Dynamic Landscapes, Emerging Territories

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Amps

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Abstract

As a result of the pressing environmental and technological conditions dominant today, new frontiers for architectural production are emerging. Fueled by accelerated change and increased connectivity, these trajectories operate across multiple scales and domains. The evolving relationship between place, technology, and occupancy formulates a complex active structure that tends to have fluctuating levels of activity and impact. These conditions are giving way to hybridized settings where the interdependence of digital and analog is altering the very politics of place and identity. In response to the prevalence of amalgamated settings, the paradigm of "Dynamic Landscapes, Emerging Territories" is presented.

Dynamic Landscapes have definitions and presence in multiple locations simultaneously, requiring new methods of documentation and assessment in order to conceive appropriate design responses. The paper uses the Syrian Refugee Crisis as a case study for deciphering the implications inherent in displacement in the context of dynamic landscapes. Furthermore, it presents an opportunity to think of new architectural trajectories rooted and driven by the animation of such sites. Inherently dynamic, forced displacement presents rich emerging territories where design carries significant impact and facilitates a tangible reassessment of a refugee's narrative. Supported by robust information

networks and active feedback loops, displaced landscapes as such can learn from their residents and inform their imminent futures specifically, as well as our collective human occupancy at large.

Within constantly changing milieus, architecture's premises and processes are being challenged to respond to fluctuating contexts and provide for transient occupancies. While some may see this as a loss of spatial agency when it comes to design, these conditions present an opportunity to think of new architectural trajectories that are rooted and driven by the dynamism of multi-layered landscapes and new approaches towards practice.

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Introduction

As our living is becoming increasingly dependent on hyper-data and our surroundings defined by binary codes, a liminal area is emerging where the stark distinction between the real and virtual ceases to exist. The overlap of these two contexts is giving way to hybridized settings where the interdependence of digital and analog is altering the very politics of place and identity. In response to the prevalence of amalgamated settings, the paradigm of "Dynamic Landscapes, Emerging Territories" is presented. Impacted by technology and displacement, landscapes acquire a dynamism that is maintained by the documentation and dissemination of data flows. Previously, proximity has defined territories. Now, within this dynamic modality, territories emerge based on common technological parameters and collective displacement patterns.

The human influence on the environment, both physically and conceptually, frames the dynamic landscape. The Syrian refugee crisis is a real-time example of this influence, illustrating how displacement and technological channels redefine the physical and abstract parameters of a given region. They give rise to territories whose commonality is not characterized by adjacencies, but rather by virtual connectivity. As such, the definition of landscape is being questioned; it is no longer static, nor is it local. It can be both virtual and physical; it is dynamic. This paper uses the Syrian refugee crisis as a case study for deciphering the implications inherent in displacement in the context of dynamic landscapes. Furthermore, it presents an opportunity to think of new architectural trajectories rooted and driven by the animation of such sites. Here and now, architecture's premises and processes are being challenged to respond to fluctuating contexts and provide for transient occupancies.

Fueled by high levels of instability, accelerated change, and increased connectivity, new frontiers for architectural production are emerging. These frontiers operate across multiple scales and domains. Heretofore, architectural

practice has had the luxury of overlooking some distant parameters if they did not directly interfere with the physical implementation of built constructs. However, technological advances and pressing contextual realities are changing proximities, and realms of impact. As architects and global citizens, we are no longer afforded such privileges, as localized issues are continually becoming global concerns. The situational ubiquity enacted by technological advances demands we address new complex settings and layered contextual parameters. Due to the intricacies of these conditions, the individualistic approach to architecture becomes ineffective. As a result, we see the development of collective design sensibilities facilitated by emerging patterns of collaborative practice that rely on unprecedented access to shared knowledge. Straddling the interface between the virtual and actual, such design approaches are redefining tolerances of authorship and singularity, while advocating for collective voices and cumulative making.

Dynamic Landscapes between Technology and Displacement

In recent years, population displacement reflected by an unequivocal surge in refugee numbers has emerged as a significant global force. In its *Annual Global Trend* report released in 2018, the UN Refugee Agency states that 68.5 million people were displaced by the end of 2017.[1] While crises both natural and manmade have triggered mass relocations in the past, the current patterns of forced displacement are very different. They are transgressing regional boundaries, simultaneously affecting local and global narratives. These recent patterns are not only testing the resilience of our resources, but also our humanity as they unearth deep biases, fears, claims to place, and definitions of identity.

While the causes of population displacement vary, the commonality of such factors lies in the patterns of landscape occupancy and their ultimate manifestations in the built environment. The built environment reflects our relationship to place and the agency of our claim to where we are from and ultimately who we are. And while design is not at the forefront of policy negotiations when it comes to displacement, it directly impacts the perception of place and reading of identity. This is especially relevant among displaced populations.[2] Adding to the existing complexities of the politics and logistics of displacement is a new layer of unprecedented access to and dependence on technology, especially information and communication technologies (ICTs). Amidst this new-found connectivity, the rise of a "networked population" occurs, a population well connected through digital media structures, and via personal communication devices. According to the *Global System for Mobile Communications Association* originally *Groupe Spécial Mobile (GSMA),* as of June 2017, five billion people (two-thirds of the world's population) have a mobile phone connection. The trend is showing no sign of decline. On the contrary, it is projected that the number of unique mobile subscribers will reach 5.9 billion by 2025.[3]

In an article published in *Foreign Affairs* titled, "The Political Power of Social Media: Technology, The Public Sphere, and Political Change," Clay Shirky argues, "As the communications landscape gets denser, more complex, and more participatory, the networked population is gaining greater access to information, more opportunities to engage in public speech, and an enhanced ability to undertake collective action."[4] The prevalence of technological mediums and the rise of the networked entity demarks a substantial change in power structures. Here, the emphasis shifts from the physical to the nonphysical: while land and territory were the measures of domination in the old world, the new world's currency is connectivity.[5]

The evolving relationship between place, technology, and occupancies formulates a complex and dynamic structure that tends to have fluctuating levels of activity and impact. The Syrian refugee crisis has been one of many emerging territories where this dynamism is evident. The Syrian War engendered a massive population displacement, creating the world's fifth largest refugee camp,[6] Al-Zaatari Camp, in a matter of months (Figure 1). The sudden shift induced by this event has carried vast implications, socially, politically, and economically. In coming years, the massive population displacement of the Syrian people is bound to redefine the physical and abstract parameters of the region and beyond. However, unlike former relocations, the Syrian scenario involves new parameters (Figure 2). Not only did the Syrian War engender a massive population displacement that occurred at an unprecedented rate, it also displayed a heavy virtual presence characterized by the constant circulation of raw footage on newsfeeds and social media outlets. The new era of technological connectivity facilitated common extensions to the localities of familiar refugee circuits, while allowing for new patterns of migration to occur beyond the expected regional boundaries.

This technological connectivity demarks a shift in the region's power structure. It uncovers new narrative sources, as traditional mainstream media outlets no longer control the propagation of information, and consequently, no longer control the region's global image. The narrative shift is induced and sustained via the continually circulating accounts of the refugees that are being collected and disseminated on portable cellular devices carried by an overwhelming majority of them. Penn State University research done by the College of Information Sciences and Technology surveyed the use of mobile devices in Al-Zaatari Refugee Camp, Jordan.[7] A report of the findings stated, "Increasingly, the lives of refugees are affected by the use of information and communication technologies (ICTs)."[8] The findings noted that refugees, like many technologically literate individuals are more frequently arriving at the camp with mobile phones. Further, many are coming with computing and internet skills; the phones have provided an important lifeline of information and communication with loved ones.[9] The ICTs catered to transient archival fragments of memories, information, and subjective maps (Figure 2). These tokens of an ever-changing geopolitical and cultural landscape operate under continual shifts that will affect the regional and global narratives for years to come.
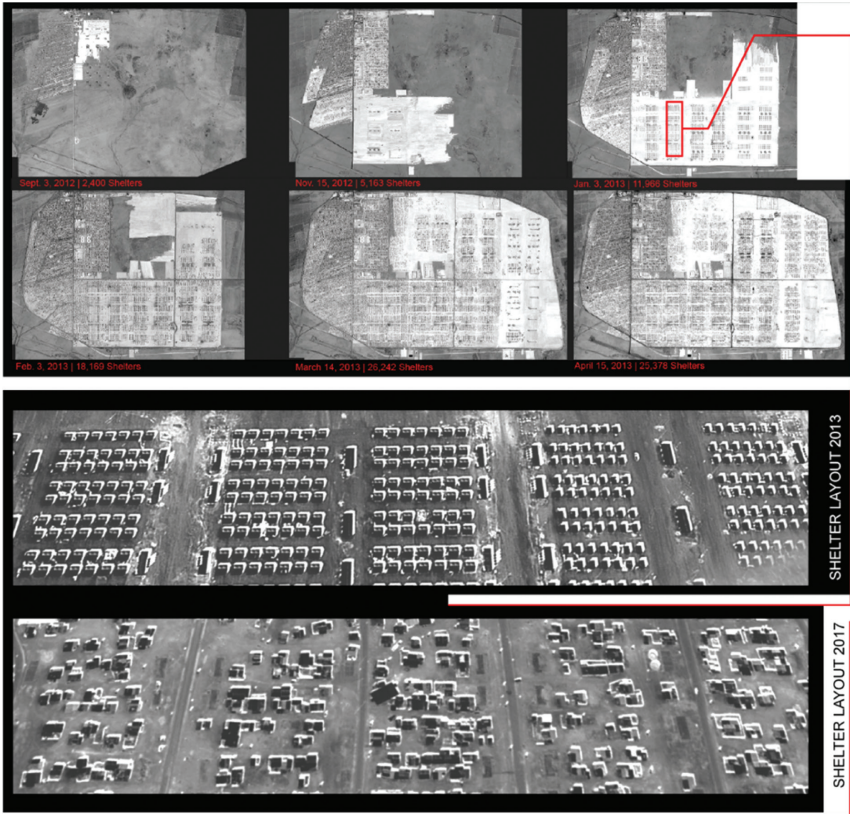
Figure 1: Top: a series of satellite images showing the rapid growth of AL-Zaatari Refugee Camp across a period of seven months. *Source:* www.nytimes.com/ interactive/2013/05/09/world/middleeast/zaatari.html. Bottom: Google Earth aerial images showing the transformation of Al Zaatari's organization. The refugees reordered the shelter units, clustering them in various formations as to facilitate living near extended family in some cases, and to house businesses in others. *Source:* by author via Google Earth.

Within such reconfigured terrains where conventional notions of physical and abstract bearings no longer apply, what becomes of identity when associations with place/placement degrade? How will this affect modes of spatial production and landscape interventions? Can emerging architectural attitudes within the context of such extremes negotiate disputed limits and perform in such states of instability? Even though we are not able to immediately draw clear conclusions from the implications of these amalgamated settings, if assessed properly, and at times improperly, their survey will yield a unique premise for understanding emerging norms in a global culture where conventional notions of anchoring and even relevance are being redefined.
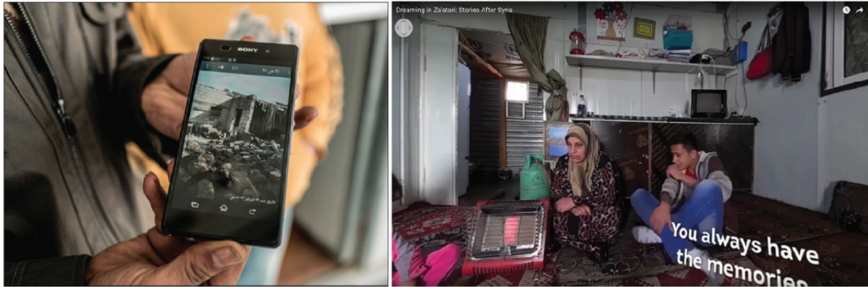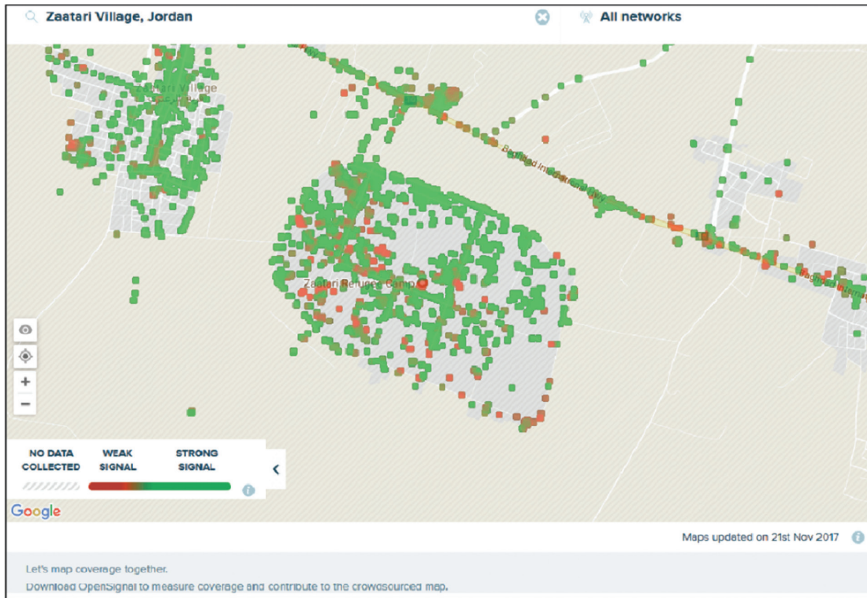
Figure 2: Top: cellular signals' strength and density in Al-Zaatari Refugee Camp as reported by OpenSignal app users in the camp, 2017. *Source:* https://opensignal. com/networks. Bottom left: Still from the documentary film, "District Zero," 2015. *Source:* www.districtzero.org/. The movie documents the role mobile devices play in connecting Al-Zaatari residents to their homelands. Bottom right: A still from the documentary shorts: Syria after Syria. Filmed by young refugees living in Al-Zaatari, the shorts depict life in the camp. The image above shows the interior of one of the shelter units, modified to accommodate the physical and psychological needs of families. *Source:* www.wvi.org/stories-after-syria.

Dynamic Landscapes and the Politics of Containment

We are beings linked to states of containment. We seek to define ourselves by our built constructs (their presence and absence alike). We build as an expression of civility; and with the same token, destruct in an exposition of power. We determine territories and claim settlements within landscapes that define

and are defined by us. Occupants, stewards, nomads, settlers, pilgrims, immigrants, indigenes, pioneers, sojourners, and refugees are various identities annexed by our relationship to place. Such are our histories, stories of our engagements with containment and context. Architecture is seldom assessed as a condition of containment, perhaps due to the fact that the term "container" may evoke negative connotations. However, negotiating containment – its composition, psychology, and thereafter its politics – is at the heart of the built environment. Working at once to create enclosures and break away from them, remains the practical and conceptual premise of making space.

Assessing this containment as it relates to displacement in its various scales, iterations, and manifestations in our present era of technological ubiquity is vital to the practice of design within dynamic settings. Understanding the politics of making enclosure must acknowledge, not only the physical parameters, but also the virtual. Technology in its vast meaning and respective digital processes of thinking and making space has political dimensions that play a significant role in our present cultural and social makeup. The provocations inherent in the coupling of technology and social identity are a pressing reality that design must acknowledge and even embrace. Virtual space is now part of our daily syntax and metabolism, integrated fully within our built constructs and social fabrics, ushering in new geographies of place and information.[10] As such, the refugee camp is understood as an instant, hybrid city mediated through substantial physical and virtual networks. In a traditional city, an occupant is still able to draw relevance from its physical places that also define virtual markers. If someone lives in London, he/she is a Londoner. Once regional territories are crossed, virtual media assumes the identity of the place as well, tuned via the Global Positioning System (GPS) to one's devices.

Settings of rapid change ushered in by displacement do not adhere to those terms, and in a conspicuous way give us a foretaste of a near future where the physical setting is bound to lose its locational agency. For a refugee, being in a particular place does not imply belonging to that place. Here, the faculty of the physical place seizes, giving way to fragments of memories, oral histories, and cultural rituals that find support in a robust virtual database and ever-changing newsfeeds. Such circumstances offer a rich testing ground for design's aptitude to assert identity, as they offer freedom from the obligations to regional loyalties. However, in the wake of dire need and emergency responses, design is dismissed in favor of modularization.[11] This often transpires due to practicality and efficiency. Yet, there is another factor at play: design is associated with permanence and is a calculated investment in the collective identity and claim to place. If the host country invests in the design of a displacement camp, a refugee camp, will this engender an invitation to settle, rather than temporally occupy? Architecture's aptitude for substantiating identity is well established; we see it articulated in the writings of Edmund Husserl, Maurice Merleau-Ponty, and Henri Lefebvre, for example. French sociologist Pierre Felix Bourdieu draws a clear correlation between built space and social identity. His writings postulate that a relationship between self and identity is foregrounded in built space.[12]

Yet, the built environment's capability to ground identity by its literal anchoring to site, is the same aspect that prematurely curbs its capacity to negotiate disputed limits.

A study published in *Epidemiology and Psychiatric Sciences Journal,* assessing distress factors among refugees, found that the lack of residential stability provokes a sense of perpetual homelessness. This affects a refugee's mental and physical health.[13] Furthermore, the generic shelters often used in refugee camps purposefully deter a displaced person from formulating a sense of belonging to the area where she/he relocates. As a result of displacement, one's identity shifts from the common anchoring that design provides to the instability implied by transience and what ensues with regards to discriminatory perception. Often, displacement is rendered unworthy of design investments, but what if we change our design approach towards refugee camps and in turn, external and internal attitudes towards a displaced group of people? Achieving this task will depend on employing technological advances in the more familiar streams of crowdsourcing and feedback loops that increase connectivity and are integral factors in improving standards of living.[14] More importantly, it will require using technology outside the normative means to implement novel design agendas that support varied affiliations and are compatible with the camp's dynamics and demands.

The narrative that drove the formation of the Al-Zaatari is familiar: it follows the pattern of conflict-driven displacement that is very common in the region. However, Al-Zaatari quickly differentiated itself from other surrounding camps by changing its approach to planning and design while utilizing technological advances, many of them so new that they did not even make it to the mainstream. In early 2017, Al-Zaatari began using blockchain technology, Building Blocks, for various transactions demarking the technology's first employment in humanitarian aid.[15] While the integration of this technology catered to an increased logistical efficiency in distributing aid, its main drive was more empathic. According to World Food Programme (WFP) executive Houman Haddad, this technology enables a refugee to own his/her identity during a time of crisis where traditional government identity documents are absent. Haddad imagines "a so-called digital wallet, filled with [a refugee's] camp transaction history, his government ID, and access to financial accounts, all linked through a blockchain-based identity system."[16] Such records stored and accessed via smartphones possessed by the majority of the camp's residents provide the means to not only regain legal identity, but also forge a fluid virtual presence that transcends borders. Such an identity is resilient to parametric instability and is compatible with the ever-changing dynamic landscapes of the region specifically and the world at large.

Also, in 2017, Al-Zaatari became the first solar-powered refugee camp in the world, providing clean and sustainable power to its residents.[17] Today, connected to Jordan's national grid, the solar plant routes unused power back into the national network to support the energy needs of local communities, helping the country meet its renewable energy goals.[18] These design investments paid off.

They enabled residents to take ownership of the camp's governance and security, and allowed them to open businesses within the camp. The businesses generate significant incomes for owners and even contribute to the host country's economy.[19] People from outside the camp are coming to buy goods provided and made by the Al-Zaatari residents. This not only produced a substantial impact on the quality of the refugees' lives, but also allowed a sense of normality to resume. Beyond that, the design initiatives restored dignity and purpose to the occupants, and perhaps supplied a measure of healing. A displaced populace is often regarded as a burden on a new location. However, the precedent of Al-Zaatari suggests that when afforded the design and technological premises on which they can base new identities, displaced individuals become active communities able to contribute to social structures, locally and globally.

The differential factor in the successes of Al-Zaatari in comparison to other similar sites was an understanding of its parameters as an active dynamic landscape in a continuous state of visceral emergence. In an article for the *New York Times* titled "Refugee Camp for Syrians in Jordan Evolves as a Do-It-Yourself City," Michael Kimmelman notes that the camp "has grown according to its own ad hoc, populist urban logic, which includes a degree of social mobility."[20] Further, he indicates that the vast forced migrations were the catalysts for much needed discussions about the image of the camp, and what that image conveys to its occupants and hosts. He writes:

> These vast forced migrations have accelerated discussions about the need to treat camps as more than transitional population centers, more than human holding pens with tents for transients. A number of forward-thinking aid workers and others are looking at refugee camps as potential urban incubators, places that can grow and develop and even benefit the host countries – places devised from the get-go to address those countries' long-term needs – rather than become drags on those nations.[21]

By its predisposition to image, design influences how we think of ourselves and others. Hence, through design, a tangible reassessment of a refugee's narrative is facilitated, and a shift that favors assimilation as opposed to alienation is possible.

Interiority and the Politics of Containment

Displacement is becoming a prevalent contextual modality that redefines tolerances of boundaries and identities. Within the shifting parameters that ensues population displacement, it is important to evaluate the role of interiority, assessing it at the scale of the refugee shelter unit and that of the refugee camp. While buildings' predisposition to permanence restrict architecture's ability to actively operate in the extremes of sudden occupancy flux, and respond to the states of instability such environments entail, interiority offers an alternate design trajectory towards spatial production. Interior

spaces carry the code of everyday life and formulate the backdrop for spatial memories that in turn play an integral role in foregrounding identity. In an article titled "Architecture in Everyday Life," Dell Upton examines contemporary theories of the everyday and its impact on social practices and collective presence. Upton acknowledges a certain rigidity in architecture's ability to respond effectively to the everyday that is due to an intrinsic bifurcation between the two.[22] Further, he notes:

> The navigation of everyday spaces, the ordinary, unexceptional sites of most of our sensory and intellectual experiences, is the primary arena within which self-hood and personhood are forged. In the give and take of everyday life we learn the personal and social meanings of our agency. Repeated individual actions become practices and clusters of practices become social formations.[23]

The transferability of such native patterns of occupancy offers a common denominator in the midst of changing typologies of dwelling, community, and culture.

Under the continual instability of displacement, interior patterns and their spatial memories have a proven fidelity that is particularly valuable when negotiating disputed limits and addressing contextual shifts. The resilience of interior spaces stems from their haptic nature that is often tied to cultural practices and domestic habits. Unlike buildings, interiors or their traces and reproductions are easily transferred from one geographic location to another. This agility is often the only assertion of identity a refugee can carry through the relocation process. Composed of fragments of memories and impositions of necessity, a hybrid interiority emerges within the refugee camp (Figure 2). It assumes an autonomous registry while asserting a territorial agency. It offers comfort and familiarity yet blurs the line between the unit and the camp as the domestic experience now depends on the provisions of the collective setting. Here, inside and outside designations degrade, and a fertile elasticity between interior and exterior forms, ushering a liminal domain that demands the designer's attention and imagination. The assessment of interiority under such light is essential to the premise of dynamic landscapes, as interior spaces (emerging territories in their own right) contribute to the activation of these landscapes and to regulating their mobility.

Forked between hospitality and hostility, the shelters formulate the proto modular of the refugee city. Operating within the domestic and urban scales, the shelter units that were once distinct entities now inter-connect, creating new social fabrics in which individual comfort and collective wellbeing take place simultaneously. This is illustrated in the manner in which occupants of Al Zaatari reconfigure their allocated shelter units (dubbed "caravans"). The initial camp layout was in a grid with the caravans placed in rows, the residents altered this layout favoring clustering (Figure 1) a number of units in U-shaped formations.[24] This order allowed the introduction of interior courtyards within the unit clusters and catered for communal living setups with extended family

members.[25] As such, the shelter units induced a recursive collective domesticity, reallocating various programmatic functions to the single interior volume, and communal interactions to the unit cluster. However, the shelter unit does not only function in the aforementioned contexts, but also becomes the main currency in the camp as the residents sell and trade these units to better living arrangements and to house businesses.[26]

With an average life of seventeen years,[27] a refugee camp/city represents the complexities, challenges, and opportunities inherent in dynamic landscapes. In the July 2017 issue of the publication, *Forced Migration Review*, titled *Shelter in Displacement*, flux is recognized as the operative modality within migrant settlements. However, despite the uncertainty of circumstances, displaced people are able to establish themselves and achieve a semblance of normalcy when appropriate design considerations are taken into account.[28] In another article in the same publication, Parrack et al. argue that while the physical resources are invaluable, the key to successful migration settlements hinges on understanding the temporality and spatial dimensions of the conflict setting.[29] They write, "With improved tools to analyze the specific local context in its relationship to shelter provision, humanitarians can develop better understandings of what is both realistic and possible in a given situation."[30] Such findings support the need for fluid information structures, active networks mediating exchanges between actual and virtual.

With a clear understanding of this need, and in order to rethink refugee settlements, Ennead Lab, partnering with the United Nations and Stanford University, developed what they called the Toolkit: "The Toolkit is a systematic framework for integrating information, design, technical tools and the expertise of multiple disciplines and stakeholders to better plan settlements."[31] A hybrid of digital planning tools and databases, the Toolkit facilitates operating under the emergency conditions that surround the advent of refugee settlements. Taking into account local conditions and ecologies, the Toolkit ensures the efficiently and sustainability of the camps while fostering ties to existing local communities and working with the governance of host countries. Despite its clear ability to improve the processes of planning and designing refugee settlement, the strength of this medium lies in its archival capacities. As such, the hybridity of this system not only informs the condition of new emerging refugee territories, but also learns from the challenges, successes, and failures the implementation of the design entails, and readjusts its parameters accordingly. Even though the deployment of the Toolkit was born out of the desperate realites of a refugee's conditions and the speed at which the settlements emerge, it presents a valuable precedent that can be applied to the larger design context. Most notable of Toolkit's paradigms is its operative premise that is in sharp contrast to mainstream channels of design practice. Still reliant on dated systems of codes and standards, conventional design practices fail to take into account the dynamic conditions which define contemporary environments that are heavily intermediated by technology and controlled by immediate and remote forces and contingencies.

Dynamic Landscapes between Documentaton and Dissemination

Dynamic landscapes function at multiple temporal and spatial scales simulta-neously. This distinguishes their operative patterns (both systemic and impet-uous) and their often multi-locational physical presences. It is only through such quasi logic that territories between phenomena and technology can emerge and have an equivocal impact on the more traditional factors that define place. Herein, geographical boundaries and borders are no longer the sole markers of landscapes. As landscapes are reacquiring presence in multiple locations simultaneously, their parameters become malleable and controlled by ephemeral forces.

In her article, "From Site to Territory," Lola Sheppard, co-director of InfraNet Lab, addresses the extensive human influence on the environment on both the physical and conceptual fronts and calls for the necessity of evaluating "site" as a "palimpsest of forces".[32] The Syrian refugee case study illustrates a palimpsest of forces that are both abstract and physical, traced and retraced from one location to many others. Examples of abstract forces are of a polit-ical, cultural and technological nature, while physical forces are the physical location and access to natural resources, resources that are in fact not plentiful
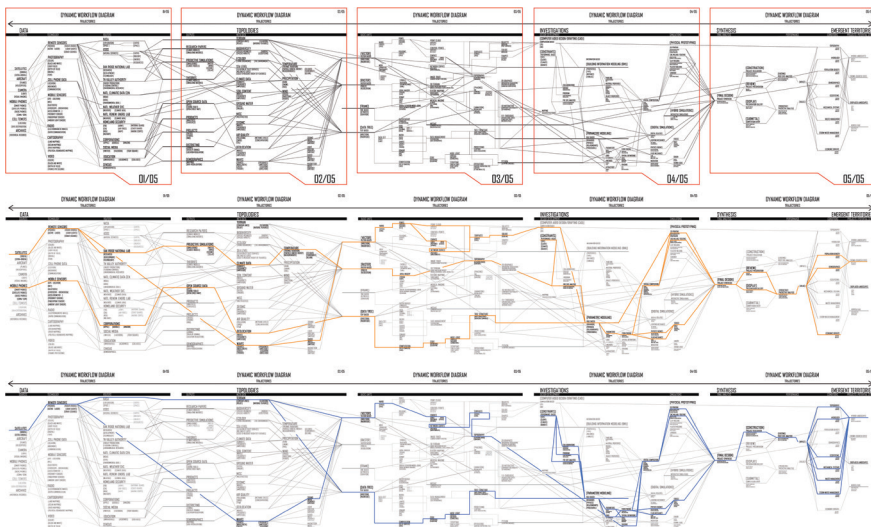

Figure 3: Preliminary proposal for a workflow diagram. Categories and connections are continuously subject to extension and modification based on predominant trends and emerging topics. Middle and bottom diagrams reflect its use referencing certain projects. Middle: PetaJakarta.org is a research project led by the SMART Infrastructure Facility. Bottom: MAX IV Laboratory Landscape – Snøhetta *Source:* by author (image generated by Paul Bamson, graduate research assistance, University of Tennessee, 2017).
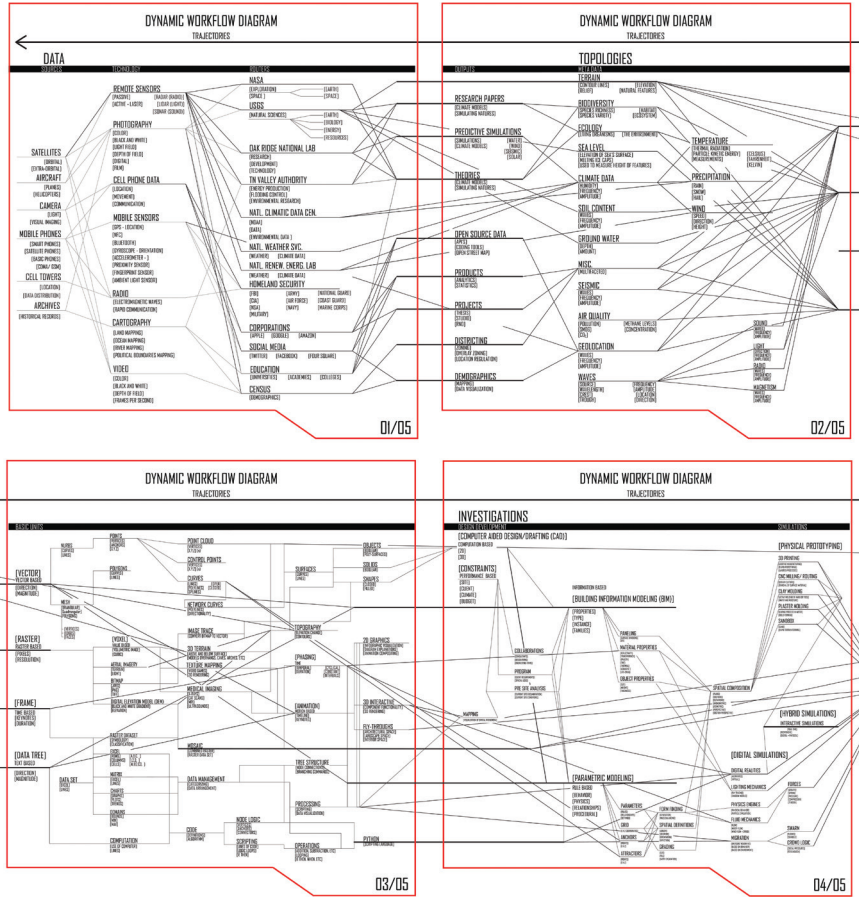
Figure 4: Enlarged segments of the workflow diagram. 1/5 outlines common sources of documentation streams. 2/5 outlines common output trajectories based on initial collected data. 3/5 maps common design visualization streams essential to generating design objectives. 4/5 maps popular digital tools used in formulating design iterations.

in Jordan. At the Al-Zaatari Refugee Camp site itself, no such infrastructure for provisions existed, and the formations of supply networks were based on emerging needs. Water, like many other necessities, is brought in daily to supply the refugee population.[33] Like most emerging territories, such forces tend to challenge the primary appropriations of site and their assumptions of exclusiveness and neutrality. Augmented by networks of information and communication, these forces acquire an accelerated level of dynamism that challenges the fundamentals of time and place.[34] Recursively occurring, expanding and contracting, based on population density, it is extremely difficult to survey and
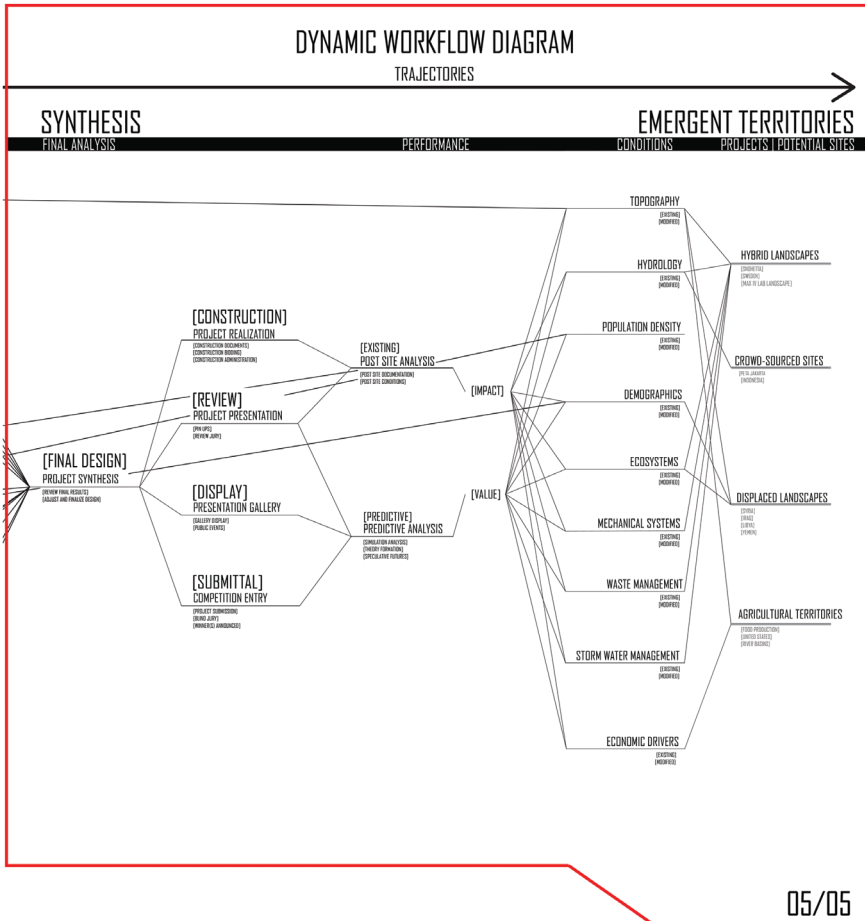
Figure 5: Enlarged segments of the workflow diagram (5/5). The segment shows a few examples of emerging territories such as refugee camps as it establishes a link to assess their impact and gauge paths to their documentation.

register the parameter of the forces affecting dynamic landscapes using traditional means. As exemplified by the Al-Zaatari Refugee Camp, such forces can appear in a matter of months and significantly change the locality of place and region. Furthermore, providing for such territories under the mandate of static authority structures is not feasible. For instance, although Jordan is the physical location of Al Zaatari, the country cannot take ownership of the camp or exert absolute authority over it. The camp is managed by multiple agencies and is provided for by many entities. In addition to the many parties involved in managing Al-Zaatari, the residents also have a significant agency in the camp, stemming from their ability to network digitally and communicate globally.

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In his book, *Militarizing the Environment: Climate Change and the Security State*, Robert P. Marzec describes the human impact on the environment that developed in tandem with technological advances.[35] Unprecedented access to computational power propelled a new era of enhanced visualization that is redefining our relationship to the landscape; surveillance and militarization are but a few issues of what he labels "technological domination" over the environment.[36] Although Marzec paints a bleak picture of the impact of such dominion – or at the very least the aspiration for one – it is worth noting that he makes it clear that, driven by the allowances of technology, our modern-day landscape is one of multiple definitions, and to a large degree is overexposed both figuratively and literally.[37] Under either scenario, whether the effects ushered in by a reign of technological dependency are dubbed "dynamic" or "overexposed," the reality remains as such: technology, its accessibility and dominance in the narrative of our living and resultant identity, is demarking an integral shift in our attitudes towards the landscape and built environment. As the realities and implications of this overlap are actively unfolding, the synthesis of both collected and projective data is essential to understanding the nature of such emerging contexts, particularly when the existence of many, hinges entirely on documentation and representation. The speed, duration, and complexity of these landscapes render traditional data agglomeration structures and documentation channels incompatible. This is due not only to registration inefficiency, but also to a dissemination disjunction that limits the monitoring and assessment of such landscapes. Furthermore, the documented and projected definitions of dynamic landscapes are sensitive to variances and mutations that develop upon their deployment into various venues. This condition is represented in the workflow diagram in Figure 3. Devising a documentation and dissemination matrix, the diagram attempts to highlight the channels that affect dynamic landscapes and underlie the emergence of their various territories. It also registers the data, which is often the only remnant of these contextual phenomena. The workflow diagram functions on three platforms. Firstly, a conceptual platform that examines the dynamic forces integral to the formation (whether temporal, constant, or cyclical) of emerging landscapes. Second, a quasi-database that archives various projects that investigate similar issues and employ relevant workflows/processes (these could be digital, conceptual, or hybrid workflows). Last, a practical platform that suggests software interfaces and work logics specific to the scope of landscape dynamics.

This multilateral deployment of data, research, and design concurrently differs from current practice structures that often delaminate the three. It is an informative tool for assessing the impact of various forces and repetitive use on the documented content. Such deployment yields tentative mutations in the documentation structure that are indicative of emergent landscape patterns and telling of implicit territorial logics. Accordingly, will the processing of dynamic landscapes begin to provoke distinct jurisdictions that transcend proximity in favor of more novel commonalities? This interrogation formulates the speculative framework for understanding *Emerging Territories*. As such, *Emerging*

Territories are subsystems that, once established, operate under new derivative logics, logics that are subject to physical properties and virtual handling.

The Collective Patterns of Emerging Practice

The shifting of contextual layers, their ambiguous boundaries and constantly emerging territories accelerated by technological advancements is progressively acquiring agency in everyday life. These parameters are challenging the fundamental concepts of architecture (such as program and context), and in effect, demand a renegotiation of the processes of design practice. Until now, practice has been reliant on prescribed workflows and predictable channels that governed the making of space from its conceptualization to actualization. In most instances, design tethers to computational logics. As a result, it often veers towards homogeneity, both in reaction to an impetuous context and in submission to the impact of technological accessibility and ease. The present computational trajectories of design and their impact on formal language are persistent. They are telling of trends that are likely to continue. Rather than accepting static workflows imposed by the commonality of tools and ease of access, it is imperative that we challenge those in response to the dynamic natures of contemporary settings and contextual criteria, while considering the collective patterns of emerging practice. Emerging patterns of practice tend to rely on unprecedented access to shared formal and analytical digital scripts and open-source information. They progressively evolve based on dissemination and use (example in Figure 6). Building on these patterns, traditional practice is bound to undergo a significant transformation as more and more designers choose this work modality, favoring communal sourcing over the conventional single-design approach and its absolute authorship.

The transition from the singular to the collective structure of practice that is dependent on open-sources of data and fluid communications mirrors the nature of dynamic landscapes. Both informed by robust user exchanges, the intersection of the two will be one of interesting implications. Furthermore, it will devise a lucid computational ecology while highlighting underutilized design paths that propel new design investigations and solutions (an illustration of this is seen in the Toolkit and Al-Zaatari Camp examples). While the issue of such hybrid processes is not fully known, they are an attempt to begin employing digital technologies beyond tooling, and advance a more contextually responsive and active approach to design.

In the article titled "We Will Be Making Active Form," architect and urbanist Keller Easterling, advocates for the implementation of what she calls "active form."[38] According to Easterling:

Active forms establish a set of parameters or capacities for what the organization will be doing over time. Active forms might describe the way that some alteration performs within a group, multiplies across a field, reconditions a population, or generates a network. The designer of active forms is designing
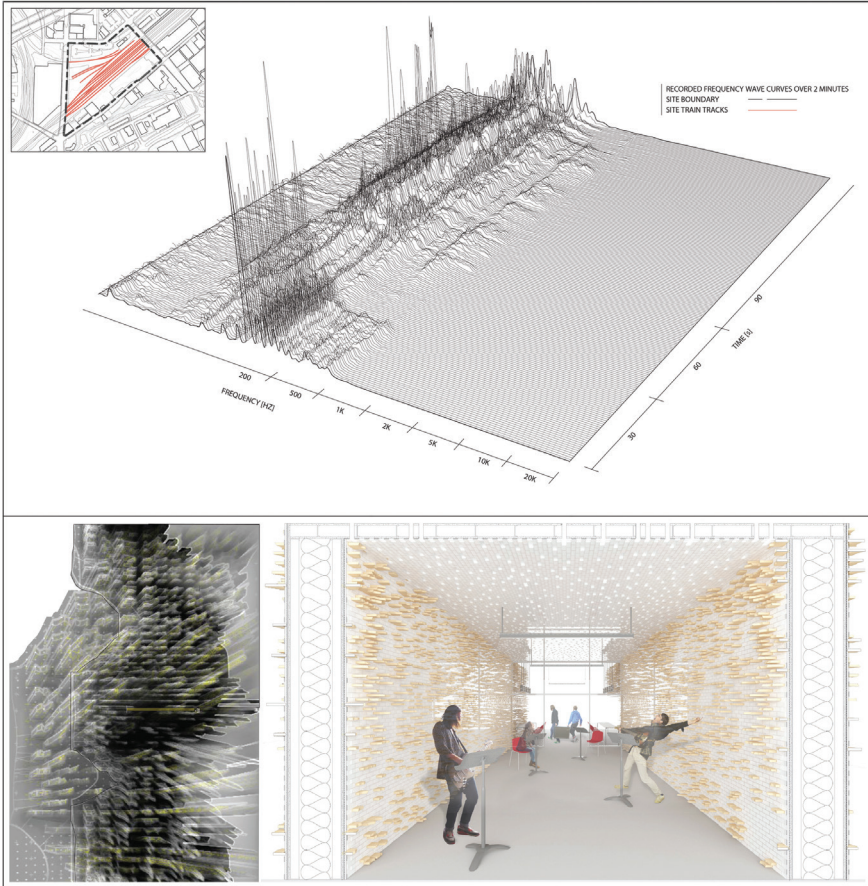
Figure 6: Top: work by a graduate landscape architecture student that focused on using visual coding platforms to define and analyze soniferous site properties. Bottom: student work by 3rd year interior architecture student. The design of an acoustical interior topography utilizing the same sound visualization script developed by Graduate Landscape Architecture student in left image. (Upper images by Paul Bamson, University of Tennessee Graduate Student, 2017. Lower images by Heather Shine, University of Tennessee Undergraduate Student, 2017.)

not the field in its entirety, but rather the delta or the means by which the field changes – not only the shape or contour of the game piece, but also a repertoire for how it plays[39]

It is precisely this activation as it relates to the dynamic formation of land-scapes and their requisite active forms that this research seeks to enable.

Dynamic Landscapes require active forms, and active forms are the organic product of a fluid practice. This necessitates an expansion of the designer's jurisdiction and a modification in the role she/he plays, from that of a maker to activator. When makers generate, the result is a multiplication (even over-population) of form, while activators prompt an intensification of impact, an intensification that is at once reactive and accommodating to evolving technologies and dynamic settings.

Using technology as a platform and medium to usher in big change is not new or unprecedented; we witnessed it happening in recent history in the Arab Spring movement, where data feeds played an integral role in altering the political structure of the region. We are seeing it architecturally today with a noted shift from a singularity of discipline to integration with areas such as film, virtual reality, and material science, for example. Demonstrated by practitioners (albeit not in the old sense of the word) such as Liam Young (Unknown Fields), David Benjamin (the Living), Nataly Gattegno (Future City Labs), architectural practice is acquiring a multiplicity of concentrations. We see similar trends in education as well. Many leading architecture and design colleges are integrating multidisciplinary platforms and crossover trajectories into their curricula. For example, Sci-Arc recently established SCI-Arc EDGE, Center for Advanced Studies in Architecture, and is currently offering many postgraduate degree programs "all devoted to investigations of architecture's twenty-first-century frontiers."[40] For years tactical shifts existed tangential to the mainstreams of practice. However, it is only now that we are seeing this trajectory come to fruition and begin to formulate a strategic change in design education and inevitably in the profession.

Conclusion

The overlap of digital and analog realities is giving way to hybridized settings, redefining the very politics of place and identity, and in turn, architecture. As association with the physical place degrades and conventional notions of tangible bearings no longer apply, displacement (and/or multi-placement) is steadily emerging as an operative contextual modality, demanding design responses that challenge one of the most fundamental parameters of architecture: context.

Today, contextual realities encompass an active structure linking places and people through complex reciprocal networks and technologies, which give rise to networked communities and smart localities. While the physical semblance of site has remained seemingly unchanged, the virtual layers of place are in constant evolution, rendering the state of our settings dynamic. Within such settings, territories emerge, having definitions and presence in multiple locations simultaneously, requiring new methods of documentation and assessment in order to conceive appropriate design responses. Under these circumstances, the conventional approaches towards architecture are in question. While some may see this as a loss of spatial agency when it comes to design,

these conditions present an opportunity to think of new architectural trajectories that are rooted and driven by the dynamism of multilayered landscapes and new approaches to practice.

Inherently dynamic, forced displacement presents rich emerging territories where design carries significant impact and facilitates a tangible reassessment of a refugee's narrative. Supported by robust information networks and active feedback loops, displaced landscapes as such can learn and inform the imminent futures of their residents specifically, as well as our collective human occupancy at large. Dynamic landscapes inevitably predicate the need for new modalities of practice that rethink the static nature of the built environment. Intertwined with direct implications for planning, policies, and development, dynamic landscapes are vital for a new architectural paradigm.

Notes

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8 Ibid., 5.

9 Ibid., 5.

10 A. Fard and T. Meshkani. "Geographies of Information," in *New Geographies 07*, ed. A. Fard, and T. Meshkani (Cambridge: Harvard University Press, 2015), 5.

11 Irit Katz, "Pre-Fabricated or Freely Fabricated," 18.

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36 Ibid.*,* 37.

37 Ibid.*,* 39.

38 Keller Easterling, "We Will Be Making Active Form," *Architectural Design* 82, no. 5 (2012): 58.

39 Ibid., 61.

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