NECSUS

The home screen as an anchor point for mobile media use: Technologies, practices, identities

Stefan Werning

Introduction

The notion of home as a place to return to has been particularly prominent (e.g. in popular culture) at times of 'abrupt change either within the social or physical environment or in the world of ideas'.[1] Abrupt change and concurrent sentiments such as disorientation and arbitrariness are not limited to material contexts but also apply characteristically to mobile media use, which is more dispersed and de-centralised than ever. This includes: geographic categories (most app stores include content from all over the world, often without clearly indicating its origin); temporal categories (smartphone use is less governed by patterns, occurs at any time of day, and can take from a few seconds up to several hours); social categories (popular mobile media applications and games like *Whatsapp* or *Pokémon Go* transcend socio-economic groups); and media formats (users are faced with a vast array of partially redundant hardware platforms and apps).

According to a 2010 study smartphones at the time already, on average, had 22 applications simultaneously installed – more than twice the number installed on traditional phones.[2] Thus, the abundance of mobile applications as well as numerous associations between them intensifies feelings of de-centeredness, and users try to compensate for that through a curated and personalised space that signifies 'home'. However, in other domains such as literature abundance or 'textual overload' has been a permanent condition[3]

that readers and writers learned to cope with. Thus, rather than adopting a dystopian view of this abundance it is important to analyze how exactly it manifests itself and how it is mediated.

For that purpose, one of the most relevant technologies to look at is the home screen of mobile operating systems like Android and iOS. Despite constant and rapid changes in other areas of smartphone development at least the outward appearance of the home screen has undergone remarkably few changes, a fact noted both in tech journalism[4] and by users themselves. Analyzing the use of the home screen and its changing functionality can improve our understanding of the role opposing concepts such as centeredness and structure play in mobile media use.

The argument draws on previous research exploring the epistemic connection between home and identity. Within cultural studies this connection has most prominently been investigated with regard to migration narratives, in which 'being at home' and 'leaving home' constitute dominant topoi, which have been iteratively manifested in various ways, thereby creating a 'mediated relation between being, home and world'.[5] Anthropological studies of domestic situations observe the construction of personal identity (within specific cultural contexts) through 'forgotten symbolism', as expressed in aspects such as window decoration, which are usually not 'conscious affairs' but rather 'related to and sustained in practice'.[6] Finally, previous research on a similar phenomenon, personal homepages, amply demonstrates the connection between users creating a virtual 'home' and performing their identity online. For instance, Miller and Arnold outline a psychological framework for 'understanding web page identity'[7] that draws on Goffman's distinction between 'back regions' and 'front regions',[8] i.e. on the use of digital technologies to negotiate between outwardly visible and consciously hidden aspects of self-presentation.

Analogously, this article substantiates the hypothesis that the changing design and use of the home screen reflects concurrent changes in mobile media identity. The perception of the home screen is framed by users' experiences with earlier technical constructs that used the material metaphor of the home,[9] for instance in the context of television. Particularly through the rapid increase in channels during the 1980s as well as short-form content like music videos, broadcast television has both overstrained and expanded viewers' capacities to 'orient themselves'. The teletext as an electronic programming guide[10] already provided a temporary 'stable ground' even though it

did not stop the broadcast. However, it also affected the contemporary perception of the 'home of the future',[11] and thus was not just viewed as a system for the dissemination of news but also as a potential infrastructure for other developments such as the rise of home computing.[12]

So far, the home screen arrangement has been studied primarily in terms of usage behavior with the goal of streamlining the user experience. For instance, based on a comparative analysis of more than 130 screens, Böhmer and Antonio identify five patterns of how users group icons such as functional relatedness but also aesthetic concepts such as color or visual relation to the background image.[13] Building on this existing research, this article outlines a media and culture studies perspective on the home screen, focusing on the notion of identity performances and affordance changes.

The home screen between space and practice

Home as a concept has traditionally been defined primarily in spatial categories; indeed, both personal and cultural identity are very closely linked to place identity, as evidenced by motifs such as 'losing one's place'.[14] However, these definitions of home also implicitly acknowledge an element of practice. For instance, Buttimer argues that sense of place in all living beings is defined by 'home' and 'horizons of reach', i.e. by the 'lived reciprocity of rest and movement', which implies a constant, active negotiation between inward and outward orientation.[15] Accordingly, in the case of mobile media, the characteristic 'exploratory' mode of use afforded by the multiplicity of apps at the user's disposal cannot be disassociated from the complementary affordance of returning to the home screen, usually with the press of a button. Following this dialectic, the goal of this study will be to conceptualize the home screen of the smartphone as a hybrid concept between place and practice.

While these 'home screens' refer to software rather than hardware, television scholars have already investigated how the screen as a material object can transform the perception of spaces, including those referred to as home. In her social history of television in postwar America, Lynn Spigel provides ample evidence of how the television screen was 'bringing the world into the home',[16] and how, fuelled by furniture manufacturers and women's home magazines, the 'ideal home theatre' was turned into a 'perfectly controlled

environment of mechanized pleasures'.[17] Moreover, Hartmut Winkler addressed the ontological hybridity of the television screen between program and space, arguing that particularly the emergence of dedicated channels for shopping and sports as well as hybrid channels like the British *Lifestyle* (1985-1993) offered an experience that defied the traditional categories of a program. Due to their repetitive structure, he describes them as a 'place' [Ort] to return to with a distinct 'symbolic topology' rather than as a 'sequence of events' [Ereignis] or a curated program.[18] Contrary to previous acceleration tendencies in televisual formats, channels like *Lifestyle* dedicated a lot of time to mundane activities such as polishing the hood of a car or painting wooden boards in advertising programs. Moreover, they produce familiarity by offering the same 'utility value'[19] [Gebrauchswert] within formally stable programs at fixed intervals. Therefore, these channels can also be included in the aforementioned overview of 'home metaphors' in previous media contexts.

The home screen, on the other hand, had been constructed from the get-go as a 'symbolic topology'. Most evident is the rectangular grid as the central organizing principle. While app arrangement in early versions of iOS was almost quadratic, the current screens usually opt for a page-like layout with 4×6 icons.[20] Moreover, it operates with a distinction between on-screen and off-screen space, being spread across different screens that are symbolically organised in a spatially congruent way. Yet, with the addition of new functionality (comparable to the addition of shopping and sports channels to the dispositif of television), the home screen gradually became a conduit for distinct practices. Over the past years these practices became more and more acknowledged as a coherent phenomenon in public discourse,[21] and users began to conduct them more self-reflexively. As a consequence, for many users the 'place' character of the home screen gradually became less relevant compared to emergent customization and sharing practices.

Customising the home (screen)

As smartphones became more and more pervasive the home screens afforded conventionalized practices that provided a sense of stability and basic orientation. Similar to how watching television (e.g. switching to one's favorite channel) became a 'routine event […]' and part of the 'invisible history of everyday life'[22] in the 1940s and 1950s, these practices, such as tailoring the

home screen to one's own preferences, became a shared experience that created a sense of connectedness among groups of smartphone users.

With the launch of touchscreen-based devices after 2007, the form factor of mobile phones became almost completely unified.[23] At the same time, customising smartphone cases became a popular way to counter this standardization.[24] For instance, Jung argues that, much more than with previous media technologies, 'users decide what a smartphone is for themselves, rather than just adopting a given product', and that the deliberate use and customisation choices exhibit a hierarchy of 'consumer knowledge' which includes the expression of attributes, consequences, and ultimately values.[25]

From that angle, the customisation of a smartphone home screen and its assessment in aesthetic terms[26] is comparable, for instance, to historical practices of designing and photographing one's home, through which 'families can *produce* representations of themselves'.[27] Ethnographic research on more recent practices, by which residents maintain and decorate their homes, frames them more specifically in terms of consumerism and consumption theories.[28] In contrast to its earlier, primarily utilitarian understanding as a by-product of production, scholars in the 1990s reassessed consumption as a cultural act, a form of communication, and, in light of post-modern consumerism, as a projection of 'dreams, images and pleasures'.[29] Accordingly, home customisation is also associated with 'symbolic values'[30] that characterise a residential neighborhood or the relation of an individual household towards that environment.

Historically, interior decoration of the home has been traditionally viewed as an oppositional practice, primarily for women, who would explore the creative opportunities of the 'domestic arena'[31] that contemporary society had assigned to them. Indeed, it became a site of actual social transformation with the advent of professionalised interior decoration that offered concrete business opportunities and, thus, social agency. These observations are only partially comparable to user customisation of their home screens, mostly due to profound differences in the social context and materiality of these practices, and indeed while in both cases the idea of 'appropriating' the home is visible the concrete implications are different. Literature on customising digital technologies is still scarce, but existing research on how users personalise a sports watch[32] or an online news aggregator[33] highlight the sense of autonomy and agency (or at least the desire to communicate these qualities towards others) as driving forces.

To further qualify this experience, however, it appears useful to more closely investigate how, for many mobile phone users, customising the home screen of their devices becomes playful performance of individual and social identity. For instance, Frissen et al. propose a basic grouping of identity dispositions according to Roger Caillois' categories of play; the second category, simulational identity (mimicking and performing identity categories), is particularly relevant here.[34] According to the authors' definition it 'expresses itself in theatrical performances rather than in (romantic) inwardness'[35] but it can also refer to the public, experimental adoption or imitation of characterising traits. One popular manifestation of this identity type is the aspiration of many users to emulate the aesthetic 'standards' established by commercial companies like Apple. For instance, a popular trope with iOS 7.0 is the combination of nature imagery (containing a lot of depth and texture) in contrast with colorful and highly stylised 'flat' icons rather than skeuomorphs – a style that has been imitated by users in various ways.[36]

Another aspect of play and games in home screen customisation is the reveling in arbitrary constraints. For example, Suits argues that in games 'the rules prohibit more efficient in favor of less efficient means, and [...] such rules are accepted just because they make possible such activity'.[37] One example of how users derive pleasure from these constraints (and the collective efforts to overcome them) is the choice of a background picture and making that 'work' with the rectangular grid of icons. Online collections of well-designed home screens provide ample evidence of this pattern, for instance demonstrating how users visually semanticise the 'dock area' at the bottom of the screen or incorporate the ubiquitous date and time widget in different ways.[38]

While iOS provides numerous customisation tools out of the box, jailbreaking the iPhone and/or installing custom software for home screen decoration exhibits additional facets of identity construction. Even though they remove some constraints, these 'advanced' forms of use still require creative use of available materials, thereby encouraging a 'bricolage' approach.[39] One example are the iBlanks: custom invisible (i.e. empty) icons that seemingly allow for overcoming the rectangular grid and enable icon placement as a novel playing strategy.[40] Moreover, they facilitate expressing different values such as the notion of 'mastery', i.e. of reclaiming control over the device and (with Frissen et al.) of communicating their competitive identity.

Sharing the home screen

Following up on the metaphor of the game, home screen customisation as an expression of playful identities is primarily a multiplayer game, i.e. a social activity in which comparing and discussing designs is often as important as creating them. An important prerequisite for collective customisation is the sharing of screenshots, which has become an increasingly pervasive cultural practice,[41] supported by the creation of dedicated platforms. For instance, Clive Thompson documents this development in a column published by *Wired Magazine* in March 2015, calling it 'photography for life on the screen'.[42] One platform for home screen sharing is *#homescreen*,[43] which offered a tool[44] that streamlines home screen sharing and a website to archive the screenshots. The parallel display of multiple user-submitted screens (starting with the most recent ones) creates an intuitive sensitivity towards patterns in other users' home screen arrangements and, at the same time, frames this comparative disposition itself as inherently plausible. The platform affords playful identity performance in several ways. For instance, it invites users to discover patterns in other users' profiles. With Caillois, this can be considered a rather paidic, i.e. a rather improvisational than teleological, form of play since the 'actual' profiles are not revealed and *#homescreen* thus provides no direct feedback on the accuracy of these guesses. However, the detail view of every home screen does show an overview of the identified apps paired with a percentage of how many other iOS home screens (in the dataset) also contain that app.[45] These data provide 'players' with cues to refine their cognitive model of the other user's impression management.[46] However, they do not provide conclusive 'evidence'; thus they maintain but also temper the uncertainty of the process, thereby making it engaging as a 'game'.[47]

There are several platforms like *#homescreen* currently active. For instance, *Homescreen.me*[48] takes a more professional approach and *MyColorScreen*[49] focuses most on social functionality and forum comments. Finally, several tech blogs formalise this usage practice through repeated activities such as 'Show off your home screen day',[50] thereby trying – more or less successfully – to institutionalise home screen sharing as a ritualised practice among related phenomena such as #screenshotsaturday for game development (which, at the time of writing, has been active for almost 300 weeks) or #FlashbackFriday on *Instagram*.

The latter two examples provide access to user discourse on home screen sharing, which could only cursorily be taken into account within the scope of this article. However, the observations above should provide a basic framework to identify and discuss other salient aspects that had to be omitted at this point. Among those, tutorials play a particularly important part, primarily because they help tie together customisation and sharing into one cyclical process. For instance, Müller studied tutorials with regard to quality discourses, i.e. in terms of how they bridge the gap between amateur media creation on YouTube and the ideal type of 'professional' online video.[51] The same patterns also apply in tutorials on home screen curation, but, even more importantly, these texts are relevant as mechanisms of 'proto-cological control' (using a term by Alexander Galloway as applied by Niederer and van Dijck to Wikipedia as a socio-technical system[52]). From that angle, the tutorials stabilise the discourse by: a) codifying established knowledge within the community; b) encouraging introspection, i.e. facilitating a systematic look at one's own theming/customisation practices; and c) establishing discursive 'standards' that can be adopted or challenged by others to catalyse user interaction.

The 'home screen-as-dashboard': A metaphor of mobile media use?

Apart from the game, a second metaphor that characterises the home screen and its hybrid state between space and practice is the dashboard. Over time, added functionality has arguably turned the home screen into a dashboard for mobile media use; the recent changes in iOS10 and the left sub-screen (with its overview of contextual data from different apps) in particular substantiate this perception.

The term 'dashboard' traditionally refers to the control panel in the front of a car, but the term has been adapted for use in different context. Most basically, it can be regarded as an apparatus that aggregates (often real-time) data from multiple sources in one place. It thus affords and – as a consequence – arguably encourages cross-referencing these data sources and, thereby, suggests a more 'complete' overview of a given phenomenon (e.g. a website or a business). Cultural studies research on dashboards as mediatised organisational heuristics has mostly focused on city planning[53] and on how software creates a distinct episteme of a city as a conglomerate of interrelated

indicators.[54] With the 'home screen-as-dashboard', mobile phones arguably foster a similar approach towards 'managing' one's mediated lives.

Like a game, the dashboard as a hybrid form combines aspects of spaces and practices. It organises information spatially but, through its 'realist epistemology',[55] aims to become 'invisible' from the user's perspective, 'capturing and communicating the city as visualised facts', and thereby institutionalises a particular set of usage practices. These practices focus on 'visually compar[ing] and combin[ing] aspects of the city from the weather to the operation of transit systems to "what is trending on Twitter"'.[56] In the context of the home screen, the dashboard is relevant first and foremost because it applies an organisational heuristic from professional contexts to (mostly) private media use; it provides mostly quantified data (current temperature, minutes until next appointment, etc.), and thus substantiates the perception that media use can and must be 'managed' by showing users how effective they are and how much remains to 'be done'. The dashboard itself encourages ludic forms of use in that it creates multiple, sometime overlapping feedback loops for the user/player to keep track of. In that sense, it is comparable to the dispositif of early digital games like *Pong*, which, according to Pias, continually provide input to 'test' for the player's presence, thereby making them part of the device itself.[57] Similarly, the home screen dashboard continually presents push notifications from connected apps that require input, 'test' for the presence of the user, and need to be 'processed'.

This view of the home (screen) as a 'command center' is not exclusive to digital media but has already been implied in earlier home-related discourses. For instance, Putnam describes the concept of the 'modern home', which emerged between the 1920s and 1950s, and its contemporary perception as a 'technical terminal'.[58] Built around a 'technical core', the modern house combined different electronic affordances and life support systems. This paradigmatic configuration would also be reflected by a 'decorative syntax'[59] that differed from 19th century principles like hierarchy and symmetry and reflected a more modernist aesthetic, with which it would become directly associated in the view of the public. Rather than just a technological development, this concept of 'home' became the locus of a new social design, in which 'professional success became more dependent on education than on family contacts',[60] not least because it required an unprecedented collaboration between state regulation and engineering developments. Similarly, taking into account the on-going 'smart home' debate and the increasing interoperability between connected home appliances, the dashboard approach

is clearly not limited to the home screen but gradually finds its way into our brick-and-mortar homes as well.

A historically diachronic affordance analysis on the home screen in transition

To understand the changing perceptions of the Android and iOS home screens, the second part of the argument will pursue a comparative software studies approach that outlines how they have evolved in terms of affordances, material metaphors, and rhetoric, often reflecting public discourse around mobile phone use in general.[61] While the home screen appears as a rather basic layer of most (mobile) operating systems, it is in fact an assemblage of different design affordances bridging both hardware and software. The 'home button' on the iPhone can be considered a hardware affordance in that it is the only easily visible button on the iPhone and, thus, materially substantiates the centrality of the home screen. For instance, Vanhemert paraphrases its impact on the device itself as follows: '[n]o matter what you were doing on your phone, if you pressed the thumb-sized disc below the screen, you were safely shuttled home.'[62] While this paper focuses on mobile phones, it is important to note that wearable devices like the Apple Watch replaced the button with a 'digital crown', which operates like a dial and allows users to zoom in and out. This material change again demonstrates the interrelatedness of hardware and software affordances. The limited screen size in conjunction with the button replacement necessitated required several 'sequential affordances'[63] like scrolling and zooming, which were thus added to the spatial 'vocabulary' of the watchOS home screen. For instance, fully zooming in opens the currently centered app, thereby suggesting a spatial continuity between the home screen and the screen space of individual apps.

Moreover, while the outward appearance of the iOS and Android home screens appears fairly consistent, the functionality of the underlying applications (on iOS, the home screen is controlled by a dedicated app called Spring-Board) is constantly expanded and tweaked. To acknowledge these changes, this chapter will propose a historically diachronic perspective on affordance analysis. Regularly, affordance analyses of software focus on a 'status quo', a particular version that is posited as representative. For example, Lev Manovich already acknowledges the changes in the tool palette of Adobe Photoshop.[64] Yet, his analysis then only includes affordances that have been

present in the software for a long time, such as the 'wind' filter[65] or the image layers and blend modes.[66] However, with apps and mobile operating systems, this monolithic view on software affordances is not really applicable. Several authors already outline approaches towards a comparative affordance analysis. For example, Wang and Woo compare affordances of blogs and online forums that facilitate learning processes.[67] Moreover, Papacharissi compares *Facebook*, *LinkedIn*, and the members-only social network *ASmallWorld* in terms of design choices that affect the structure of the respective virtual social space.[68] Finally, in my work I analyze the different ways in which software affords and re-semanticises the use of the touch screen through standardised gestures.[69] Due to the ephemerality of apps and mobile operating systems and the intrinsic focus on the respective latest version, the observations on the home screen below are intended to demonstrate how comparing the addition, modification, or removal of specific affordances within the same application can produce insights that more static concepts of software fail to address.

As affordance analysis is primarily concerned with design choices and can only make informed guesses about their impact on individual user behavior, this method can and will not address the intentions of the developers nor the interpretation of individual users, and both are secondary for the argument at hand. Therefore, the corpus comprises affordances pertaining to the home screen from iOS1.0 and Android 1.0 up to the most recent versions as of writing (iOS10.1 and Android 7.0). In some cases, references to online user comments are included to illustrate concrete use cases; these are not generalisable but can serve as a reference point for a more systematic media ethnographic perspective on the home screen.

Stabilising the home (screen) through constant change

Early affordance changes to the home screen were intended to enable the transition of the iPhone from a few system apps to a multiplicity of concurrently-installed applications, including rarely used or even deliberately redundant ones. iOS 1.1.3 allowed users to rearrange app icons or delete web site links and web clips from the home screen through the so-called 'wiggle mode', which prepared opening up the operating systems for external developers with iOS2. The addition of a persistent search function with iOS3 fulfills a similar purpose but already includes a key epistemic difference: rather

than relying solely on spatial contiguity, it allowed users to access applications through other associations like the name or last date of access.

The constant but granular tweaking of the home screen can be regarded as an affordance in and of itself, which only becomes observable from an inherently diachronic perspective. For a long time, the tweaks have stabilised the 'authority' of the home screen as the dominant metaphor of mobile media use, which can be optimised but for which no viable alternative exists. In an article for *The Atlantic*, Bogost argues, taking the 'tweaking' of the Facebook News Feed algorithm as an example, that this common practice in platform development 'highlights the black-boxed nature of the software'.[70] In fact, according to Bogost, the rhetoric of algorithmic tweaking suggests that journalists and users effectively 'elevat[e] those services to the divine rank of gods'. Even though Bogost does not explicitly make that point, it can be argued that the practice of algorithm updates and their public communication afford this fetishisation since only a few people have access to the source code as 'ur-text', even though many try to re-construct it and only selective interpretations are publicly communicated on a regular basis. This precarious textual status therefore appears reminiscent of the exegesis of religious documents and related discourses in biblical studies.[71] Analogously, the tweaking of the home screen has long cemented its role as the indisputable navigational paradigm of mobile media use.

Home: From (screen) space to (quasi-)social situation

This paradigm, however, is currently being challenged, and retracing the systematic change in affordances provides a better understanding of how concurrent notions of 'home' in mobile media use change with it. Already in the early 2010s, attempts at making home screen interaction more personalised were discernible. For instance, Shin, Hong, and Dey formulated an approach towards predicting mobile application use and developed a dynamic home screen application that would show the most 'likely' use apps first. The system was advertised as significantly 'outperform[ing]'[72] traditional solutions. However, the first of two big steps towards transforming the concept of home in mobile media is the gradual positioning of messenger apps as a replacement for the home screen, the front end of the devices. For instance, the *Messages* app on iPhones, launched in September 2016, included 3rd-party compatibility, which enabled users to access the functionality of all participating

apps through text messages. In turn, this would frame apps (and, in a second step, the companies behind them) as potential 'contacts' that gradually become more responsive over time as they expose more of their functionality to the *Messages* app. From a platform perspective,[73] the increased programmability of the messenger makes it a separate ecosystem within iOS; users will even be able to install dedicated apps without having to open the traditional app store.[74]

Thus, the idea of the virtual 'home' as a curated space gradually shifts towards the metaphor of an ongoing conversation, in which other users, but also apps and services, temporarily appear as 'interlocutors'. Unsurprisingly, the current technological imaginary of the Messenger as quasi-operating system is extremely commercialised. Sample applications include ordering a table at a restaurant or simply transferring money through integration with Square Cash, all via pre-defined messages. Another key characteristic is the competition between different platforms, all of which try to establish their messenger app as the new hub for mobile media use. For instance, Facebook is currently preparing its Messenger for that purpose by, seemingly paradoxically, introducing 'a new twist on a familiar concept: the home screen'.[75] While Facebook does not have its own operating system or hardware, the amount of time users spend on the platform essentially puts it in a similar position as Apple and Google. As a consequence, rather than revolving around one home screen, mobile media use will oscillate between several conversations taking part in different 'rooms'. Even smaller, more focused messenger services like Slack are adopting a similar strategy: '[t]he chat app as operating system is an idea gaining currency in the tech industry right now, thanks in large part to the success China's *WeChat* has seen as a platform for apps.'[76]

The final step in the transformation of the home screen is the inclusion of AI assistant-like chat bots into the conversation. For instance, Facebook is integrating its virtual assistant M into the Messenger app[77] and Microsoft is gradually bringing bots like Tay and Cortana into the Skype chat function.[78] Crucially, while the home screen for the most part afforded actively curating one's own environment/identity, the AI assistant replaces that with algorithmically framed self-perception: '[i]f you fire up NYT Now each morning right when you wake up, iOS 9 will endeavor to note the habit and make the app available in the morning as a shortcut on the lock screen.'[79] Thus, rather than proactively designing one's space, the messenger as 'home' primarily affords (re-)assessing one's own identity through algorithmic suggestions

such as people the user is likely to contact or apps that they might want to open at a given point in time.

To conclude, the (re)design of the 'home screen' is a struggle for establishing a dominant episteme of digital media use and the changing affordances reflect the shifting status of 'home' or 'centeredness'[80] in mobile media use. The 'home screen' of the Google website revolved around the search function; for Apple it was the 'home screen' as an orderly display of the most-used apps (downloaded from within its own walled-off ecosystem), and with Facebook at the forefront, the messenger is taking the center stage but relativises the notion of centrality itself. While the space as metaphor implies clear dimensions and facilitates orientation, the alternative metaphor of the conversation has no discrete boundaries, neither in (virtual) space nor time, and users accept the notion of 'getting lost' in a conversation not as a crisis but as a permanent state.

The home screen as a shared idea (Outlook)

As the two-fold analysis has shown, the home screen has served as an 'anchor point' for users' mobile media activity throughout the years, and while smartphone use has become more diverse the use of the home screen is surprisingly constant. This can even apply in extreme cases; for instance, Barbara Dabrowska and Yahya Alous asked several refugees from Pakistan, Jordan, Syria, and other Middle-Eastern countries to share and talk about the home screens of their smartphones,[81] which many describe as their most valued possession. Most users in that sample, from teenagers to elderly couples, decorated the screen with pictures of family members they had to leave behind, and one with a picture from the plane, as a symbolic reaffirmation of the journey. One home screen shows a photo of the phone owner 'at home' wearing a traditional Pashtun dress; thus, the screen helps mediate the transition from his 'old self' to the new.

Despite these similar use cases, rhetoric related to the home screen on tech blogs indicates its ambiguity as a concept. Due to its seemingly anachronistic stability as part of mobile operating systems, it has been described with a mixture of reverence and mockery, e.g. as a 'hallowed place'.[82] While initially the home screen was 'the iPhone's face to the world', its fixed structure – which at first was deemed liberating because it provided orientation – has recently been interpreted as rather constraining, as 'these days, the

smartphone experience is just too fast and fluid to be pinned to a grid'.[83] The disproportionate interest in the home screen as a mirror of the owner's personality is referenced in similar terms, e.g. as a 'cult of the home screen'.[84]

Quotations from the early 2010s, when the home screen was at the peak of its popularity, indicate how users perceived it as an epistemic bridge that turned the smartphone into a veritable extension of its owner in a McLuhan-esque sense. For instance, one journalist argues that it provides 'quick access to the apps that will help you make the most of you, not the device'.[85] This perceived connection also gave rise to manifold discussions about 'mastering the [...] home screen'[86] as a means of seamlessly incorporating mobile media technology into the users' identity construction. Despite its technical simplicity, the home screen thus displays a surprising degree of ambiguity and multivalence, and this ambiguity is the primary reason why the home screen as a shared idea will take a lot longer to be 'replaced' than as a technology.

Author

Stefan Werning is an assistant professor for new media and game studies at Utrecht University, where he founded the Utrecht Game Lab (2014) and co-coordinates the graduate program Game Research. He has previously been an assistant professor for digital media at the University of Bayreuth (2009-2014), at the University of Bonn (2004-2006), and at the Fraunhofer Institute Media Communications in St. Augustin (2002-2004). While completing his PhD thesis on game technologies and concepts in the military entertainment complex, Werning worked in the digital games industry, most notably at Nintendo of Europe (2007-2009).

References

Ahmed, S. 'Home and Away: Narratives of Migration and Estrangement', *International Journal of Cultural Studies*, 2 (3), SAGE Publications, 1999: 329-347.

Batty, M. 'A Perspective on City Dashboards', *Regional Studies, Regional Science*, 2 (1), Routledge, 2015: 29-32.

Bogost, I. 'Go Tweak Yourself, Facebook', *The Atlantic*, April 2016: http://www.theatlantic.com/technology/archive/2016/04/go-tweak-yourself-facebook/480258/.

Bogost, I. and Montfort, N. 'New Media as Material Constraint: An Introduction to Platform Studies', *1st International HASTAC Conference, Duke University*, 2007: http://bogost.com/downloads/Bogost Montfort HASTAC.pdf.

Böhmer, M. and Krüger, A. 'A Study on Icon Arrangement by Smartphone Users' in *CHI '13 Proc. the SIGCHI conference on human factors in computing systems*. New York: ACM Press, 2013: 2137-2146. doi:10.1145/2470654.2481294.

Bolter, J. *Writing space: Computers, hypertext, and the remediation of print*. New York: Routledge, 2001.

Buttimer, A. 'Home, Reach, and the Sense of Place' in *The human experience of space and place*, edited by A. Buttimer and D. Seamon. Abingdon- New York: Routledge, 2015: 166-188.

Chen, Y., Bentley, F., Holz, C., and Xu, C. 'Sharing (and Discussing) the Moment: The Conversations That Occur Around Shared Mobile Media' in *Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services – Mobile HCI '15*. New York: ACM Press, 2015: 264-273.

Cieraad, I. *At home: An anthropology of domestic space*. Syracuse: Syracuse University Press, 2006.

Costikyan, G. *Uncertainty in games*. Cambridge: The MIT Press, 2013.

Frissen, V., Lammes, de Lange, S., de Mul, J., and Raessens, J. 'Homo Ludens 2.0: Play, Media, and Identity' in *Playful identities: The ludification of digital media cultures*. Amsterdam: Amsterdam University Press, 2015: 9-52.

Gaver, W. 'Technology Affordances', *Proceedings of the SIGCHI Conference on Human*, 1991: http://dl.acm.org/citation.cfm?id=108856.

Gram-Hanssen, K. and Bech-Danielsen, C. 'House, Home and Identity from a Consumption Perspective', *Housing, Theory and Society*, 21 (1), 2004: 17-26.

Graziplene, L. *Teletext: Its promise and demise*. Bethlehem: Lehigh University Press, 2000.

Haberman, V. 'Designing for Diverse Users – a Case Study on Touchscreen Smartphone Customization', Georgia Institute of Technology, 2012.

Johnson, D. *Media franchising: Creative license and collaboration in the culture industries*. New York: NYU Press, 2013.

Jung, Y. 'What a Smartphone Is to Me: Understanding User Values in Using Smartphones', *Information Systems Journal*, 24 (4), 2014: 299-321.

Kitchin, R., Lauriault, T., and McArdle, G. 'Knowing and Governing Cities through Urban Indicators, City Benchmarking and Real-Time Dashboards', *Regional Studies, Regional Science*, 2 (1). Routledge, 2015: 6-28.

Louridas, P. 'Design as Bricolage: Anthropology Meets Design Thinking', *Design Studies* 20 (6), 1999: 517-535. doi:10.1016/S0142-694X(98)00044-1.

Manovich, L. *Software takes command*. New York-London: Bloomsbury, 2013.

Miller, H. and Arnold, J. 'Self in Web Home Pages: Gender, Identity and Power in Cyberspace' in *Towards cyberpsychology: Mind, cognitions and society in the internet age*, edited by G. Riva and C. Galimberti. Amsterdam: IOS Press, 2003: 73-94.

Moore, C. 'Screenshots as Virtual Photography' in *Advancing digital humanities: Research, methods, theories*, edited by P. Arthur and K. Bode. London: Palgrave Macmillan, 2014: 141-160.

Müller, E. 'Where Quality Matters : Discourses on the Art of Making a YouTube Video' in *The YouTube reader*, edited by P. Snickars and P. Vonderau. Stockholm: National Library of Sweden, 2009: 126-138.

Niederer, S. and van Dijck, J. 'Wisdom of the Crowd or Technicity of Content? Wikipedia as a Sociotechnical System', *New Media & Society*, 12 (8), 2010: 1368-1387.

Nurkka, P. '"Nobody Other than Me Knows What I Want": Customizing a Sports Watch' in *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 8120 LNCS:384–402. Springer Berlin Heidelberg, 2013. doi:10.1007/978-3-642-40498-6_30.

Papacharissi, Z. 'The Virtual Geographies of Social Networks: A Comparative Analysis of Facebook, LinkedIn and ASmallWorld', *New Media & Society*, 11 (1-2), 2009: 199-220.

Pias, C. 'The Game Player's Duty: The User as the Gestalt of the Ports' in *Media archaeology: Approaches, applications, and implications*, edited by E. Huhtamo and J. Parikka. Berkeley: University of California Press, 2011: 164-183.

Putnam, T. '"Postmodern" Home Life' in *At home: An anthropology of domestic space*, edited by I. Cieraad. Syracuse: Syracuse University Press, 2006: 144-155.

Roizen, J. 'Teletext in the U.S.A.', *SMPTE Journal*, 90 (7), 1981: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=7242540.

Shin, C., Hong, J., and Dey, A. 'Understanding and Prediction of Mobile Application Usage for Smart Phones' in *Proceedings of the 2012 ACM Conference on Ubiquitous Computing – UbiComp '12*. New York: ACM Press, 2012: 173-182.

Sparke, P. 'The Domestic Interior and the Construction of Self: The New York Homes of Elsie de Wolfe' in *Interior design and identity*, edited by S. McKellar and P. Sparke. Manchester: Manchester University Press, 2004: 72-92.

Spigel, L. *Make room for TV: Television and the family ideal in postwar America*. Chicago: University of Chicago Press, 1992.

Suits, B. 'What Is a Game?', *Philosophy of Science*, 34 (2), 1967: 148-156.

Shyam, S. and Marathe, S. 'Personalization versus Customization: The Importance of Agency, Privacy, and Power Usage', *Human Communication Research*, 36 (3). Blackwell Publishing Ltd, 2010: 298-322.

Thompson, C. 'The Most Important Thing on the Internet Is the Screenshot', *Wired Magazine*, 2015: http://www.wired.com/2015/03/clive-thompson-6/.

Tov, E. *Hebrew Bible, Greek Bible and Qumran: Collected essays*. Tübingen: Mohr Siebeck, 2008.

Tseëlon, E. 'Is the Presented Self Sincere? Goffman, Impression Management and the Postmodern Self', *Theory, Culture & Society*, 9 (2), 1992: 115-128. doi:10.1177/026327692009002006.

Tuunanen, J. and Hamari, J. 'Meta-Synthesis of Player Typologies' in *Proceedings of Nordic Digra 2012 Conference: Local and Global – Games in Culture and Society*, 2012: http://www.digra.org/dl/db/12168.40312.pdf.

van den Boomen, M. 'Interfacing by Iconic Metaphors', *Configurations*, 16 (1). The Johns Hopkins University Press, 2008: 33-55. doi:10.1353/con.0.0045.

Vanhemert, K. 'Apple Is Going to Kill the Home Screen', *Wired Magazine*, May 2015: www.wired.com/2015/06/ios9-proactive-apple-is-going-to-kill-the-home-screen/.

Wang, Q.Y. and Woo, H.L. 'The Affordances of Weblogs and Discussion Forums for Learning : A Comparative Analysis', *Educational Technology*, 48 (5), 2008: 34-38: http://eric.ed.gov/?id=EJ807450.

Werning, S. 'Swipe to Unlock. How the Materiality of the Touchscreen Frames Media Use and Corresponding Perceptions of Media Content', *Digital Culture & Society*, 1 (1), 2015: 55-72.

Williamson, J. 'Family, Education, Photography' in *Culture/power/history: A reader in contemporary social theory*, edited by N. Dirks, G. Eley, and S. Ortner. Princeton: Princeton University Press, 1994: 236-244.

Winkler, H. 'Vom Programm Als Ereignis Zum Programm Als Ort. Zeit Und Linearität Im Fernsehen Und in Den Digitalen Medien', *Kinoschriften*, 4, 1996: 45-54. http://homepages.uni-paderborn.de/winkler/linear3.html.

Notes

[1]   Buttimer 2015, p. 166.

[2]   Shin & Hong & Dey 2012, p. 173.

[3]   Bolter 2001, p. 83.

[4]   Vanhemert 2015.

[5]   Ahmed 1999, p. 331.

[6]   Cieraad 2006, p. 4.

[7]   Miller & Arnold 2003, p. 79.

[8]   Ibid., p. 75.

[9]   van den Boomen 2008.

[10]   Roizen 1981.

[11]   Graziplene 2000, p. 15.

[12]   Ibid., p. 43.

[13]   Böhmer & Antonio 2013, p. 2140.

[14]   Buttimer 2015, p. 167.

[15]   Ibid., p. 170.

[16]   Spigel 1992, p. 106.

[17]   Ibid., p. 108.

[18]   Winkler 1996, p. 50.

[19]   Ibid.

[20]   Android introduced an optional auto-rotate feature that affords a landscape view of the home screen in January 2016; cf. e.g. http://cnet.co/2acEKDz.

[21]   These shifts in perception are limited in their generalisability and would require a more thorough diachronic analysis of public discourse than is possible here; tech websites like TheNextWeb (cf. e.g. http://thenextweb.com/apps/2011/04/24/theres-no-place-like-home-screen-exploring-the-philosophy-of-app-placement/) can provide cursory evidence, but only represent a particular group of smartphone users.

[22]   Spigel 1992, p. 2.

[23]   Haberman 2012, p. 2.

[24]   Image sharing platforms like Pinterest fueled this development by acting as an attention economy, within which categories for 'successful' customisation could emerge over time; cf. e.g. https://nl.pinterest.com/search/pins/?q=iphone%20cases.

[25]   Jung 2014, p. 303.

[26]   Cf. e.g. archives like http://mycolorscreen.com/.

[27]   Williamson 1994, p. 237 (italicisation in the original text).

[28]   Gram-Hanssen & Bech-Danielsen 2004, p. 18.

[29]   Ibid., p. 18.

[30]   Ibid., p. 17.

[31]   Sparke 2004, p. 72.

[32]   Nurkka 2013.

[33]   Sundar & Marathe 2010.

[34]   Frissen et al. 2015, p. 39.

[35]   Ibid.

[36] Cf. e.g. an example at http://i.imgur.com/9ZZ4s7B.jpg, referenced in a Reddit forum discussion on home screen customisation at https://www.reddit.com/r/jailbreak/comments/2mt1we/show_us_your_primary_springboard_homescreen_page/.

[37] Suits 1967, p. 34.

[38] Cf. e.g. http://www.hongkiat.com/blog/cool-android-homescreens/.

[39] Louridas 1999.

[40] Cf. e.g. http://iempty.tooliphone.net/en/customize/iphone/customize-your-iphone-springboard-with-transparent-icons#.V4_K4vmyNHw.

[41] Chen et al. 2015; Moore 2014.

[42] Thompson 2015.

[43] Cf. https://homescreen.is/.

[44] In 2015, the app was removed from the iOS app store because its functionality was allegedly too similar to the app store itself.

[45] For instance, the 'phone app' is present on 86% of all home screens, while YouTube, which had been pre-installed until iOS 6.0, only reaches 33%.

[46] Tseëlon 1992.

[47] Costikyan 2013, p. 2.

[48] Cf. https://homescreen.me.

[49] Cf. http://mycolorscreen.com.

[50] Cf. e.g. http://www.droid-life.com/tag/home-screens/.

[51] Müller 2009.

[52] Niederer & van Dijck 2010, p. 1373.

[53] Batty 2015; Kitchin, Lauriault, & McArdle 2015.

[54] Cf. e.g. http://citydashboard.org/london/ for a prominent example.

[55] Kitchin & Lauriault & McArdle 2015.

[56] Batty 2015, p. 30.

[57] Pias 2011, p. 175.

[58] Putnam 2006, p. 145f.

[59] Ibid., p. 146.

[60] Ibid.

[61] Most recently, Apple proposed moving onto a different navigational paradigm altogether; cf. http://www.wired.com/2015/06/ios9-proactive-apple-is-going-to-kill-the-home-screen/.

[62] Vanhemert 2015.

[63] Gaver 1991, p. 82.

[64] Manovich 2013.

[65] Ibid., p. 129.

[66] Ibid., p. 142.

[67] Wang & Woo 2008.

[68]   Papacharissi 2009.

[69]   Werning 2015.

[70]   Bogost 2016.

[71]   Tov 2008, p. 92.

[72]   Shin & Hong & Dey 2012, p. 178.

[73]   Bogost & Montfort 2007.

[74]   Cf.   e.g.   http://appleinsider.com/articles/16/06/14/inside-ios-10-third-party-compatibility-opens-up-messages-to-apples-app-universe.

[75]   Cf. https://www.wired.com/2016/06/facebook-messenger-new-home-screen-lure-away-apps/.

[76]   Cf. https://www.wired.com/2015/12/slack-is-investing-80-million-in-slack-bot-startups/.

[77]   Cf.   https://techcrunch.com/2015/08/26/facebook-is-adding-a-personal-assistant-called-m-to-your-messenger-app/.

[78]   Cf.   e.g.   https://www.inverse.com/article/16007-chatbot-murphy-uses-faceswap   and   https://techcrunch.com/2016/03/30/microsoft-is-bringing-bots-to-skype-and-everywhere-else/.

[79]   Vanhemert 2015.

[80]   Buttimer 2015, p. 166.

[81]   Examples can be found at http://www.vice.com/read/the-smartphones-of-refugees-876.

[82]   Cf.   e.g.   http://thenextweb.com/apps/2011/07/28/10-apps-you-need-to-have-on-your-iphone-home-screen/.

[83]   Vanhemert 2015.

[84]   Cf.   http://thenextweb.com/apps/2011/04/24/theres-no-place-like-home-screen-exploring-the-philosophy-of-app-placement/3/.

[85]   Cf.   http://thenextweb.com/apps/2011/07/28/10-apps-you-need-to-have-on-your-iphone-home-screen/.

[86]   Cf. http://www.smartmobilephonesolutions.com/content/android-home-screen.