# CURE WITH CARE
## Plea for a more sensory architecture

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## About the authors

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**Abstract**
The health care system in the Netherlands is under pressure; the social welfare system is unsustainable. Rising costs in health care and above all a sharp rise in the ageing population combined with a continued rise in life expectancy prompt the need for new measures. The health care system will need to be dramatically reformed, but we will also need to focus on a radical redesign of our environment.

**Keywords**
Inclusive design, sensory architecture, environmental psychology, caring architecture

## 1 Introduction

Since the 1980s a neo-liberal breeze has been blowing through the Netherlands whereby the emphasis is placed on more responsibility for citizens and public institutions. This privatisation has, in fact, not resulted in the envisaged improvement in quality and differential needs, nor in a reduction in the length of waiting lists. The majority of health care institutions are struggling with enormous problems which are becoming ever more pressing owing to the pressures incurring from the rise of aging population. It is not only the health care institutions themselves, but also their buildings which are not cut out for this growing target group – a group of elderly persons who are, although aging, also fitter, have longer life expectancy and have their own personal set of requirements. In this respect it is time to permanently shift the supply controlled system into a demand controlled system in which the autonomy of the person in need for long term care will be improved. Care should give an answer to the changing needs and wishes of the next generation of elderly.

Social circumstances for the elderly have changed since the idea of a 'final' home. Inhabitants have been complaining for years about the temporariness and impersonality of care institutions. Current care establishments appear to be primarily concerned with cure rather than care – it goes without saying that this influences those who use these places. Contemporary care architecture seems to have overwritten the obsession for health and functionality in its field of activity and context. Elderly care establishments leave

hardly any space for interpretation, the unexpected or surprise. It's character is based on the avoidance of risks.[1]

This medical and functional approach to care architecture has led to a standardisation of the care environment. Buildings no longer appeal to their users. Architecture and objects communicate with their users and 'project' their 'ideas of happiness' on to the inhabitants, states British philosopher Alain de Botton in *The Architecture of Happiness*. Our environment, the décor in which we reside and live, has an enormous impact on how we experience our lives. Even though we attempt to steel ourselves against our physical surroundings, one cannot deny that we are strongly influenced by the location and atmosphere of a space. Through the basis of its structure a space or an object provokes emotions, uses and behaviours. It visualizes our idea of happiness and represents the person we would like to be or become.

### 1.1 Hospitalisation

The origin of elderly care has never been designed as such. It finds its origin through a historical process in society. The responsibility for elderly was mainly a private concern. This private responsibility gradually got supported and completed by initiatives from churches, labour unions and interest groups, and later on, the government. This shift from private to public concern has resulted in the existence of care establishments in the Netherlands.[2]

According to the philosophy of Alain de Botton, the majority of care establishments are destined to exude chiefly misery. When we examine the buildings that these establishments inhabit, we see that the majority of them display the hallmarks of an institution. These are buildings with which we cannot, or do not want to, identify because they do not express our ideas of human needs as far as safety, comfort and welfare are concerned and sometimes even keep inhabitants literally imprisoned by, for example, denying them control of lighting, air (windows) or warmth (radiators). The Canadian sociologist Erving Goffman showed, as early as the beginning of the 1960s, that the psychiatric wards in residential buildings had the effect of making the patients totally dependent. He introduced the term hospitalization for the behavioural effects of compulsory residency in these depersonalised buildings.

Old care establishments and nursing homes are generally designed along the lines of hospitals. Nursing and care were central and therefore design was mainly concerned with the work environment for the nursing staff. Functionality received pride of place, whereas human characteristics were neglected. In care establishments living space had to be simple, easy to clean, and require a minimum of upkeep. Thus the chosen interiors with a predominance of hard materials created a disagreeable acoustic climate resulting in an unpleasant space for the inhabitants. Wheelchairs or other aids were often in sight (or in the way) in the corridors, as were the carts with dirty laundry. In this way spaces and objects remind the inhabitants constantly of their physical or mental deterioration. In these old buildings one can speak of a great imbalance between the functional character and the aesthetics of the surroundings.
Elderly people in care establishments find themselves in a world where fear, vulnerability. Losing a great deal of their autonomy, they are often dependant on the care available in their surroundings – because of this, a certain form of alienation can occur. Moreover, a growing group of elderly people cope with health problems related to old age, such as deteriorating (visual and audible) perception and cognitive abilities. Care buildings can support these physical and psychological alienations by providing a safe, more

[1] J. Rodermaond: Weg met de grauwsluier; zorgarchitectuur vaak onnodig stigmatiserend, in 'Hedy d'Ancona prijs voor excellente zorgarchitectuur', published by the Stimuleringsfonds voor architectuur, Ando BV, Den Haag, 2010.

[2] J. Eijlders, W. Ros, G. Schrijvers: Hoe komt de burger in Europa aan zorg? Een oriënterend onderzoek naar indicatiestelling en zorgtoewijzing voor langdurige chronische zorg in zeven Europese landen. UMC Utrecht, 2009.

comfortable and more sensory living environment.[3]

### 1.2 Healing environments

In recent years there seems to be a growing interest in improving the quality of both our living and our working environments. We are becoming more conscious of the impact of our surroundings on our wellbeing – witness the growing amount of literature on this theme. Nonetheless, for the time being this has led only to a smattering of high-profile innovations in care environments. We can see that slowly hospitals are becoming involved in creating *caring and healing environments*, more so, because minimal adaptations to the design, architecture and decoration can often lead to impressive improvements in recovery. The term *healing environments* became widely known through the work of behavioural therapist Roger Ulrich who researched illness recovery in the 1980s. In the meantime much research has been done into the positive effects of using natural element – plants, natural materials, a view of nature – on health. Patients who have a view of trees from their rooms tended to recover more quickly, and even a painting or image of a natural environment would have a favourable effect.


Reestoord, Meppel, the Netherlands

### 1.3 Critical elderly people

It is expected that it won't be long before care establishments also take up this innovative stance – certainly now that a new target group is presenting itself. Future residents are often representatives of the so-called baby-boom generation, a large and particularly articulate and critical generation who – rightly – make new demands about their often 'final' home. These greying baby-boomers want to have their individual needs taken care of and wish to have a high level of involvement. In the light of this growing group of critical elderly persons new structures and combinations of living environments and (health) care and also in particular care-architecture are important.

If we consider that architecture is a human product, it should perhaps respect human dignity through a balanced distribution of function, form and aesthetics. Spatial aspects could incorporate elements which have an influence on the way the space is experienced. How can we create care establishments which take more account of the needs of the residents – buildings which strengthen emotional and physical health – mental and sensual prosthetics as it were?

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[3] T.Vollmer & G. Koppen: Fysieke en psychische vervreemding, in 'Hedy d'Ancona prijs voor excellente zorgarchitectuur', published by the Stimuleringsfonds voor architectuur, Ando BV, Den Haag, 2010.

Below we have made but a number of suggestions, in which we mainly focus upon a more sensual architecture – building which feel more pleasant (literally and figuratively), in which we can easily understand one another, in which we can easily find our way around, where our physical disabilities can be supported through a strong focus on light and colour, and whereby we can enjoy smell and taste. After all, the organisation of a building influences health. Think, for example, of the spatial organisation of the building, the way in which spaces are situated in relation to one another and the place (literally and figuratively) of the care centre in relation to the rest of society.


Vitalis Peppelrode, Eindhoven, the Netherlands

## 2 Your own space

Living and working agreeably is a condition for feeling well. Ideas about how an agreeable, pleasant home or building looks, are very disparate, but spaces in which residents and users feel safe and comfortable, meet a number of basic requirements. Thus a pleasant home or office primarily offers the possibility of a space of your own where one has some privacy. The user of a building can access everywhere and has control over various elements that regulate comfort, such as temperature and light. The symbolism of a building should also fit its function.
A pleasant stay also requires a barrier-free environment. This goes for both buildings and the (semi) public space surrounding them. A barrier-free building emphasises the autonomy of its users and fits in with users needs, also if they differ from the norm.
For nursing homes safeguarding / guaranteeing an ‘own’ space is of great importance. Experiments show that elderly people comport themselves more socially if they have their own space to which they can withdraw.

Casa Bonita, Apeldoorn, the Netherlands

### 2.1 Sight and view

For the elderly with diminished eyesight lighting is of great importance. From the age of 60, many generally need fifteen times as much light as a ten year old in order to be able to see the same. Lots of day light and lamps with a high illumination are therefore of great importance – both are regularly lacking in many care establishments, (particularly old ones).
Moreover, care needs to be taken as to how light is admitted – too much contrasting brightness will quickly lead to people being dazzled or confused. By setting windows deeply with respect to the outer walls, or through an overhang, direct sunlight, which could cause discomfort, can be more easily avoided. Also, windows positioned not too high in the gable, so that light enters the room at a lower height, creates a more diffuse light . A skylight can also be the cause of disturbing light – the light falls in a 'puddle' on the ground and can cause confusion.
Also, awnings, window blinds or adjustable Venetian blinds can also seriously disrupt the view. Specific applications such as foils which absorb sunlight can reduce dazzling light and warmth whilst not preventing or disturbing the visibility through the glass. It speaks for itself that a view of green surroundings is preferable to the view of a car park.

### 2.2 Colour

Particular colours stimulate and agitate whereas other colours have a calming effect. The use of green gives a sense of safety, whereas blue has a restful effect and the colours red and yellow both stimulate activity.[4]
In care buildings, a good balance should be maintained between the colours used, but above all, one should avoid going to town with a mass of different colours. Flooring, carpets or wallpaper with an excess of coloured patterns can be particularly confusing. People with dementia could, for example, interpret these as a dark hole or abyss.

[4] E. M. Sternberg, M.D.: Healing spaces; the science of place and well - being, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, London, England, 2009.


Talma State, Heeg, the Netherlands

### 2.3 Tactile stimuli

Touch is the sense with the largest bodily surface. The whole body is home to touch receptors in various degrees. According to the Finnish architect Juhani Pallasmaa it is impossible to design a good building without taking the sense of touch into account. He even believes that hands can think, (see the title of his marvellous book, *The Thinking Hand*.)
A building can accommodate tactile stimuli by working with different materials. By using tactile materials in transitory spaces such as the corridor leading to the living room, the blind and visually impaired can easily recognise the different spaces. The same goes for obstacles, for example by laying a carpet at the beginning or end of the staircase.
A so-called smear / smudge / stain plank – a plank at hip height – in the long corridors is also often experienced as something helpful. The plank offers extra support and literally gives something to hold onto, certainly for those elderly people who are not so steady on their feet.

### 2.4 Sound

Sound and silence have an effect on our nervous system and our emotional reactions to the direct surroundings. Sound can evoke many different emotions.[5] An environment with a diverse pallet of residents should certainly take into account individual differences, not only in taste but also in awareness. Ideally residents themselves should be able to determine volume – but this is not always feasible.
The acoustics of the building are actually more important. Elderly people with reduced hearing capacity are greatly advantaged by understandable speech. By using simple, inexpensive, acoustic enhancing materials to adapt a space, speech clarity can be greatly enhanced. It is also important to separate spaces that have different functions – it is extremely disruptive for people with impaired hearing if sounds from the kitchen continually intrude into the living space. This is something which goes against the current trend of removing the walls dividing rooms to create large open living or working spaces.

### 2.5 Smell & Taste

Unpleasant smells in care homes for the elderly such as the smell of urine or the odours from soup kitchens can invoke a negative humour and put people off visiting the building. Smell should actually be inviting and invoke a sense of comfort and wellbeing. Through spreading natural smells, for example flower or

[5] E. M. Sternberg, M.D.: Healing spaces; the science of place and well - being, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, London, England, 2009.

plant smells, the experience of a care home can be influenced in a positive fashion.
Furthermore, in an increasing number of care / nursing homes there is growing attention to making healthy and fresh food available. The way taste is experienced plays a large role here. Fresh products, preferably grown locally, enhance the taste experience.
In short: in care buildings for the elderly there should be a balance between institutional professionality and individual singularity, between sensory perception and cognitive perception, between rest and experience. The primary functions of a building are the provision of physical and psychological safety, but certainly, equally important is that the building is able to give its inhabitants a feeling of 'happiness'. Architecture is a human product and should therefore preferably reflect as many human qualities as possible. As Alain de Botton says – "What we hope to find in architecture ultimately doesn't differ much from what we expect to find in a friend."

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