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Architects' approaches to healing environment in designing a Maggie's Cancer Caring Centre

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The built environment is increasingly recognized to influence people and their wellbeing. The related concept of healing environment is adopted by the Maggie's Centres, which provide psychosocial cancer support in the UK. Outstanding architecture, stated to have the power to uplift people, is an inherent part of the programme.

This article investigates the meaning of healing environment in design practice. In-depth interviews with five designers of different Maggie's Centres provide insight in their perspective. The study reveals particularities of the design process, such as a close collaboration with the client-expert. Furthermore it identifies common design themes designers associated with healing environment, such as nature, spatial experience, domesticity, and privacy. Finally, a focus group interview with users of the Dundee Maggie's Centre augments the discussion on how architecture can contribute to wellbeing.

Keywords: *architecture, design process, healing environment*

Introduction

The concept of healing environment emerged in different research domains. In the 1980s research in environmental psychology addressed the interplay between the environment and people's wellbeing. Environmental psychologists studied the characteristics of restorative environments (Kaplan & Kaplan, 1989), and discovered that the environment influences health outcomes (Ulrich, 1984). More recent research has been conducted in the field of neuroscience. Sternberg (2009) explains how the environment acts on people's wellbeing through the immune system. Identifying stress as a main negative influence implies that relaxing environments by definition impact people positively. The built environment is thus increasingly recognized to influence people and their wellbeing.

Despite the relevance of such scientific research, designers hardly rely on it when designing therapeutic environments (Tétreault & Passini, 2003). Information from scientific research is usually regarded as difficult to access and integrate in design. This might be explained by the fact that this information is rarely oriented towards building design. The approaches mentioned above mainly study the outcome of an isolated aspect of the built or natural environment (Annemans *et al*, 2012a). Moreover, measuring health outcomes (Schweitzer *et al*, 2004) does not fully account for the interplay between people's emotional state and experience of the environment, which can be highly relevant in traumatic situations (Worpole, 2009). The absence of an integrated framework on designing healing environments seems to hamper architects from implementing scientific research in design.

Outside the positivist scientific field, a body of knowledge on spatial experience is constructed by theoreticians and philosophers like Bollnow (2011). The phenomenologist

approach, adopted by architects like Pallasmaa (1996), Holl (2006) and Zumthor (2010), centralizes the sensory experience of space and does take into account the mutual influence of emotions and the environment. Some architectural approaches are closely related to the concept of healing environment, but rarely labelled as such –with exceptions in the context of design for mental or palliative care (Worpole, 2009; Jencks & Heathcote, 2010). Architects hold a rather intuitive knowledge about architecture's healing potential, which is not specifically stated in an elaborated theory or grounded in scientific research.

In summary, the concept of healing environment emerges in different shapes and domains. Despite the consensus that the built environment impacts people's experience and wellbeing, there is no integrated framework that offers guidance to designers of this built environment.

The reported study aims to investigate how architects deal with the concept of healing environment in design practice. Their situation is characterized by the absence of scientific knowledge to hold on to. However, architects are known for their creativity, which enables them to respond to a specific new situation. The study examines the design processes of five acclaimed architectural offices, all commissioned to design a Maggie's Centre. This provides a nuanced image of how these designers apply architecture to create an environment that is thoughtful of its users' emotional needs.

After outlining the study's methodology, the article introduces the Maggie's Centres. It presents the goals of the Maggie's Trust –the organization behind the Centres–, analyses the Architectural Brief, and introduces the five Centres selected for the study. Subsequently it zooms in on the designers' perspective. Interviews with architects provide nuanced insights in the way the concept of healing environment is addressed in the design process and allow identifying the main design themes they apply. The outcome was also presented to a group of users of one of the studied Centres. Findings from this focus group interview are reported briefly, as taking into account users' experience of an actual Maggie's Centre allows for a more nuanced understanding of healing environment's implementation. Finally the article relates the study's findings to other research and summarizes the lessons learned on architecture's potential to contribute to a healing environment in the design of Maggie's Centres.

Methods

The study examined the Maggie's Centres as a case where architecture is applied to contribute to a healing environment. Since the study aimed to understand intended and lived experiences, it adopted a qualitative research approach.

First, the organization's aim was analysed based on official documents by the Maggie's Trust and an in-depth interview with co-founder Charles Jencks by the first author and a colleague. Special attention went to the Architectural Brief (Maggie's, 2011a) architects are provided with, reflecting the Trust's goals.

Next, the first author conducted in-depth interviews with five designers of different Maggie's Centres, in order to reconstruct their encounters with the concept of healing environment. The interviews were semi-structured: interviewees were encouraged to tell their story while the order of the questions prepared to cover some important topics was adjusted to the course of the interview. The aim was to understand how healing environment was expressed in different stages of the design process.

Interviews were transcribed verbatim and reread thoroughly in order to obtain a holistic understanding. Concrete experiences were indicated in the transcripts and tagged with themes. A concept list was drawn up for all interviews and relevant interview fragments were linked to these concepts. Concepts were cross-analysed to understand their general and particular meaning. The findings are organized by design situations and substantiated with original quotations from the interviews.

In order to confront the designer intent with users' experience of healing environments, interview results served as an input for a focus group interview with users of Maggie's Dundee. As the focus group interview will be reported in detail elsewhere, this article reports the findings that are relevant in the discussion on architecture's potential to support a healing experience.

Maggie's cancer caring centres

Maggie's aim

The grounds for the Maggie's Centres were laid by landscape architect Maggie Keswick, who was diagnosed with cancer. She and her family experienced that the hospital environment could not offer them the support they needed, neither regarding information needs, nor in terms of the built environment. Encouraged by her husband, architecture critic Charles Jencks, and her medical team, Maggie developed a vision for a cancer caring centre:

She wanted a place that offered healing potential through its design, where people could meet and share with others in similar circumstances. She felt strongly that people could feel better by becoming 'active participants' and taking greater control over what was happening to them, and to do this they needed access to expert advice, information and psychological support. (Maggie's, 2011b, p.26)

The Maggie's Trust was founded in 1995 and is now lead by Laura Lee, Maggie's former oncology nurse. The fact that the organization originated from a patient initiative, is still clearly reflected in its philosophy. People are at the heart of the service, which aims to empower them by complementing conventional treatment with 'professional help, communities of support and building design' (Maggie's, 2011b, p.3).

The third aspect, the building's architecture, acts on two levels. Firstly, there is personal spatial experience. Interiors are designed to relieve distress, 'conveying the value [placed] on therapeutic environments and [the] aim to make people feel better simply by being inside a centre' (Maggie's, 2010, p.10). Secondly, the building's typology supports its operation. As Jencks (2010, p.14) explains, a hybrid building –blending aspects of a house, hospital, church and art gallery– can provide an informal continuity. It enables both visitors to open up and care-givers to be attentive. As such, the building can make the organization more effective in providing its service. Architecture's potential in this specific context is explained as follows:

A building has done a good job if it even lifts your spirits for a brief moment. If it creates spaces which make it easier to be with other people, by creating a comfortable balance between public and private, which make you feel safe but at the same time stimulate your imagination without your even noticing that such a thing is going on, then it has done even more. (Keswick, 2007, p.29)

The architectural brief

The Trust's expectations regarding the buildings are further clarified in the Architectural Brief, a short project definition that is presented to the architects. Basically, a Maggie's Centre consists of an entrance area, library, office, central kitchen, large activity room, two sitting rooms, some small counselling rooms, and some lavatory rooms. No technical requirements are mentioned in the Brief. Instead, it describes the different activities a Centre should accommodate and, particularly, the aimed atmospheres and experiences. These atmospheres are described from users' perspective, forcing architects to consider and respond to their emotional state.

As the following extracts illustrate, the brief communicates with designers in a narrative way rather than through a list of requirements:

The kitchen should be relaxed and inviting enough for anybody to feel welcome to help themselves to coffee or tea. (Maggie's, 2011a, p.8)

The interior spaces shouldn't be so open to the outside that people feel naked and unprotected. They should feel safe enough inside that they can look out and even go out if they wanted...this describes a state of mind, doesn't it? (Maggie's, 2011a, p.9)

The Brief also includes suggestions on how to humanize spaces, like applying domestic rather than institutional characteristics. This requires avoiding prescribed stereotypes:

We want to have the minimum possible 'administration office' type atmosphere. No doors with 'fundraiser' on the outside. We want the ethos and scale to be domestic. We need to think of all the aspects of hospital layouts, which reinforce 'institution' –corridors, signs, secrets, confusion– and then unpick them. (Maggie's, 2011a, p.10)

Substituting daunting institutional atmospheres with relaxing domestic ones is insufficient, however. As mentioned, the built environment should uplift and encourage its users. Maggie's Centres need a mix of both unusual architecture that is not alienating and domesticity that is not patronizing, as stated in the Trust's vision on building design:

Maggie's centres blend visionary architecture with warm, homely spaces, which inspire people to come in and feel comfortable as they seek out our support. [...] Our centres' open plan spaces encourage people to explore, while thoughtful details [...] puts people at ease and can inspire them to approach things differently. (Maggie's, 2011b, p.17)

A variety of buildings

The Trust currently hosts 12 Centres in the UK and one in Hong Kong. In three cities an interim service is provided, while eight more Centres are being planned. Many Centres are designed by famous architects who knew Maggie and Charles personally. For this study, five purpose-built Centres were selected. These were assumed to offer most information about the architectural features that were intended to contribute to a healing environment. Another selection criterion was diversity in design.

Maggie's Dundee (Figure 1) was Scotland's first purpose-built Centre and opened in 2003. Designed by Gehry Partners, it boosted the media attention for Maggie's. The building sits on a hill, overlooking the Tay estuary. A watchtower comprises the library. The building refers to the archetype of a house, yet with a folded metal roof –a modest version of Gehry's signature architecture. The interior surprises with high ceilings of an intriguing wood structure.

Maggie's Fife (Figure 2) designed by Zaha Hadid Architects, opened in 2006. As organic as Gehry's building is, as sharp and angular is the folded dark envelope of Hadid's. The interior walls, by contrast, are white and rounded. Triangular perforations in the envelope animate its bright interior. The enclosable rooms form a buffer zone at the hospital side, whereas the activity room opens onto a hollow.

Maggie's London (Figure 3) by Rogers Stirk Harbour + Partners opened in 2008, setting the precedent for slightly bigger Centres. It was the first Centre in an urban area. A spiralling red wall shelters the Centre and its garden spaces, while leading visitors into the heart of the building. The kitchen takes a central place in the grid plan, private rooms are situated in the outer corners.

Maggie's Gartnavel (Figure 4) was designed by OMA and opened in 2011. The predominantly glass building is sheltered by the woods. Koolhaas' team introduced a new typology: a circular building. Within its continuity, an intimacy gradient is provided: from public areas that overlook the area, over sitting rooms that can be closed off from the internal circulation, to sky lit solitaire rooms.

Maggie's South West Wales (Figure 5) by Kisho Kurokawa Architects opened in 2011 in Swansea. The building symbolizes a whirling galaxy. Its central part has an ocular skylight. The two opposite semi-circular wings with activity rooms rise from the ground and lead visitors directly into the building's centre, where the kitchen is situated –a metaphor for the centre that holds the energy.

Findings: designers' perspective

Taking an initial stance

For most of the designers interviewed, the moment they were asked to design a Maggie's Centre was their first confrontation with the concept of healing environment. From this point on, they started developing their own interpretation, which later on evolved into design concepts. Although the designers hold different opinions on architecture's role in people's wellbeing, they all touched upon the notion of individual spatial experience.

The designers at OMA asked themselves: 'what would a cancer patient need most in terms of an environment?', and answered: '[they] necessitate an environment where they can relax'. They aimed to create a pleasant environment with the appearance of 'a very big living room', hoping to induce 'a positive feeling, like you are at home'. At Kurokawa's, this home experience shifted to being able to 'find your own corners and feel at home'. They focused on the individual experience of a healing environment, because 'you heal at your own pace'. The Rogers Stirk Harbour team shared this opinion on individuality and explained architecture's role as follows: 'architecture is part of a process of making an individual feel comfortable and therefore aiding the healing process'. Hadid's team held similar ideas and grounded them in phenomenology. They stated that the 'environment does have a significant impact on your experience of space and also on the emotions that you feel'. This makes architecture and its designers 'responsible in actually making things easier [...] and

making you feel better, because you're surrounded by a better atmosphere'. The local architectural firm that collaborated with Gehry's stressed the sensory experience of space: 'the role of architecture is to heighten the senses and actually uplift'. This sensation can be emotional as well as spiritual. Therefore, architecture needs to reconnect with human needs, scale and senses, in order to 'humanize spaces'.

Designers' common aim was thus to create a space where one feels better. But who are those people whom architects designed this experience for? First, designers mainly focused on individual experience and rarely referred to group experiences. Second, they seemed to have an image of a primarily standardized user. Mostly they referred to 'cancer patients', particularly those in extreme situations: 'people who are undergoing treatment for cancer' or 'chemo patients'. Maybe designers chose to focus on extremes, or Maggie's moving story served as a main reference. Anyhow, the notion of the vulnerable user was frequently adopted to clarify design decisions.

Most designers differentiated this user image by occasionally referring to patients' relatives. Only one designer pointed to user diversity—even among 'patients'— by describing a conflict situation that can arise when 'someone coming in here feeling really low' is confronted with 'people that are a bit more lively', in a cheerful meeting around the kitchen table. None of the designers mentioned the staff or volunteers working in the Centre. One designer explained it was 'just a natural reaction [to] look at the majority'.

Setting up the design process

For most designers their unfamiliarity with the concept of healing environment initiated their collaborative relationship with the client—the Maggie's Trust. As mentioned, this collaboration was based on the Architectural Brief. According to the designers, it was quite an unusual document because no technical requirements were included. Instead, it described an atmosphere, 'more that aspirational feeling and understanding of what it needed to do', and communicated the Trust's vision on people-centred care.

The Brief also introduced some of the main design concepts, which were further elaborated during the meetings with the client's Architectural Committee. The concepts included: a non-institutional, relaxing atmosphere; the metaphor of a house, including aspects like the big kitchen table, living rooms, and 'the concept of a fireplace being a place that encourages social interaction'; and even small-scale design suggestions relating to the Centres' operation, like sliding doors.

The Maggie's Trust expected architects to imagine and respond to the users' condition. To facilitate this understanding, they extensively informed designers about potential problematic situations. Several designers mentioned for example that 'entering the building for the first time might be often off putting people'. One architect recalled the story of 'a young lad whose mother had cancer [...] and [who] came to the door about ten times before coming in'. The fact that architects repeated these examples suggests that personal stories functioned as a trigger and that narratives transferred information effectively.

Designers thought of the Trust as an expert who provided first-hand information about the Centre users. They even seemed to consider its expertise as a substitute for direct contact with users or other specialists. One architect stated: 'It was our understanding, and our understanding with Maggie's. We did not speak to any so-called expert, and certainly not hospital design experts'. Most designers also visited existing Maggie's Centres in operation. For some these visits were eye-openers, which even changed their design

approach. As one architect recalled: 'I learned a lot from [Maggie's Edinburgh], watching how people use the space'.

Reflecting on the concept generation, designers recalled that 'the most important part was actually guided by the client'. The relationship seems to be based on mutual respect and trust in the other party's competence. On the one hand, the architects accepted feedback about the Centre's operation and atmosphere. On the other hand, they did not receive any design restrictions but were encouraged to create an exceptional design. Designers appreciated the 'constructive advice' and the 'informally, friendly collaboration'. At the Rogers Stirk Harbour team this even influenced their use of design media: they only made 3D renderings 'after the building was designed', because 'it was about the power of trust, not the power of image'.

Finding the right spot

All Maggie's Centres are situated in the grounds of a National Healthcare Service (NHS) hospital with a major oncology unit. Designers took a mainly negative stance towards this hospital environment. Their comments ranged from 'hospitals do not have a pleasant atmosphere', to depicting them as 'the industrial face, the clinical face of medicine', and 'the machine of healing, a cold interface: a machine where patients enter on one side and get healed and exit on the other door'. These comments resonate with the Trust's aim to provide 'an antidote to the often impersonal hospital environment where people can feel inhibited and 'processed'' (Maggie's, 2011b, p.17).

Although the designers tried to create a contrasting environment in terms of atmosphere, their Maggie's Centres do not oppose the hospital. Because a Maggie's Centre is an important complement in terms of function (e.g., people may visit the Centre after a hospital appointment), the spatial link with the hospital needed consideration. All designers located their Centre such that it is withdrawn from but –at the same time– embedded within the hospital environment.

In trying to balance detachment and connection, designers used the landscape as a mediator, to 'integrate the Centre into the hospital without making a literal connection'. All designers orientated the Centre towards nature as much as possible. Some Centres (e.g., Dundee and South West Wales) were blessed with a green location offering stunning views. But in less fortunate settings too, nature was a key design theme. Assuming that people who 'leave the hospital [...] automatically tend to walk towards nature' because of its therapeutic character, designers felt motivated to (re)design the landscape, thus reinforcing its qualities. In Fife, the leftover hollow of a coal mine was transformed into a wild garden. Maggie's Gartnavel was hidden in the woods, surrounding a courtyard. Sometimes nature was even designed from scratch, like the series of gardens and patios in London.

Yet, the existing environment could endanger this carefully achieved restorative atmosphere. In case the surroundings exerted a bad influence, designers tried to shelter the Centre. The designers of Maggie's London developed 'a wall as a concept of something to wrap around the inside as a barrier to the street, but also an edge to other things within the site such as car parking'. This wall was also designed to envelope the outdoor spaces, thus creating a layer 'because the space around it was so harsh'. Another example is Maggie's Fife, located in the corner of a parking lot. The designers felt they had to 'create a sort of defence' against this aggressive environment. They developed a protective building skin, formed by 'a folded surface that [rose] from the asphalt'. Design decisions like designing a

barrier and keeping a certain distance spatially translate the aim to safeguard a differentiated atmosphere.

Attracting visitors

Building on the notion of the vulnerable user, designers put considerable effort in designing the entrance route. It needed to be obvious, since most Centres were withdrawn in a corner of the site. Furthermore, arriving at the Centre should require minimal effort, to overcome visitors' physical or psychological reluctance. One architect stated: 'we do not want any person finding an excuse to turn around and walk away'. Therefore, most designers opted for a comfortable 'meandering route through the landscape, which is direct but not straight'. Along this path, they provided seats for visitors to pause and proceed at their own pace.

In Fife and London, the designers opened up the sheltering envelope and extended it into the landscape as a vertical guiding element that outlines the entrance path. Also in Maggie's South West Wales, designers let the building arise alongside the entrance path. All designers interviewed eventually lead the path to a recognizable door. Indicated by the welcoming gesture of an overhanging roof, the entrances express invitation.

Besides the welcoming effect of convenience and clarity, also curiosity was a strategy to attract visitors. Firstly, several designers referred to the power of iconic architecture: 'a lot of people came because they felt attracted or curious about the building, even if they [knew] nothing about the Centre'. Curiosity is awakened by unconventional architectural forms. The building 'is an intriguing enough object' that people want to find out more about. The first view visitors get can be crucial, as the local architect of Maggie's Dundee suggested: 'as soon as you see the Centre, it is quite dramatic. The tower that you see, that is stunning. You get a real uplift: this is sculptural architecture'.

Secondly, curiosity was stimulated by offering glimpses inside the Centre as visitors approach. The wall of Maggie's London, e.g., has 'openings [that] draw you into the interior'. All Centres have glass doors, 'so immediately you could see right into the entrance area and at the other side out' towards the landscape. An architect determined that 'the vision is one which tends to invite you in'. Whether this vision concerns people, nature or the interior architecture, designers assumed that visitors 'certainly want to see more of that'. Architecture was thus applied to persuade visitors.

The designers interviewed devoted special attention to the entrance experience itself, being the final stage in the journey of arriving at the Centre. Entering the Centre was considered a meaningful moment, as it symbolizes accepting the illness and deciding to help oneself. Most architects tried to create 'a kind of wow-factor when people enter'. Most often this was achieved by an 'explosion of volume' and light or a 'moment of revelation where you discover that there is this wonderful landscape'. This is what Jencks (2010, p.7) calls the 'metaphor [of] the architecture of hope'.

Configuring the programme

The Centres' entrance area is atypical for a public building. The Trust banned the idea of a reception desk because of its institutional feel. Instead, they imagined visitors to be personally welcomed: 'as soon as you arrive, someone will offer to make you a cup of tea'. It was important that the staff could see people arriving and also keep an eye on visitors in the other areas, yet would not be too present. Designers figured out that the best solution to this was an open plan building where visitors 'arrive straight into the centre of the building'.

In London and South West Wales, the staff area was situated on the upper level and given a visual connection, so that visitors 'could be informally supervised'.

The open plan concept offers various advantages. Since the building's lay-out is immediately clear, visitors can intuitively find their way: 'like in your own house, you don't really try to navigate your way around, you don't get lost'. Moreover, it allowed designers to integrate the circulation area by designing interlocking sequences of spaces instead of corridors. The central kitchen was given great importance –in line with the brief–, as from this area people could 'tell which spaces are being used and which aren't' (Figure 6). Vice versa, people in the more private areas could notice what was going on in the Centre's more active parts without feeling forced to participate.

One of the biggest design challenges was dealing with the duality of the programme, asking for both spaces to gather and spaces to be on one's own or have a private conversation with a counsellor. In the smaller Centres of Dundee and Fife, the enclosed private rooms were aligned at the building's hospital side, whereas the more public area was situated at the back. In bigger Centres, designers created 'a sequence from more interactive spaces to more individual spaces'. In London the most private rooms were situated on the outskirts of the building, showing a clear hierarchy of spaces.

The presence of both group and private spaces in an open plan forced designers to think about adaptable relations between the different areas and their corresponding privacy levels. Designers tried to make 'enclosable' instead of 'just enclosed, cellular spaces', so that the building could have 'the facility to close itself down into several areas, but not with any fixed partitions or walls'. Most often designers opted for sliding doors, but also pivoting walls or large doors were applied to communicate the private nature of the conversation or activity going on, when closed, and to relate the space to the central area, when opened.

Apart from internal relations, designers also considered the relations with the exterior. Obviously the private consultation rooms needed privacy, so often they have windows above eye level or skylights. Designers wanted to make sure that people could for example 'exercise without people looking in'. Therefore the more open public spaces were oriented towards nature, so that people would not feel exposed. Hence, Centres were designed to be internally open –though modifiable– but rather private to the exterior.

Designing a healing experience

Not only is the Centres' programme two-fold, its aimed atmosphere is complex too. The Trust expected the building not only to help visitors relax, but also to inspire them. To achieve the former, references to a house were promoted, whereas the latter required unconventional architecture. To describe the Centre's atmosphere, designers most frequently used terms like 'calm', 'soft', 'relaxing' and 'comfortable'. Whereas some simply aimed to create such an atmosphere, others believed that the atmosphere also could foster 'contemplation', 'meditation', 'interest' or 'inspiration'. These ambitions confirm architects' individualistic user image.

All designers interviewed referred to domesticity, yet they pointed to different characteristics. Some wanted to create the feel of a 'home', whereas others clearly wanted to distinguish between an actual home and applying certain aspects of a house. These were for example 'intuition of space', a 'domesticated scale' and a 'domesticated layout', although they concerned a public building of a bigger scale than a house. Probably the metaphor of a domestic environment persisted because domestic characteristics were applied as a viable alternative for an institutional environment. The major motivation for an informal and

familiar looking environment seemed its ability to address people's unconscious understanding and help them relax.

Designers were also motivated to create unusual architectural forms. As mentioned, some applied architecture to make visitors curious and 'let them explore the building by themselves'. This applied to the buildings' exterior as well as interior. Kurokawa's Centre, for example, was given 'a staircase that goes up to a viewing platform' (Figure 7), which fits the concept of supporting people to take a more active role.

Another purpose of designing unconventional architecture was providing a visual focus. The timber ceiling structure in Maggie's Dundee, for example, is fully exposed. The ceiling has an organic shape, so 'the eye is forever following the timber' as the structure continuously leads to new details (Figure 8). The local architect explained: 'If you were sitting on your own, you could still quietly follow the architecture. That adds to the contemplation that you can have in here.' Also in South West Wales, the ceiling with its glass rim was aimed to allow visitors 'to focus their attention on something' and 'to lend itself to meditating'.

Light and loftiness were commonly applied to stimulate people's senses. Special attention went to diversifying the ceilings heights and windows. Small openings could frame views and allow the light inside to change. Big windows could draw the landscape indoors, curved solid walls could evoke privacy and enclosure (Figure 9). Skylights could create an exceptional atmosphere by providing light without views to the exterior, as applied in the meditation room of Maggie's Gartnavel (Figure 10). Architecture was thus applied to 'create different levels of intimacy'.

Confrontation: user experience

Architecture's role: from relaxation to stimulation

The interviews with Maggie's Centres' architects reflect designers' hesitation to make statements about architecture's potential role. Findings from a focus group interview with users of Maggie's Dundee suggest that they are much more convinced about its healing potential. Unlike some designers, the users interviewed expected a healing atmosphere to support not only relaxation, but also stimulation. One user stated: 'You'd want an energy from a building, that it would give you [an] uplift and a feel good factor'. Another user explained that stimulation can contribute to the optimism needed to be able 'to relax the fences you built up' and 'come to terms with your fears'. In this regard, relaxation and stimulation are very much intertwined.

The users were also asked to illustrate how architecture can contribute to a healing experience. First, 'light' and 'spaciousness' were claimed to contribute to both relaxation and stimulation, 'physically [making] you feel good'. Regarding relaxation, users referred to the importance of 'a small, domestic entrance' 'that doesn't overwhelm you'. Several users stated to relax immediately when entering the Centre because of its atmosphere. Regarding stimulation, all users stressed the fascination evoked by unconventional forms. For example, the Centre's exposed roof structure was appreciated, because 'you honestly see something different, absolutely every time'. Impressed by the building's organic design, one user stated that this is 'an important feature: not square'. These comments suggest that the general design approach of combining familiar and relaxing domestic features with surprising and stimulating features –as promoted by the Trust– is successful to the design of Maggie's Centres.

Privacy in an open plan

The designers interviewed stated that configuring group and individual spaces was a major design challenge. The focus group interview with users suggests that an open plan configuration does not threaten privacy as long as it allows withdrawal.

Users' statements provided more insight into the actual operation of this two-fold space. One user referred to a foreground/background model to illustrate how privacy is experienced in an open plan building: 'you can have nice, peace and calm and [...] chickens crowing in the background'. Users tolerated the noises, as they liked being aware of other activities without participating. Yet, they brought up some privacy issues, e.g., acoustic problems during meditation sessions and consultations. This highlights the importance of modifying acoustic relations, as in certain situations, users might feel the need for a soundproof space to withdraw to.

In general, the users interviewed appreciated the building's openness. The fact that it prevents isolation was rated an important quality: 'you could be on your own but not alone'. This balance turned out to be achieved through social intelligence. Users indicated that one learns to use the open space, by noticing who needs more privacy and '[leaving] the pair of them alone in their own space'. Isolation did not seem necessary for private conversations, because of the 'shared understanding' amongst users. Privacy requirements in an open plan building appeared to be met by social behaviour. This explains users' appreciation of a layout with 'corners' and 'alcoves': 'it lends itself to being able to be in an open space but yet to be private, whereas if you have just one big square, it would be a lot more difficult'. Being spatially connected to the main space while managed by social relations, these areas allow for a distinct atmosphere.

Focus on individual versus collective experience

Findings from interviews with Maggie's Centres' designers revealed a focus on individual experience during design, whereas Centres mainly operate as a collective space with changing compositions of groups. This user diversity requires major attention during design. The risks of adopting a narrowed user image during design are illustrated by the acoustic problems mentioned above, but also a lack of space in the staff area, as signaled by users in Dundee.

The focus group interview provided interesting insights in a Centre's collective spatial experience. Several users stated that social contact was not a main motivation to visit the Centre, yet considered an atmosphere of 'shared understanding' –based on a shared confrontation with cancer– crucial. The 'whole building' turned out to be experienced as a private space in its entirety. Users' emphasis on 'shared experience' highlights a Centre's group experience. This calls for architects' attention to the design of community-building aspects (e.g., the kitchen table) and the flexible accommodation of changing group configurations.

The focus group interview also revealed that users' experience of the built environment was highly influenced by their appreciation of the support service. A Maggie's Centre's experience was claimed to be the 'combination' of the spatial experience and the experience of the social atmosphere, which cannot be separated. In several user statements, characteristics adopted to describe the architecture, such as 'welcoming', 'embracing' and 'warm', also apply to the support service. The fact that users linked these qualities, suggests that they characterize an integral experience. Herein lays a potential for architecture to express particular qualities of the programme it accommodates.

Discussion & conclusions

This article aimed to shed a light on the meaning of healing environment by reconstructing architects' encounters with this concept in designing a Maggie's Centre. Despite a growing recognition that the built environment influences people's well-being, scientific research does not provide an integrated framework for designers. This raises questions on how architects deal with a concept like healing environment. Interviews with five designers of Maggie's Centres provided insights into their particular approaches to the concept during the design process. This closing section relates the findings to other research and formulates conclusions.

The designers interviewed did not rely on scientific research to ground design decisions. Their designs expressed the concept of healing environment through various themes that relate to architects' intuitive knowledge and personal experience. This has been noticed frequently in research, and according to Cuff (1989) may also explain architects' general focus on individual spatial experience.

In the interviews with the designers, several themes could be identified. For example, they associated healing environment with nature. This may not come as a surprise, given its origin in research on restorative environments (Kaplan & Kaplan, 1989), and the consideration of environmental factors in debates on architectural quality (Day, 2002). More particular to the Maggie's Centres was a focus on domesticity, which was promoted by the Maggie's Trust to support relaxation –a philosophy Jencks (2010) entitles *Kitchenism*. Another important theme in design was spatial experience –architects' core business. Considerable attention was devoted to meditation spaces and the entrance, in order to respond to visitors' emotional needs. Architecture's ability to intensify experiences, through materials (Zumthor, 2010), intimacy gradients (Day, 2002), or by providing spatial metaphors for mental changes (Malnar & Vodvarka, 2004; Worpole, 2009), seems part of architects' common knowledge.

These common design themes were often negotiated by the Maggie's Trust, which played an exceptional role in the design process. The architects interviewed particularly appreciated the collaborative relationship. The concept generation process could be called a *collective production* (Crilly *et al*, 2008), as both parties provided a fundamental contribution. The client's role was to communicate a care vision, which is specifically based on user needs –e.g., through an effective design brief (Annemans *et al*, 2012b). As such, the client's contribution could be regarded as an alternative for *consumer engagement* (Crilly *et al*, 2008). Yet, the combination of designers' focus on personal experience with a lack of direct user engagement introduces the risk of an unrealistic user image. Designers' reliance on the Trust makes its contribution crucial.

The importance of the client's role even increases when taking into account findings from the focus group interview with users. The Trust influences not only the creation, but also the experience of its Centres. This could be called *collective consumption* (Crilly *et al*, 2008), for the established ethos of the support service acts on user experience. Whereas designers mainly focus on the physical environment, the influence of the social context should be recognized too.

The success of the Maggie's architecture and support service are thus intertwined. As such, architects' role is to express the client's philosophy spatially. When resonating, architecture may amplify the effectiveness of the support service. This makes close collaboration between designers and client not only a characteristic, but even a key success

factor in realizing a healing environment. A result of such collaboration, the Maggie's Centres show a case where a healing environment is realized without a scientific basis but inspired by user experience. Further research should be conducted on the potential ways to communicate user experience to designers. The importance of the briefing process has already been recognized (Elf *et al*, 2012) in this regard. Yet a broader exploration of knowledge transfer from users to designers might optimize the implementation of healing environments in design practice.

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Figures



Figure 1: Maggie's Dundee by Gehry Partners
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Figure 2: Maggie's Fife by Zaha Hadid Architects
© Duncan Cumming



Figure 3: Maggie's London by Rogers Stirk Harbour + Partners
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Figure 4: Maggie's Gartnavel by OMA
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Figure 5: Maggie's South West Wales by Kisho Kurokawa Architect and Associates
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Figure 6: Maggie's London by Rogers Stirk Harbour + Partners
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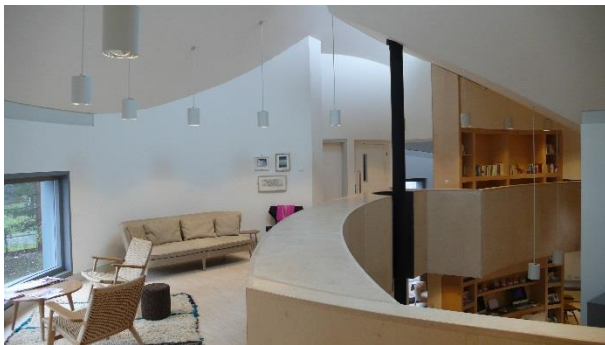


Figure 7: Maggie's South West Wales by Kisho Kurokawa Architect and Associates
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Figure 8: Maggie's Dundee by Gehry Partners
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Figure 9: Maggie's Fife by Zaha Hadid Architects
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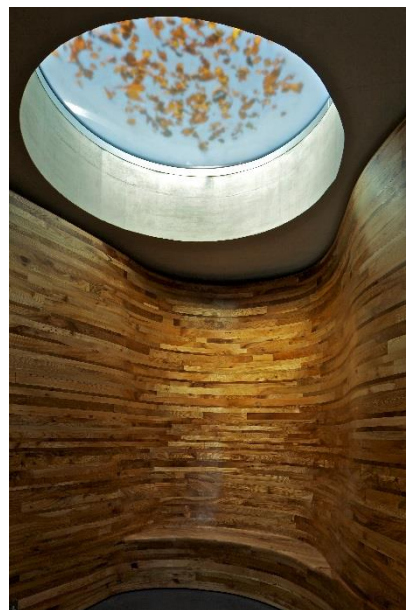


Figure 10: Maggie's Gartnavel by OMA
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