. Individual or group identities are formed by interactions with their environment and are dependent on the nature of these interactions. Weinreich concludes from this that:

> *"A person's identity is defined as the totality of one's self—formed by how one construes oneself in the present, how one construed oneself in the past and how one construes oneself as one aspires to be in the future."*

According to Weinreich's and Anthias' work, the interpretation of identity is directly linked with one's sense of belonging to a community or environment [18] and implies that identities are not rigid characteristics, but rather fluid, evolving entities that respond to experiences gained through interactions [16-18]. This is salient when considering that the development of belonging in itself, requires a form of identity shift to grant positive responses to external influences. Consistent with Bhugra's work on identity and belonging [19,20], the notion that a change of identity directly correlates with one's need for belonging, presents numerous questions about how these changes occur and how they manifest. Migrant identities are challenged to adapt or assimilate [19-20] to benefit from the structures that new environments are offering. If people inhabiting these environments do not feel as they belong to them, those spaces will start to show imbalances in social cohesion and a regressing civic economy, and consequently, turn into unsustainable environments. As posited by the NCCA, inclusion must move to a more specified focus on belonging [21] and seek to generate well-rounded and confident identities, welcomed in decision making to progress the system as a whole.

SUSTAINABLE SYSTEMS AS A CONSEQUENCE OF GENERATED BELONGING

When considering the limitations of inclusive systems, designers must reflect on the long-term efficacy of structures that everyone can access yet not relate to or develop within. In their critique of inclusive design approaches, Bianchin and Heylighen [22] write about the fairness of designed systems and how the equal accessibility and usability of a system is not yet thought through. Whilst most individuals or groups can access a system, they might not necessarily benefit from it as the structure does not offer relevant points of connection [22]. Additionally, critics have pointed out that a lacking scrutiny of the principal attitudes within inclusive design such as social learning or impact are often not considered outside of speculation [23,24]. The reality of exclusion, rejection and marginalisation within supposedly inclusive systems originates from the fact that such systems are never homogenous and therefore, complex, and intricate.

Consequently, systems that grant access but do not foster belonging, generate limited participation and interactions that are far from the democratised utopian aspiration inclusive design wants to entail [23,24]. Such systems are deemed to be unsustainable and will throughout the course of their existence, generate mismatches from within. According to Kim and Rigdon, a sustainable system is aware of its internal and external challenges, and it self-sufficiently learns and develops from its interactions [25, 26]. Therefore, a sustainable system is one that actively engages in the analysis of behaviour and how this might affect interactions within. Such analysis needs to centralise belonging as a principal facet of sustainability - something inclusive design is not fully integrating within existing approaches.

In the writing of Siebenhuner and Heinrichs, a system that becomes and remains sustainable undertakes individual and collective social learning through interaction analysis [27]. This is done to understand where points of imbalance might occur and how these might form patterns of behaviour that could disrupt a system's balance. Systems that deal with regulations and adaptations of the rationality behind their framework can move the system and all that is within it towards sustainable development [28]. This is opposed to stripping the system of an individual action whereby the rationale inevitably ends up rebuilding a similar action in a different casing [29].

BELONGING IN INDIVIDUALS WITH ACCELERATED IDENTITY SHIFTS

Another focus in Bhugra's explorations of belonging [19, 20], is in examining identities that undergo accelerated changes due to migration. Although all identities go through transformations by interacting with their environments, in the case of migrants this change is amplified [19] and presents a form of deliberate identity loss [31, 32] motivating individuals to form an altered self that will grant them access to services provided by the new system.

Whilst identity changes motivated by the need to belong are partially intrinsic, it is crucial to consider the extrinsic influences migrants face when interacting and adapting to new places and communities [19, 20 ,31]. If a system merely grants migrants access but doesn't actively seek to engage, affirm, and accept them, it will inevitably exclude or marginalise them, which consequently hinders the development of a sustainable system. The detrimental issues that a lack of design that considers belonging creates are evident in the struggle of migrants to participate in, contribute to and benefit from mainstream society. In the long term, these issues can feed into ghettoization, joblessness, poor mental health amongst other adverse societal behaviours [31, 26].

THE VISUAL MAPPING OF EXPERIENCE AND SYSTEM DYNAMICS

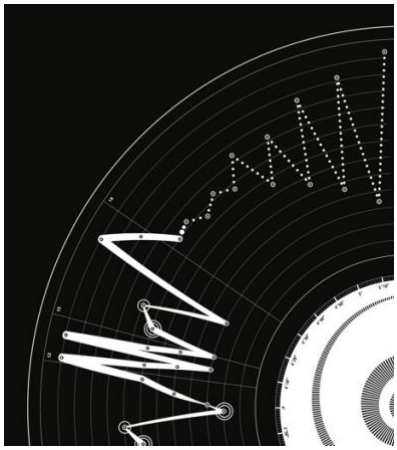
Visual data mapping as a tool for the quantification of evidence is a common tool utilised in data design and design research [32]. Though it serves as a data collecting and organising tool, its primary purpose is to communicate data to external participants [33]. The benefit of mapping as a visual method is that it allows for multiple visual layering and demonstrations of data changes and shifts throughout short or long-term periods [31]. Visual maps can assist designers and researchers to visualise raw and evolving data, whilst effectively presenting underlying developing frameworks or methodologies, they can also present an opportunity for the experimental visual development of experiences and interactions [31, 32].

Mapping qualitative experiences can be an act of co-design or participatory practice and therefore present an opportunity for graphic developments of distinct visual languages [35]. Working with visual data is not a practice exclusive to data designers, but rather presents a form of active reflection on circumstances, emotion, and knowledge that everyone can access and produce [36]

Visual communication as a form of non-verbal discourse, insight, and manifestation, is not solely represented in the processed side of graphic design that we encounter daily. Before the introduction of rendered forms, shapes, pictograms and infographics, a multitude of research has to generate complex data to be processed, leading to final versions of the visuals. Whilst this has been a regular procedure in commercial design practices, an increasing number of designers, thinkers, and creative enthusiasts are discovering the data gathering stages anew as a form of design expansion and opportunity to democratise the creative process. Data amalgamated throughout the research stages of any creative project can often be a combination of quantitative and (post)qualitative data. This information can be gathered

through various methods such as visual, sensory, or embodied forms of ethnography, structured, and semi-structured surveys, site and precedent study and analysis. This implies a vast containing but also compressing of complexity, particularly when considering (post)qualitative data, which is experience-driven and often difficult to quantify. Although traditionally conditioned by reductionist approaches, this data is commonly presented in numerical forms or flat examples of infographics such as pie charts and bar graphs which are not always accessible to a wide range of audiences. New more holistic approaches to data gathering, rendering and dissemination have been emerging and used by designers working with graphic disciplines.

These emerging approaches tap into the resourceful nature of visual language and semiotics which encourage hybrid forms of quantification without eradicating the importance of numerical reasoning. In the work of Valentina D'Efillipo, notions of playfulness and narrative world-building are used to gather and process data. In the collaborative project with Miriam Quick, she developed the visual data deconstruction of David Bowie's Space Oddity, by incorporating and illustrating data that had contributed, shaped, and disturbed Bowie's process and final work (Figure 1-3).



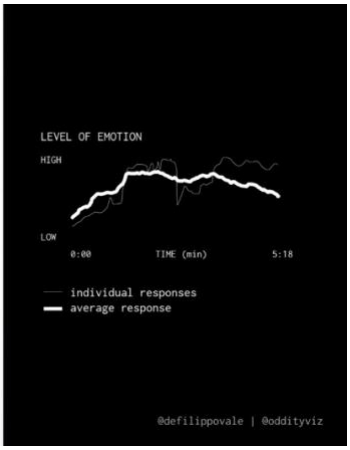


Figure 1 (D'Efillipo, V. & Quick, M., Space Oddity 2017)

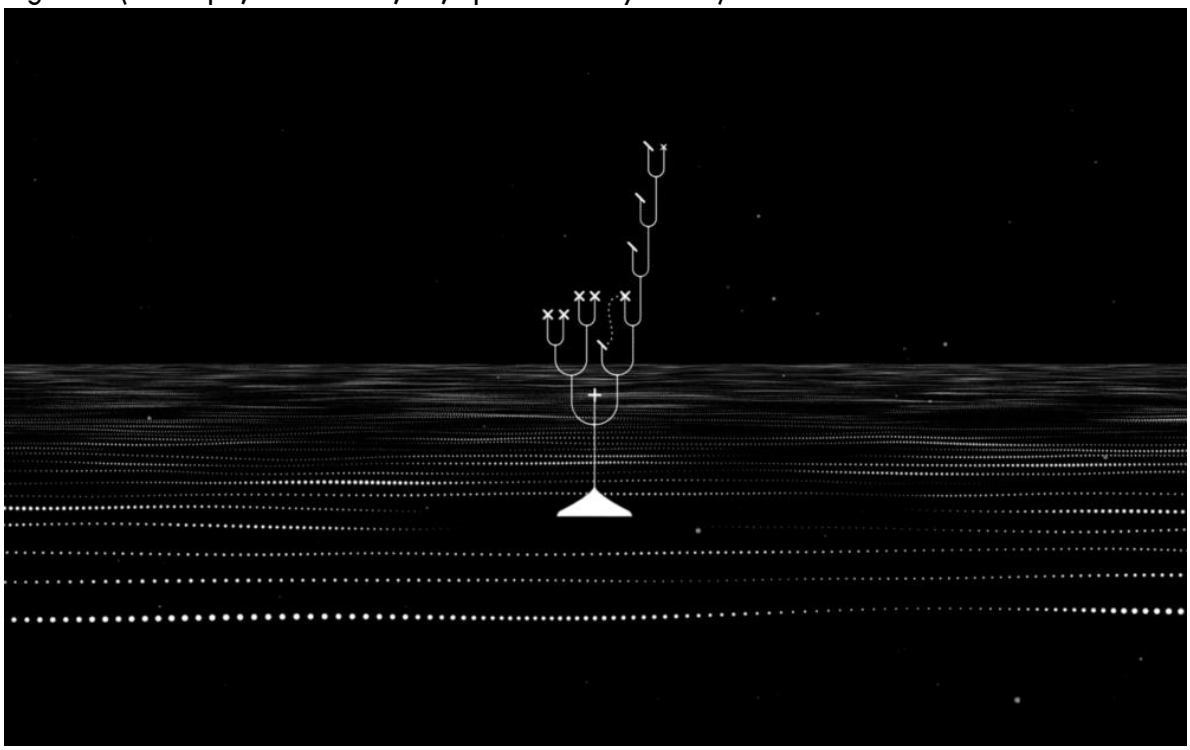


Figure 2 (D'Efillipo, V. & Quick, M., Space Oddity 2017)

Figure 3 (D'Efillipo, V. & Quick, M., Space Oddity 2017)

In 'Dear Data' Stefanie Posavec and Georgia Lupi demonstrate the art of noticing, generating forms of primitive data, by mark-making their everyday life and generating infographic postcards exchanged between the UK and US for a full year (Figure 4-7).

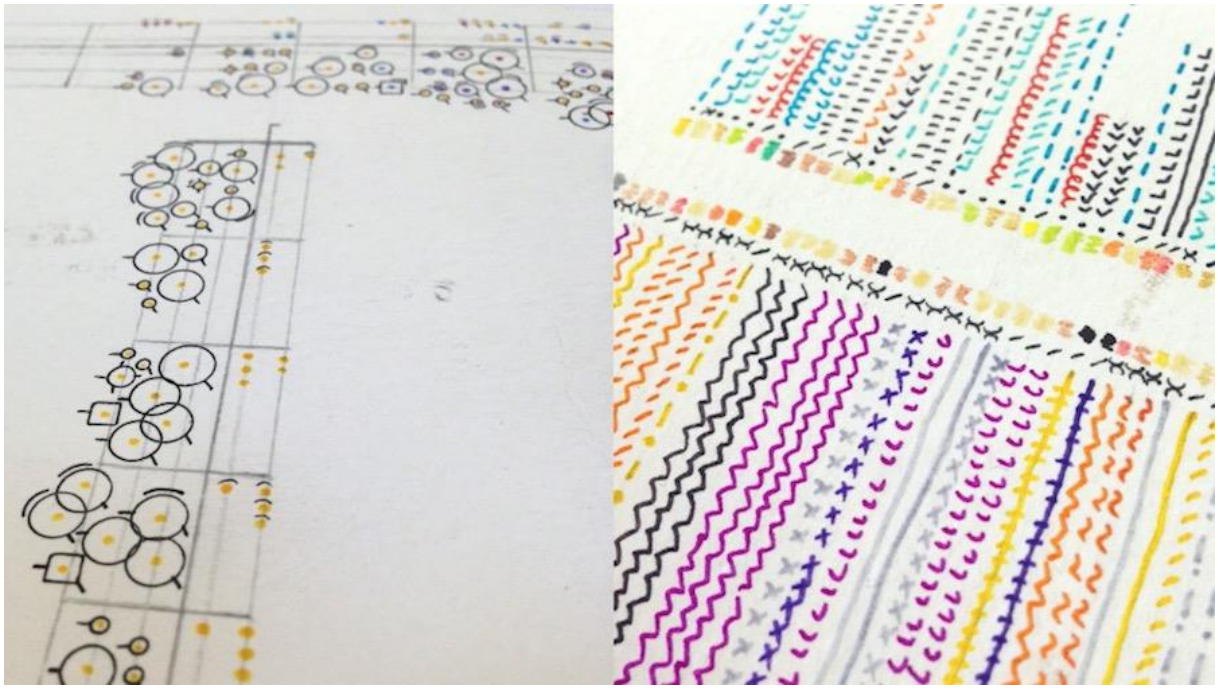


Figure 4 (Posavec, S. & Lupi, G. Dear Data, 2018)

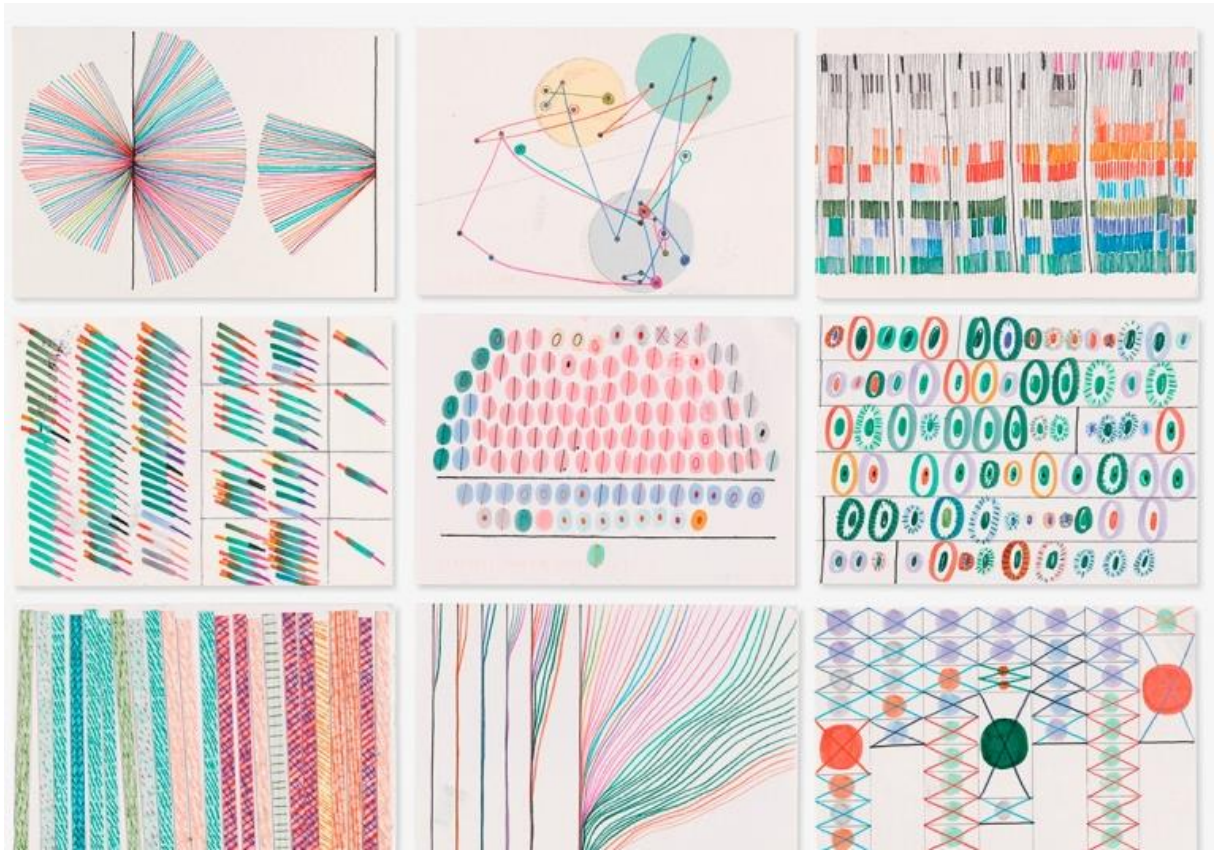


Figure 5 (Posavec, S. & Lupi, G. Dear Data, 2018)

Figure 6 (Posavec, S. & Lupi, G. Dear Data, 2018)

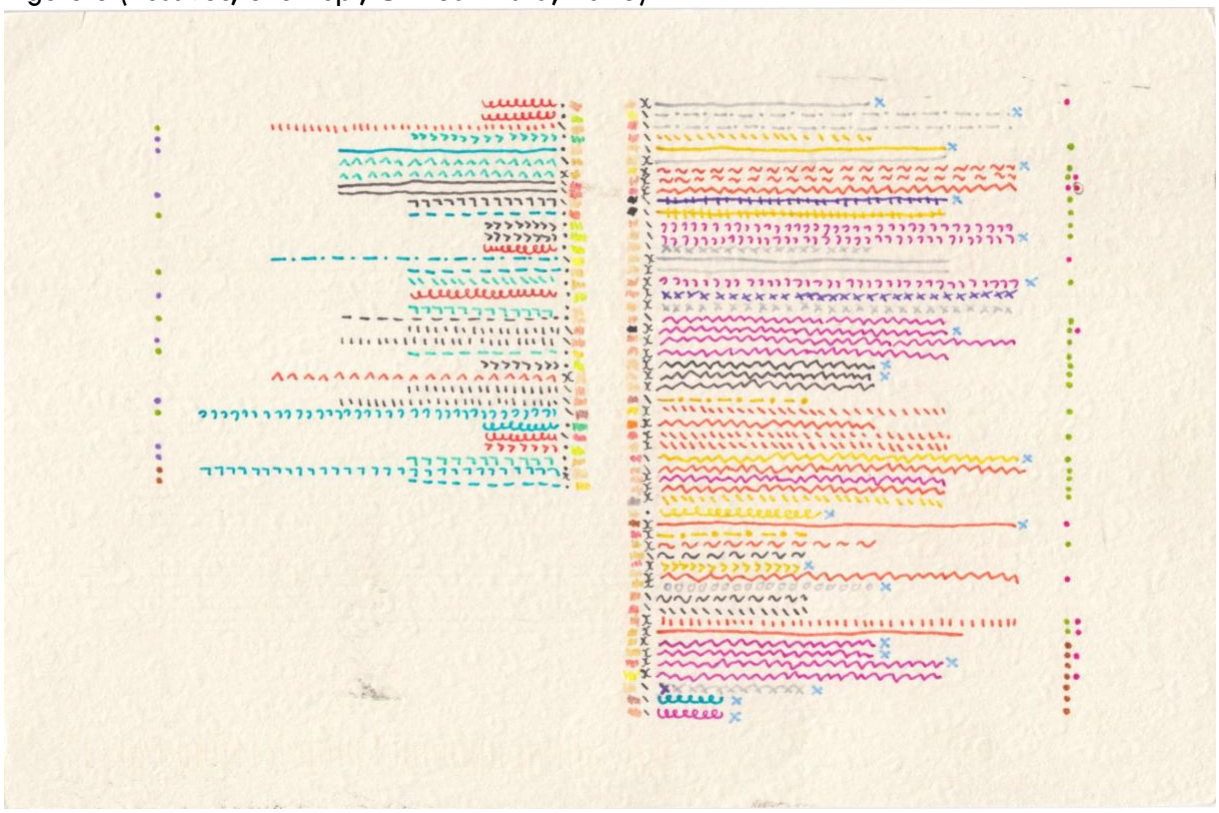


Figure 7 (Posavec, S. & Lupi, G. Dear Data, 2018)

Lupi and Posavec recognised that the term 'data' was frequently perceived as something hyper-analytical, numerical, and generally distant from people's experiences. The terminology was often
linked to particular and specialist practices, removed from people's routines. The fact that data was a form of knowledge that everyone has, knows, and generates, was not made familiar nor accessible enough. Their work expresses the importance of data being communicated visually

and playfully, stepping away from rigid graphs and numerical representations of very personal experiences.

This notion was also picked up and extensively covered by Manuel Lima and his work on visual data mapping. In his work on visual complexity, Lima expands on the examples of research methods such as ethnography and site analysis being conducted through visual mapping. As a tool, mapping is often used in cartography and graphic design, predominantly representing geographic areas and the phenomena and circumstances of the social, natural, or built environment. The use of maps as analytical tools for nature's and people's behaviour is nothing new, yet it remained still a distant form of knowledge transmission in the modern world. Lima highlights the vastness of knowledge hidden in experiences and interactions which are not mapped and that this distance to rendering and analysing data, is a missing link in the understanding of many of our current systemic issues [37].
By considering visual data mapping as a documentation of the personal (individual and collective), designers and those working within the context of human complexity could benefit from substantial and often overlooked information, vital to understanding people's experience within a particular system.
This is also evident as a more rendered practice within processes of systemic design and systems change. In this context visual data mapping is utilised within processes of actor-network and system maps, where experiences, and actor relationships area mapped out to elucidate pain points or mismatches in a system as well as highlight leverage points for further interventions [38]. As in the example of Dark Matter Lab's project on applying systems thinking to environmental thinking in Albania, the process of developing interventions undertook in-depth, qualitative, and ethnographic research in order to visually map data representing dynamics and mismatches within the system (figure 8, Dark Matter Labs, 2019).

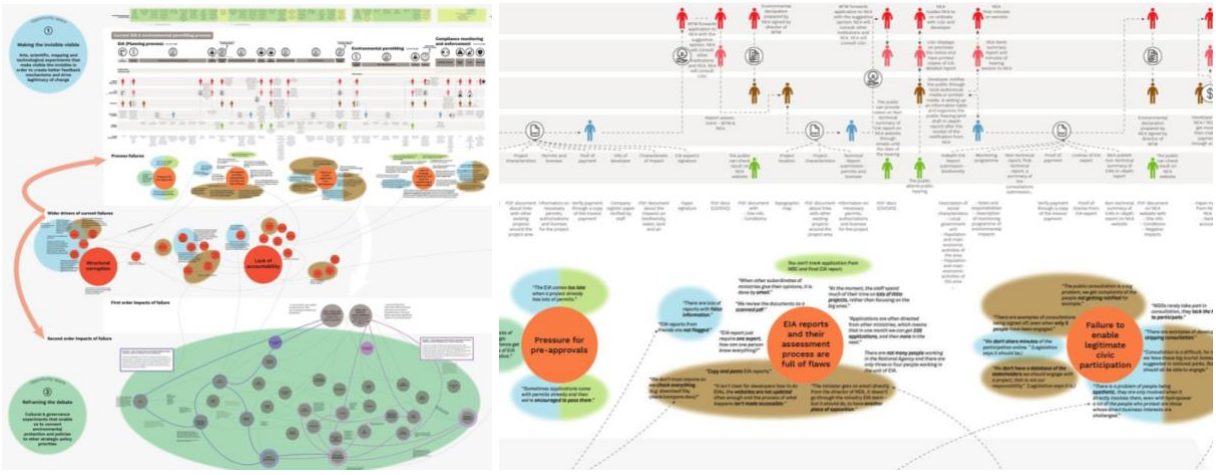


Figure 8, Dark Matter Labs, 2019.

In this process, the system mapping becomes an action of co-design – not only in the engagements of the visual mapping itself, but rather in the mapping out of knowledge, experiences, and system dynamics between participants. This type of visualising and representing of knowledge within a system, opens up new avenues for inclusive design endeavours and methodologies that foster participants' long-term influence as a form of expressed and actualised belonging.

MOVING TOWARDS DESIGN FOR BELONGING THROUGH NEW VISUAL ETHNOGRAPHIC APPROACHES

Considering the imbalances in data transliteration through existing quantitative methods, it is evident that these compressions of experiences can lead to overly reductionist approaches in system and imbalance analysis, leaving out qualitative data as a result of rigid data sets. In

the context of visualising points of inclusion/ exclusion of migrants and their experiences and aims to build belonging in new environments, it is significant to challenge the existing methodologies with a new approach to inclusion in mind. Cogitating identity shifts as indicators of people's relatability to designed systems could have the potential to reform existing methodologies to inclusive and systemic practice as well as re-democratise the process of knowledge gathering, development, and transmission. Co-designed visual data maps present a viable field in practice driven and visual research that is yet to be defined and iteratively tested in order to establish adaptable and applicable methodologies that at third core carry ethnographic principles to capturing and studying people on an intrinsic and extrinsic basis.

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IMAGES:

Figure 1 - D'Efillipo, V. & Quick, M. (2017). OdityViz, Space Oddity -Kantar Awards.

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Figure 5 - Posavec, S. & Lupi, G. (2018). Dear data. Penguin Random House
Figure 6 - Posavec, S. & Lupi, G. (2018). Dear data. Penguin Random House
Figure 7 - Posavec, S. & Lupi, G. (2018). Dear data. Penguin Random House
Figure 8 – Dark Matter Labs (2019). Environmental thinking in Albania.