Chapter 2
Digital Out-of-Home Media: Means and Effects of Digital Media in Public Space

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Abstract Digital out-of-home media and pervasive new technologies are bringing the internet experience into public spaces and stepping up the pace with which brands and products, as well as their virtual representations, penetrate urban environments. This article explores the current phenomenon of pervasive advertising and its underlying perceptions and puts forward a typology for describing a range of applications for the emerging media infrastructure. It argues that the critical dimensions comprise the way in which pervasive advertising and creatives exploit both physical and social contexts by increasingly relying on the effects of illumination, temporality and spatiality.

2.1 Introduction

Technology mediates day-to-day experience in cities more than anywhere else, and pervasive advertising is fast becoming an integral part of such postmodern urban environments. Advertising relies on pervasive digital infrastructures and has become a salient feature in popular culture, where shopping has long since developed into a centrally important activity. The city is reinventing itself as a communication hub in which pervasive advertising generally plays a decisive role in creating an emotionally charged environment that is crucial for shaping the behavior of shoppers, tourists and inhabitants.

From a sociological perspective, these emerging media in public spaces are manifestations of two social trends: continuing digitization and convergence (first pervading and transforming the workplace, then the private sphere, and now the public space), and a societal shift away from consuming goods and service towards

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searching for experiences. While the first trend emphasizes technical developments, as well as the drivers, consequences and controls, the latter focuses on experience as the main marker in this shift towards what is called "experience economy".[1]

The experience society continues where the service society left off – primarily focused on customers' affective responses (and memories) rather than on tangibles and services themselves.[2] Offering experiences as a part of the product has a long tradition in the market. What is new, however, is the increasing importance being put on experience as a product per se, not to mention the growing number of services containing a targeted experience dimension within the vast number of products being offered.

This change in consumer attitude reflects in a paradigm shift in marketing, which is abandoning its emphasis on functional attributes and instead is focusing on creating holistic customer experiences.[3] Brands thus have become symbols for lifestyles in the experience economy that provide stimuli for life plans and emotional states [12, 20, 33]. Furthermore, the proliferation of pervasive media infrastructures in public spaces is only possible in the urban environment, which uses it as catalyst for creating holistic and social brand experiences for all the senses.

A distinguishing feature of the experience economy and its "public spaces"[4] is the abundance and diversity of the media that are being offered and consumed and that define the atmosphere Böhme refers to [5]. Advertising thus structures and defines public space, becoming an everyday phenomenon in itself.

Referring to the concept of "narrative machines" (*Erzählmaschine*) of Legnaro/ Birenheide [17], Guido Zurstiege distinguishes among three types of media that act

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[1] B. Joseph Pine II and James H. Gilmore coined the term 1999 in their book "The experience economy" [24], defining experiences as a new economy that follows the provision of services, goods, and commodities. In the "experience business", customers are charged for the feeling they get; in the next stage of product evolution, "the transformation business", customers pay for the benefit they receive from spending time there.

[2] Post-materialist consumption has long been an issue, see ibid alt [9, 24, 30].

[3] Bernd Schmitt claims that experiences can be offered strategically. In his book "Experiential Marketing" [28] he states that "experiences are usually not self-generated but induced" and claims that "as a marketer, you provide stimuli that result in customer experiences: you select your 'experience providers'". Unlike conventional function-and-benefit-marketing, which, according to Schmitt, "lacks a fundamental basis and insight understanding of customers', experiential marketing is based on psychological, yet practical, theory of the individual customer and his/her social behavior." Schmitt contends that experiences – depending on their intend effects on the user – may be categorized into various "strategic experiential modules" (e.g. sense, feel, think, act, relate) that can serve as criteria in the design process so as to extend their range (pp. 61, 63).

[4] In this article, the term "public space" refers to public places that are designed for and freely accessible to the public. The starting point is the traditional concept of a place as a tangible, three-dimensional location, regardless of whether it is being administered under public law or privately by a legal entity or natural person. The reasons for using this term is to avoid specialized terms such as "Third Places" [23], "Places", respectively "Non-places" [2], "Other Spaces" as "Utopia" and "Heterotopia" [7], etc. that are highly occupied by discourses.

as drivers [35]: First there are advertising media that stimulate behaviors in visitors revolving around wish fulfillment, transformation and change stories; second there are media such as newspapers, magazines, books as well as portable music players, laptops and tablet PCs that are used in public space not only for information or entertainment purposes but also as social shields, providing relief from excessive demands and reducing on-track conversations; and third there are media that display information as well as regulations and that are specific to the place and thus help define it. These media reduce complexity by suggesting a clearly defined path through the "jungle", besides providing an organizational framework that facilitates social orientation.

Georg Franck identifies a fourth type of media that goes hand-in-hand with the "Invasion of the brands": Surveillance and security media [8]. Mass surveillance is no longer restricted to areas predisposed to promiscuity or crime, such as alleys, parking lots, or public toilets. Instead, public and private organizations frequently use mass surveillance to protect themselves against allegedly dangerous groups, such as terrorists (e.g. at airports), to maintain social control (e.g. at football games or in traffic), or to pursue individual interest (e.g. preventing theft in stores, littering). Private-sector mass surveillance often uses copyright laws and "user agreements" to obtain (typically uninformed) 'consent' to monitor consumers who are within their spaces.

By doing so, Franck emphasizes the less visible aspect that is transforming public space: increasingly dense data space where signals are permanently exchanged [8]. Here, surveillance media use the same digital infrastructure as pervasive advertising media: Information, communication and identification technologies are seamlessly integrated and increasingly available. The latest cameras, which are virtually invisible on account of their small size, allow for real-time image analysis by using facial recognition technology that compares images and behaviors against database records.

This twofold "privatization of public space" by brand images and control mechanisms as found in the private sector has been widely criticized for violating privacy rights, laws, and political and social freedoms because it interferes with the organic and heterogeneous nature of urban life. It reduces cities to places of consumption, transforming them into "non-places" [2] that degenerate into gigantic vending machines [35].

Within marketing research, the scientific analysis of these pervasive digital media infrastructure in public space has only just begun. So far, media studies have made only passing, if any, reference to urban screen media, focusing on media saturation in general and on media abundance in the context of contemporary life in cities.[5] Or, as regards audience measurement, they mainly focus on the realm of traditional "outdoor advertising" or the home (TV, DVD, games, internet for entertainment, etc.) as seen from a consumer perspective.

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[5] For a critical overview see [14].

One way out of these dead-end approaches is to study the pervasive media infrastructure from the bottom up by examining its concrete forms, their essential characteristics, and gauging their potential for the advertising and brand management industry.

2.2 Media Forms

In the perception of the marketing industry, the predominant business case for digital media infrastructure in public space is mostly restricted to advertising and how the new distribution channels use advertising (content, messages). By focusing less on a given (traditional) business model and more on the common characteristics of the media itself, a field of research opens up that is defined by and centered around a new technology that has long since evolved from a tool into a medium.

In the realm of the public sphere, this digital medium manifests itself in many forms that in essence comprise systems for posting information (news and transport information overlays) on screens, exchanging information (kiosk systems), advertising (billboards), enhancing architectural design (media façades). Furthermore, it serves as a venue for public art (often referred to as "urban screens") in various forms (textual information, moving or still images, light) and on a variable scale. Although they vary strongly as regards their goals, form or scale, they all use digital network technology, which differentiates them from other media in urban environments.

According to Sauter, the digital medium[6] has developed into four physical formats: screen applications, interactive objects and installations, interactive spaces, and interactive architecture, each engaging the user in a different form of interaction [25]. All four types of digital media can be found in public space employed for specific marketing strategies (Fig. 2.1).
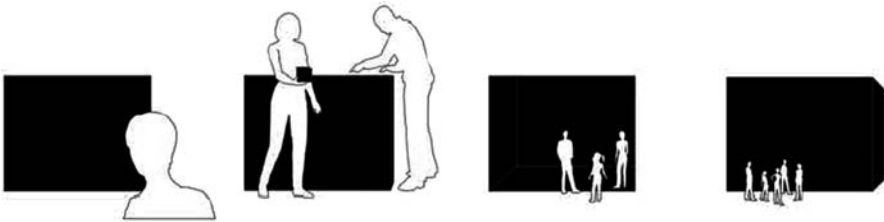

Fig. 2.1 The four physical formats of the digital medium: screen applications, digital objects and installations, media spaces, and media architecture [25]

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[6] Joachim Sauter describes the digital medium as essentially immaterial, synthetic and virtual and having four distinct qualities: interactivity, multimedia, connectivity, and generativity, through which the content, narrative and form can be represented, expressed and communicated. These four media options define the medium and distinguish it from traditional forms such as print, film, television, each with its own media characteristics, and also from classical art forms such as painting, sculpture, performance, video art [25].

In screen applications, users engage in one-on-one dialogue with a screen (the "text") that is mediated digitally and geared to the user's requirements. When designed with an interface, two-way interactions become possible as a way of processing the input by a user and the subsequent output by the system. These types of digital media are tied to all forms of urban environments, outdoor or indoor, stationary or mobile, small scale (info or ad screen), medium scale (e-boards, public screens), or large scale (media facade), displaying high or low resolution images on a sliding scale.

Digital objects and installations are mostly designed for specific content (e.g. an interactive table). They can host a dialogue between the text (information, message) and one or several parties. In the latter case, the screen functions as interface, e.g. as a touch screen. Well-designed installations allow passive members to observe others in their interaction and thus join in the process of mediation or experience (substitute interaction). In a marketing context, media objects are increasingly used at trade fairs (e.g. *CeBit* in Hannover, the *Autosalon* in Geneva), exhibitions (e.g. *Mercedes Benz* brand museum), or in flagship stores (e.g. *Prada Epicenters*) – enhancing live touchpoints by playfully engaging the customer and offering new brand experiences and service designs.

Media spaces – where digital media decisively impact the space and visitor behavior (e.g. interactive media floors and walls), allowing for immersion and reactive changes – determine visitors' behavior, which in turn determines the "behavior" of the space, generally comprising a multi-user environment designed for a shared experience. The most common aim is to initiate interaction between visitors and the interactive content experience and to facilitate interaction among visitors.

The fourth type, *media architecture* (e.g. a façade enhanced by light or media technology, iconic brand architecture), enhances urban environments by adding a narrative layer. If well done, it increases the value of the physical and social space by adding uniqueness, meaning and authenticity, thus enhancing the status of those who experience it. In marketing strategies, highly medialized architecture helps to build the reputation of locations (cities, neighborhoods) and brands. An excellent example for this is the SPOTS facade of the *Park Kolonnaden* building (*Postdamer Platz*, Berlin) that promoted the real estate company (and their rentals) as well as the value of the site and neighborhood.

2.3 Media Types

Out-of-home media involve at least four different interest groups: The property owner (private or public) looking to optimize the profitability of the property and to maximize rental income from the space; the outdoor media company (media seller) providing the surface for displaying the ads and renting out the space (or time) to clients; the client (media buyer) as tenant/buyer of the available space/time to reach
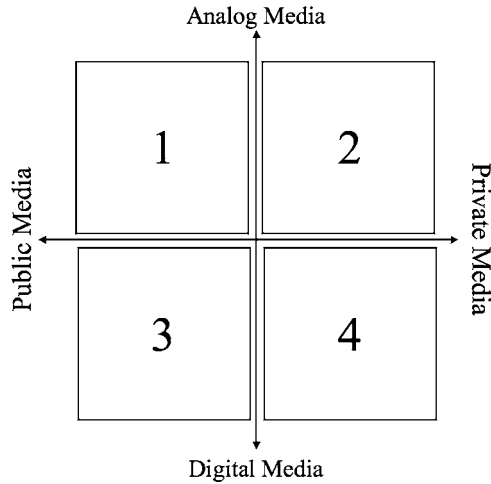
Fig. 2.2 Research framework I: The four media types and the segments of Pervasive Advertising: (*1*) Analog/Public: traditional out-of-home-media e.g. billboards, mega posters or new forms of ambient media; (*2*) Analog/Private: traditional in-store/in-house media, incl. all types of promotional material, interior designs etc.; (*3*) Digital/Public: Adscreens and e-boards of all sizes, indoor and outdoor; and (*4*) Digital/Private: Digital signage media at-store/in-store, as well as media architecture

the audience; and the public administration safeguarding the public interest by means of regulations and licenses/permits.[7]

The potential of the digital medium to develop into different formats for engaging the user in various forms of interaction – cognitive text-user relations, playful interactions, or immersive experiences – can be seen as a prerequisite for deploying specific media in the public sphere (Fig. 2.2).

2.3.1 Public Mass Media

Public or mass media refers to a type of media specifically designed to reach a large audience. The marketing industry uses it for placing advertising by buying media space or time in order to reach relevant audiences.

Commercials displaying moving images in public spaces appeared originally as "a problem-solving tool for the shortcomings of home spectatorship and its possibility

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[7] Different jurisdictions regulate outdoor advertising to varying degrees and with different reference models, such as traffic safety systems, cityscapes, etc. In general, there is a tendency to prohibit billboards altogether or to prevent new ones from being constructed (e.g., in Zurich 2009), or to ban them within the city (e.g., in Sao Paolo 2007).

to "zap" messages with remote controls or power switches" [19]. Ambient television has given advertisers a reason to imagine the final "captivity" of the audience due to a "lack of competitive separation" [19] in zones without remote controls.

Out-of-home advertising, therefore, addresses consumers who are neither at home nor at work, but in a public or semi-public space or in transit (on the go), while waiting (in-between) in line at the cashier or a medical office, for example, or who are at a specific commercial location, such as in a retail outlet.

2.3.1.1 Adscreens

Adscreens are increasingly common in a range of public spaces, especially in typical urban nodes (e.g. train stations, airports, in public transportation, post offices) and places of entertainment (e.g. bars, restaurants, fitness or music clubs, etc.), and have been accepted by both media buyers and users (Fig. 2.3).

For media buyers, adscreens are complementary media because they are close to buying decision points (the "recency" argument[8]) and thus can leverage situations harboring strong latent viewer attention, e.g. queues (the "captive audiences" argument) as well as reinforce messages from other media (the "crossmedia" argument). Users, on the other hand, have become familiar with traditional ways of experiencing advertising as part of their daily out-of-home experience and are adept at either filtering it out or enjoying its entertainment value (Fig. 2.4).

Adscreens are (other than e-boards) currently set up mostly along traditional lines: Owned by established outdoor advertisers and run by major networks aimed at reaching large audiences that are mostly closed networks, etc. Business models, campaign targeting options and impact measurements are therefore similar to nondigital out-of-home media. It doesn't come as a surprise that new creatives and strategies derived from the digital bases or media characteristics are being used only sparingly. Despite the constraints they face in this market due to the limitations of particular advertising models[9] [11] and the deployment of creative concepts for presenting content in targeted way to specific audiences, ad-screens have successfully established themselves in the modern media landscape.

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[8] Recency, a "school" of advertising planning, believes that relevance, not repetition, is what makes an ad message effective and that its relevance gains proportionally with the consumer's readiness to buy, i.e. that the prospective buyer's proximity to the actual buying decision or point of sale is crucial. Impact-driven, continuous and creative advertising generally fails to capture consumers' attention because they can screen out the messages that are of no interest. Advertising thus becomes effective only when consumers are ready to buy.

[9] According to José and Soares, there are two emerging trends that are likely to cause a significant development in ad models: First, the move towards interactive displays that can respond to the surrounding spatial environment. Second, the emergence of pervasive display networks in which advertising models can leverage the power of open networks [11].

Fig. 2.3 Adscreens – networked digital billboards – are operated similar to traditional out-of-home media: Selling media time to third-parties by offering large networks for reaching large audiences (**a**) New ePanels, 82″ full HD screens, are replacing the traditional Rolling Stars in major railway stations (scheduled for June 2011) (Photo: © APG/e-Advertising, Zürich); (**b**) A network of adscreens at 77 Tamoil gas stations operated by IP Multimedia (Photo: © IP Multimedia (Schweiz) AG, Zürich)

Fig. 2.4 Adscreens potentially replace older (analog) media infrastructures as well as develop new locations and formats for reaching the audience (**a**) Swiss Post's CanalPoste, an advertising network in 236 post offices, offering not only video ads but a full range of crossmedia packages including flyer and staff presentations (Photo: © Die Schweizerische Post, Bern); (**b**) The Digitaler U-Bahnhof Berlin-Friedrichstrasse, the first underground station featuring only digital out-of-home Media (Photo: © Wall AG, Berlin)

2.3.1.2   E-Boards

E-boards are typically much larger and are therefore better integrated into the architectural environment, and they are designed to optimize the size and position available for generating awareness and attention by their audience. While the cost of installing and maintaining them is relatively high, the number of screens that are linked to a network is relatively small. Revenue objectives are nevertheless met by

Fig. 2.5 E-boards – large-scale screens at high-impact sites: Due to their size, e-boards are much better integrated into a particular area than adscreens; the program is also especially developed for a specific environment (**a**) The 65 m² e-board at Zurich Main Station (Photo: © Ursula Stalder, Zürich); (**b**) Big screen at the M&M's WORLD flagship store in New York showing exclusive animation (Photo: © Ursula Stalder, Zürich); (**c**) Interactive mural at New York City's 14th street promoting the launch of Adobe CS3 in 2007 (Photo: © Eric__I_E via flickr.com); (**d**) Forever21's big screen displaying an augmented reality spot during the opening of the new flagship store in 2010 (Photo: © Fastcompany, NYC)

installing such e-boards at high-impact locations with extremely large audiences, and they are particularly suitable for campaigns targeted at the general public and offering a competitive CPT[10] (Fig. 2.5).

Because of their size, e-boards strongly influence the atmosphere of the space where they are installed (and, therefore, are more similar to the newer group of out-of-home-advertising called "Ambient media"). As a consequence of increased visibility, project strategies for getting new e-boards approved invariably lead to mixed programs displaying a range of cultural notes, news headlines, and commercials in an attempt to harmonize interests with financial resources.

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[10] Cost per thousand (CPT) is a commonly used measurement in advertising. It is used in marketing as a benchmark to calculate the relative cost of an advertising campaign or an ad message in a given medium. Rather than an absolute cost, CPT (or CPM *cost per mille*) estimates the cost per 1,000 views of the ad.

2.3.2 Private Corporate Media

Private or corporate media is a term referring to a system of media production, distribution, ownership, and funding that is dominated by corporations and therefore geared to support companies' strategic goals of maximizing profits rather than serving the public interest (as in the case of public media). These media obviously are based on revenue models that differ from those of public media: third-party commercials are rarely found for competitive reasons, and the revenue model is often linked to long-term brand strategies (image, loyalty) or agreements with business partners (e.g., contribution to marketing costs).

Corporate out-of-home media are traditionally found near stores (e.g., in company-owned parking lots, garages, escalators), in stores (at the entrance, near shelves, at the cashier etc.) and, in a broader sense, include the store itself (interior design, architecture, service design) as well as other touch points (e.g., exhibitions, brand museums, brand lands).

2.3.2.1 Digital Signage

The term digital signage describes a range of digital communication and information media in the retail environment that takes advantage of the digitalization trend that can be observed throughout the retail value chain. These media range from "front-end" promotion, ambient and convenience services, all the way to shopping assistance or services for customers and management help for staff. The reference model here is that of "recency", empirically supported by studies showing that about 70% of purchase decisions are spontaneous while the person is at the shelf [10] (Fig. 2.6).

The increasing amount of information on products and customer behavior enable retailers to offer a more personalized shopping experience, while personalized advertisement and tailored suggestions might potentially benefit both shoppers and retailers. Well-placed and selected advertisement can help to raise satisfaction among retail buyers and increase opportunistic shopping, and thus total revenue, at the same time. The Prada customer card, for example, gives "Epicenter" staff direct access to the stored profiles incl. buying habits of the holder, allowing for a more customized type of service. This might even lead to personalized products that are fully adjusted to the specific needs of each customer [31] (Fig. 2.7).

RFID (radio frequency identification) is seen as a prerequisite system. Transponders can be attached to pallets, clothing shipments or cartons, making it possible to address all items. In the future, RFID is expected to be deployed not only "behind the scene" to optimize logistics and warehouse management, but also at the customer interface where items on the sales floor are tagged with RFID transponders. Such systems are already being tested in a number of pilot projects. In the men's department at *Galeria Kaufhof* in Essen, Germany, for example, readers are installed in dressing rooms and on mirrors to identify the items customers choose

Fig. 2.6 Digital signage – digital retail media, stationary or mobile: The common goal of is to deliver information and services either to customers or to staff (**a**) Telekom Austria "a1 lounge", Vienna (Photo: Rupert Steiner (www.rupertsteiner.com), © mobilkom austria AG & Co KG, Vienna); (**b**) Intel® Intelligent Digital Signage Proof-of-Concept, showcases how digital signage technology can enhance the retail customer experience (Photo: © Intel Corp., Santa Barbara/CA)

and to display the available sizes, colors, and other combinations. The items are then found on smart shelves that send out warnings when inventories run low or displayed on special terminals with details about the products.

Fig. 2.7 Digital signage when combined with RFID has the potential to create an intelligent environment allowing new service designs on sales floors (**a**) Smart tables and (**b**) Smart mirrors at Galeria Kaufhof in Essen (2007–2008) uses RFID to identify the pieces of clothing customers are trying on and display useful information such as prices, materials and care instructions. On top of that, they also suggest accessories and possible combinations and show which pants go with which shirt (Photos: © Metro AG, Düsseldorf)

2.3.2.2 Brand Architecture

Architecture has long been used to build brands as part of corporate identity programs in multinational corporations, serving as a visual symbol to express a company's culture and personality.[11] While commercials shown on adscreens, e-boards or promotional digital screens have only a short-term effect, brand architecture aims to establish a more lasting impression. Although commercials may trigger an adrenalin rush by means of media-enhanced narratives (plot, storytelling), architecture establishes a sense of individuality and being at ease. According to Barbara Klingmann, architecture has by its very nature "much more long-lasting effects than the ephemeral products of the media because it can manifest ideas about who we are into permanent and tangible forms that endure over time" [13].[12] There are again different forms of mediated architecture employed to establish a brand image in the public's opinion.

2.3.2.3 Media Facades

Media facades – media embedded in architectural facades – comprise components of building envelopes that are animated using digital technology. Krajina points out that this development marks the ultimate separation of a building's two essential purposes: providing shelter and serving as a symbol [14] (Fig. 2.8).

For Klingmann, media facades mark the transition from an "old school" corporate architecture based on the concept of visibility and authority to express power, wealth and financial growth (e.g. BMW's Zylinderhaus in Munich) toward a new concept that is based on interaction and dialogue [13]. The light and media facades of the T-Mobile Headquarter (Bonn), the BIX facade at Kunsthaus Graz or the Park Kolonnaden buildings (Potsdamer Platz, Berlin) are examples of building facades that reflect both the brand's traditional value and the innovation, providing a public interface for interaction with the community (public sphere) and consumers (Fig. 2.9).

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[11] Corporate architecture, as an integral part of a comprehensive corporate identity program, conveys a firm's core ideas and belief systems by simultaneously providing the symbols, emotional experience, and organizational structure that helps strengthen the perceived corporate values. Unlike conventional architecture, brand environments are not based on an existing physical context but on a holistic corporate identity program designed to represent and support a firm's values and philosophy [6].

[12] Klingmann also observes: "While most architects agree that architecture should create relevant experiences, there is still a lingering confusion about how architecture might compete with, relate to, or distance itself from the noisiness of mediated effects. As digital communication remakes the traditional rhythms of daily life, which is increasingly crammed with sophisticated electronics, many people believe strongly that everything should be action, motion, excitement, and saturation, while countless consumers want nothing more than a seductive oasis." ([13], p. 51)

Fig. 2.8 Media facades – light and media technology embedded in architectural facades – create an interface between the architectural and urban space on one side, the digital and narrative space on the other side (**a**) T-Mobile Headquarters, Bonn, the first permanent media facades worldwide; (**b**) Transparent panel structure with LEDs for Helmut Jahn's concept of a new convention center in Zurich (Photo & rendering: © ag4 mediatecture company, Köln)

Until recently, media facades displayed mainly temporary installations, for cost reasons [25]. In the meantime, the feasibility and sustainability of the technology determines both the awareness and willingness among builders, architects and lighting designers, engineers and media people – including authorities issuing licenses.
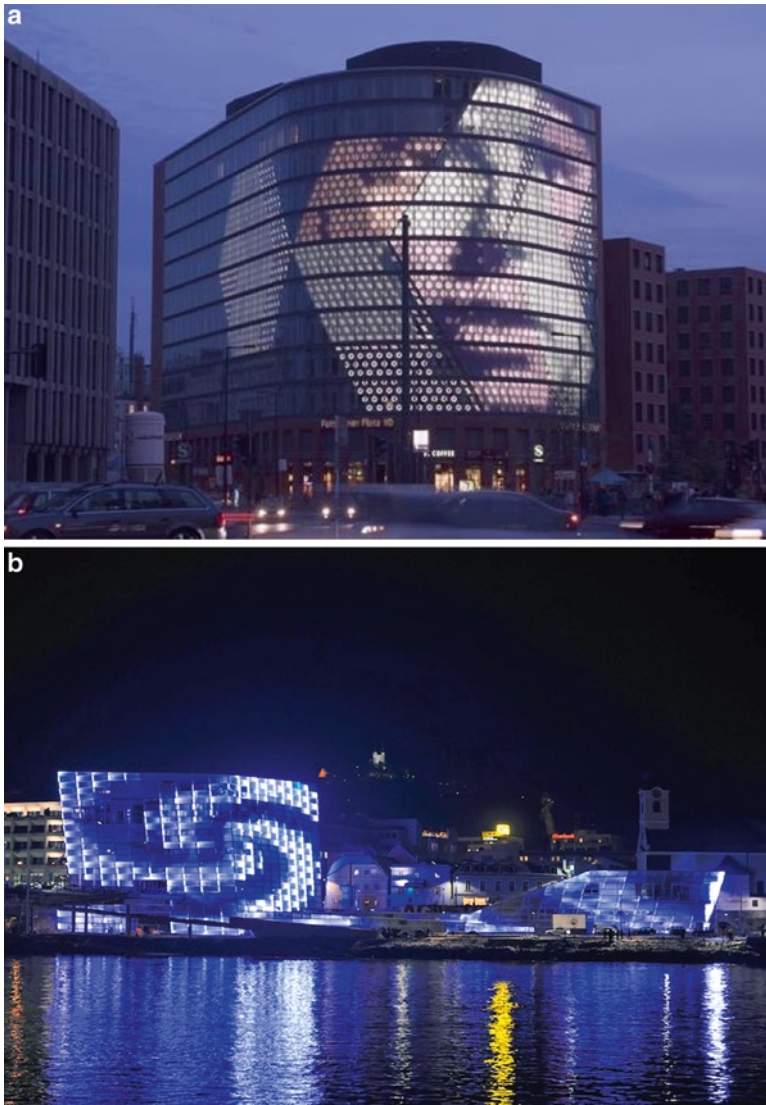
Fig. 2.9 Media facades have substantial influence on both – the visual and the social experience of urban space (**a**) The SPOTS light and media facade at HVB's Park Kolonnaden building, Berlin, showing a curated art program for a period of 18 months (Photo: © Bernd Hiepe, Berlin); (**b**) the Ars Electronica Center AEC media façade, an interactive application with approximately 4,400 individually addressable and adjustable channels, generates a homogeneous interaction with its surroundings, at the same time becoming a distinctive landmark (Photo: Stadt Linz, © Ars Electronica Center, Linz)

Fig. 2.10 Brand Scenographies – three-dimensional multisensual brand presentations: These spatial brand touchpoints aim at stimulating different senses and instincts in order to deepen the experience of a brand (**a**) The Prada Epicenter store in SoHo, New York (Photo: OMA/AMO, © Prada); (**b**) The Mercedes-Benz Gallery, opening 2009 at Berlin's Unter den Linden (Photo: © Ursula Stalder, Zürich)

2.3.2.4   Brand Scenographies and Flagship Stores

Retail architecture increasingly relies on established values and associations, be it the name of a famous architect (Frank Gehry, Herzog & deMeuron), city (Barcelona, New York), or neighborhood (Fifth Avenue or the Meatpacking District in New York City). Nike's temporary "House of Innovations" in Beijing during the Olympic Games or the Chanel Mobile Art Pavilion (designed by Zaha Hadid) exemplifies the more recent trends of using events to build short-term brand presence (Fig. 2.10).

Fig. 2.11 Brand Scenographies are building spaces and stages to tell their stories inviting the consumer to a playful interaction with the brand universe (**a**) Nikes House of Innovations, in the 798 Art Zone in Beijing, telling the most important stories behind some of the most successful Nike products, innovations and technologies during the Olympic games 2008 (Photo: © Inquiringmind Magazine, Toronto); (**b**) Chanel's mobile container for contemporary art by Zaha Hadid, gave the quilted bag, icon of Chanel's heritage, its own means of expression by confronting it with contemporary creation (Photo: © Core77, Inc.)

Flagship stores, brand museums and exhibitions use media and architecture, as well as scenography, in a similar way to build a dialogue with an audience – both externally and internally. In this respect, the store becomes a place of communication, media production, and symbols – including itself – and of intermediality in general [10] (Fig. 2.11).

Brand scenographies become "catalysts" [13] for perceptual values and transformative experiences. The Prada Epicenter stores (New York City, Los Angeles, Tokyo) feature not only sophisticated architectural design for branded fashion goods but an entire program aimed at exploring ways to reinvent the Prada retail experience. Architect Rem Koolhaas argues that "shopping is indeed the last remaining form of public activity", one that inverts the act of consumption, turning the store into a social space[13]: "While presenting a unique brand experience for Prada, the store is first and foremost designed as a social gathering place in which customers can simply enjoy spending time".

2.3.2.5 Brand Lands

Brands and architecture have developed a close relationship over the last decade. Architecture and distinct urban environments are increasingly being integrated into a larger marketing strategy, and the uniqueness of a physical environment (geographical territory) is used to underscore the uniqueness of a brand identity. At the same time, urban planning and architecture borrow increasingly from branding, with the Olympic Games 2008 or the FIFA World Cup 2006 being just two examples. Space/spatiality has become a further marketing asset (Fig. 2.12).

Brand lands are mixed-use centers designed to provide multi-functional customer experiences. They are often close to headquarters and production plants that are closed to the public. Brands lands like BMW Welt in Munich, the Mercedes area around Werk Untertürkheim in Stuttgart Bad-Canstatt or Swarovski's Kristallwelten in Wattens combine a range of facilities and thus anchor the brand in the place.

The physical (natural and man-made) "brandscape" [13] is the result of an artificial spatial manifestation of brand identities and an equally artificial creation of physical space. Marketing will be incorporated into the architectural design process, increasing the tangibility of firms' values by offering places in which to consume experiences. Visual choreography and architecture are thus designed to facilitate experiences in a social context, replacing what would otherwise be a purely commercial environment [13]. In the context of current urban spatial development, brands provide a physical context that re-establishes a connection to a particular territory (Fig. 2.13).

These iconic buildings[14] (signature architecture) are primarily designed to represent values, create moods and provide contrasts. A proven strategy involves

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[13] Anna Klingmann notes: This blur of highbrow or lowbrow in architecture is echoed in Koolhaas' 'Harvard Design School Guide to Shopping', an 800-page tome on mainstream consumerism. It mainly purports that shopping has become the 'defining activity of public life'. According to one of its contributors, "not only is shopping melting into everything, but everything is melting into shopping" (p. 129). This trend also includes the growing number of signature architects who increasingly use their expertise to blur the distinction between consumerism and elite culture in the form of "shopping architecture." ([13], p. 125).

[14] On the relationship between architecture and branding see ibid alt. [1].

Fig. 2.12 Brand lands – brand communication by means of architecture and territory – generate a distinct experience and lends appropriate dimensions through the uniqueness of the territory, iconic architecture and symbols derived from the brand narratives (**a**) (**b**): The Autostadt, a mixed-use center next to the Volkswagen factory in Wolfsburg, features a museum, an amusement park, seven brand pavilions as well as a customer center, which attracts some two million visitors each year (Photos: © HENN Architekten, München)
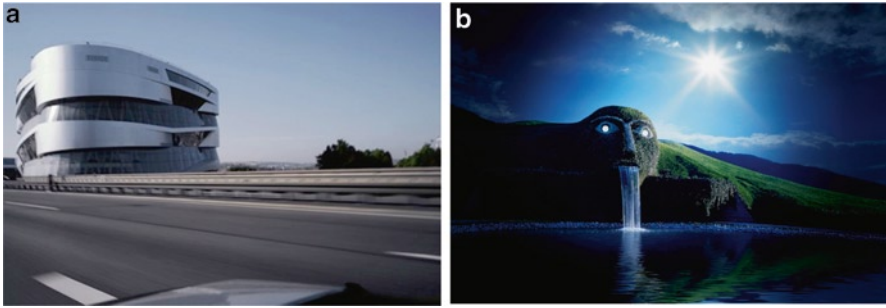
Fig. 2.13 Brand lands are the nucleus around which power, cultural values and a certain way of thinking have found expression. They are narrative, designed through consistent adherence to a single theme, anchoring the brand in the real world (**a**) the Mercedes Benz Museum in Stuttgart (Photo: Brigida Gonzales, © Daimler AG, Stuttgart); (**b**) the water-spouting Giant that magically lures visitors into its interior, where 12 Chambers of Wonder ignite beacons of imagination Swarovski Cristal worlds in Wattens, Austria (Photo: Elfie Semotan, © Swarovski AG, Triesen)

co-branding, whereby a corporate brand (e.g. A1, Prada, Guggenheim) is associated with a famous architect (e.g., EOOS, Herzog & deMeuron, Gehry). Architecture is used specifically as a symbol of cultural prestige [34] that relies on technology at all levels, with signs and symbols creating a distinct experience through the use of spatial effects whereby artificial territory provides a spatial (material and social) brand experience.

2.4   Media Characteristics

The nature of new media becomes apparent when staging, rather than hiding, its new properties and at the same time anchoring them in the findings of basic scientific research (social and physical space; pervasive computing [32]; visual communication [15, 21]). This article puts forward a three-vector model for investigating the communicative potential of this digital medium:

1. Screen as light-emitting (output) medium (light emission/illumination);
2. Moving images as the dominant form of communication (movement/temporality);
3. Situatedness of communication/interaction in the social and physical space (spatiality) (Fig. 2.14).
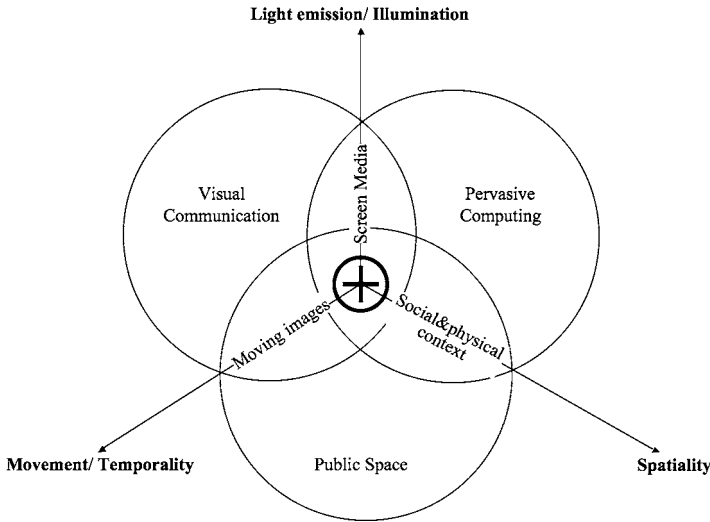
Fig. 2.14 Research framework II: Key vectors suggested for a study of Pervasive Advertising

2.4.1 Screen as Light-Emitting (Output) Medium: Illumination

A common characteristic of all digital out-of-home media is the screen, which serves as the presentation medium.[15] The most desirable brightness of the screen depends on a number of variables, such as the ambient light level and the luminosity of the image source. But in contrast to traditional outdoor media such as billboards, screens actively emit light by means of backlight technology.

Newer display technologies have high luminosity and good contrasts, even under changing or dim conditions. As light and movement (of the images) act as a stimulus enhancement, digital media per se have better chances of being perceived.[16]

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[15] A digital screen is a data processing and data output device for presenting visual information (pictures or signs), unlike in the case of a projection screen. Flat or curved screens may be deployed depending on the technology used to project the image and the desired geometrical accuracy of the image production, flat screens being the more common of the two. This article disregards projected images mainly because light emitted from screens used as an output device and permanently integrated into urban space is an essential starting point that includes projections only in exceptional cases on account of their mainly temporal nature. Of course this is a subjective point of view that may be challenged.

[16] For the principles of activation theory, see [26]. In cognitive psychology, perception is understood as a process of information processing, in which specific environmental and physical stimuli are selected from a range of other stimuli before they are decoded and combined with prior knowledge. Key features of perception are subjectivity, activity and selectivity. A prerequisite for conscious perception is the willingness to absorb and process information. The capacity to absorb depends on the degree of activation, the "inner alertness"; a temporary increase of activation is referred to as attention [15].

Furthermore, the reflected light itself becomes a form of communication, giving the space a specific aura [29]. Or as Walter Benjamin puts it: "What, at the end, makes advertising so superior to criticism? Not what the moving red neon says – but the fiery pool reflecting it in the asphalt." [3]

2.4.2   Moving Images as the Dominant Form of Communication: Temporality

For Lev Manovich, any screen constitutes a window onto a representation within our normal space, and a digital screen "represents an interactive type, a subtype of the real-time type, which is a subtype of the dynamic type, which is a subtype of the classical type". This "screen genealogy" rests on two ideas: "First, the idea of temporality, whereby the classical screen displays a static, permanent image; the dynamic screen displays a moving image of the past, and finally the real-time screen portrays the present. Second, the relationship between the space of the viewer and that of the representation." [18]

While visual communication research[17] discusses the means and effects of images (as opposed to texts) and film theory discusses the basic code of moving images, Manovich examines the different forms of "new temporality" as "narrative engines" as found in digital media.

However, the effect of moving images – movement in itself as well as visual texts as communication modes – in the context of the public (social, man-made) space creates and simultaneously defines an emotionally charged environment [5].

Located in the public space, the temporality of such movement becomes the boundary between the physical and digital worlds, transforming the *genius loci* beyond what appeals to individual viewers and affecting the experience of everyone who happens to be in the space simultaneously.

The added value for communication lies in this ability to create uniqueness in a fleeting moment.

2.4.3   Situatedness in the Social and Physical Space: Spatiality

When applied to media, experience marketing implies that creating messages people will remember in their daily routines means focusing on the transformative effect a space can have and on the emotions it can trigger through its use, whereby

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[17] For a summary of visual communication research, see ibid alt. [21]. The findings indicate that images are more easily detected and retained than words, like "quick shots to the brain" [15]. At the same time they are also suitable for public use in various communication modes and usually referred to as (1) autoactive, (2) reactive, (3) interactive, and (4) participatory displays [13, 25, 27].

the atmosphere and other environmental factors, such as light, noise, number of people, etc. and "the surrounding assemblages of signification and stimuli" [14] become prerequisite for success. In terms of "contexts", specialists increasingly refer to an awareness of the complexity of "culture, climate, background, audience and built pattern" on the ground [29]. As Offenhuber purports, design strategies subsume both the planned imagery (that people locally are assumed to be "familiar" with) and the screen as a material object, which may "imitate" other physical objects in close surrounding, such as a bus schedule, or a concrete façade [22].

2.5 Conclusions

From a marketing and branding perspective, these pervasive digital media infrastructures offer much potential to reach, interact and engage audiences in a dialogue and offer opportunities for reaching audiences in new places and situations by means of creative concepts. By using new technology and broadband data networks, pervasive media offer the means to blend iconic brands, streamlined products, and corporate identity into a single experience. Nike has become a prototypical example of iconic quality marked by uniqueness, the result of standardized mechanisms.

From the perspective of integrated marketing communications, three important trends can be observed that drive this development:

- The trend towards image – moving image – becoming the dominant narrative form of the brand story, cf. "iconic turn" [4];
- The trend towards spatialization of brands against the background of changing consumer behavior, cf. "experience society" [24];
- The trend of shifting away from the reach of a corporate communications orientation (mass) toward an involvement orientation (dialogue, encounter communication).

The digital medium, as well as the different media forms, are neutral in essence and can be used to meet strategic goals, and they constitute parts of the message being conveyed. Their characteristics influence the narrative, the means and effects of the message being conveyed – but they are not the story itself. This becomes all the more apparent when examining the immense variety of forms and uses of pervasive media infrastructure in public space by marketing and brand managers. The fact that pervasive advertising blends with other research fields, thus blurring the distinction to surrounding disciplines, can be seen as a "marker" in the medialization process as put forward by Friedrich Krotz [16].

The spatial dimension of out-of-home media must aim to provide a broader cultural context that seizes opportunities to create new organizational structures and social relationships instead of merely devising representational images for clients. In pervasive media, exploiting the potential for enhancing a brand means moving away from the established forms of media communication, and the most cogent arguments put forward by media theorists so far purport that media can be used to transcend spatial and temporal boundaries (Helmmann and [35]).

Pervasive advertising can potentially establish relational frameworks that are both specific and open, that encourage social interaction and engagement, and that are most likely to be defined by new ways of conveying messages: with images (symbolic dimension), narratives (story dimension), places (ecologic and experiential dimension), and communities (social, economic, and political dimension). This will most likely continue to hold true regardless of any specific application.

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