



The Haptic Envelope: Evaluating Material Honesty and Earthy Textures in Non-Institutional Palliative Facades

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Abstract. Most institutional palliative care centres end up making patients more anxious instead of less, mainly because of the stark, sterile look of their building envelopes. This paper looks at what I am calling "The Haptic Envelope" in the context of non-institutional hospice design, and tries to understand how macro-textured, natural building skins can help patients feel more grounded and emotionally secure. The study connects the idea of material honesty — specifically the deliberate use of exposed brick masonry and raw travertine texture — with the broader concept of salutogenic, or health-promoting, architecture. Looking back at Indian vernacular construction, where raw earth and stone were used to represent stability and grounding (the Prithvi element), the paper builds a qualitative design framework that can be applied to present-day healthcare facades. It also studies how these macro-textures respond to changing daylight to create softer, glare-free visual environments that reduce sensory agitation for patients. The Benziger Hospice Home by Srijit Srinivas Architects is used as the primary case study, since it is a real, award-winning example of unplastered brick being used to turn a healthcare building into a calmer, more earth-bound space.

Keywords: Haptic Envelope, Material Honesty, Exposed Brick Masonry, Travertine Texture, Salutogenic Facades, Palliative Architecture.



I. Introduction

1. Overview / Historical Background

Introduction, Background, and Context

A building starts communicating with the people who use it well before they actually step inside — the facade is really the first psychological impression that a patient, caregiver, or visiting family member gets. But most contemporary healthcare design still leans on a fairly industrial material vocabulary: aluminium composite panels (ACP), glass curtain walls, and high-gloss, almost sterile concrete finishes. For a terminally ill or elderly patient, these cold, reflective skins tend to reinforce the feeling of an alienating, institutional space, which only adds to the anxiety and emotional vulnerability they are already carrying.

Problem Statement

Even though evidence-based design today puts a lot of emphasis on the psychological well-being of patients, that focus almost always stays limited to interior planning or biophilic landscaping. The exterior facade itself is still mostly treated as just a functional weather barrier and nothing more. Architects don't really have a simple, non-mathematical set of guidelines to design macro-textured exterior walls that reduce glare and, at the same time, give a healthcare building a warm, dignified, non-institutional identity even before a person walks in.

Aims

The aim of this paper is to build spatial strategies and material guidelines that connect older vernacular wisdom with present-day construction practice, so that hospice facades of the future can prioritise tactile and visual warmth on their building skins.

2. Objectives

Managing and Controlling Exterior Architecture: To gain some control over the external identity of healthcare blocks, so that they respond well to their natural surroundings and avoid the feeling of "institutional shock" on arrival.

Present Technology Application: To see how materials that are already easily available, like native wire-cut bricks and travertine stone, can be combined to build layered, self-shading facades without needing any complex mechanical or mathematical calculations.

Prototype Framework: To put together a working guideline that other final-year architecture students could also refer to, showing that raw, honest material choices can actively contribute to a patient's healing process.

II. The Values & Significance

1. Architectural Significance

This study pushes back a little on the standard industrial treatment given to modern building elevations. By focusing on material honesty — that is, leaving brick and stone unplastered and unpainted — the research tries to shift the building envelope from being a passive outer wrapper to becoming an active, health-promoting element of the space.

2. Cultural & Emotional Significance

In the Indian context especially, end-of-life care needs an environment that treats human vulnerability with a certain amount of humility. Using earth-derived materials ties the building back to regional vernacular history, and gives patients and grieving families a sense of cultural familiarity, timelessness, and grounding during what is already a very difficult phase of life.

III. Issues & Potentials

1. Case Studies & Literature Review

Environmental psychology research has repeatedly shown that people have a natural preference for organic textures, variation, and imperfect, natural patterns. Within healing architecture specifically, researchers like Roger Ulrich have shown that stress levels tend to drop when patients are exposed to natural features. Going further back, traditional Indian architecture was organised around the Panchamahabhutas, or the five elements, where the Earth element (Prithvi) was specifically associated with stability and grounding.

That said, there is a clear gap between what modern healthcare finishing guidelines recommend and what material authenticity actually demands. Most hospitals still prefer high-gloss, easily bleachable finishes because they look "clean," but these same surfaces create harsh specular sunlight reflections, or glare, which cause headaches and visual fatigue for patients. Very little existing literature actually explains how rough, unpolished materials could be used on a building envelope in a way that absorbs glare while still holding up structurally.

To understand how all of this plays out on a real project, this paper studies the Benziger Hospice Home in Thiruvananthapuram, Kerala, designed by Srijit Srinivas Architects. It is a 26-suite facility built for underprivileged cancer patients, and its exterior envelope directly responds to the emotional needs of the people who use it.



Figure 1: The double-slanted louvered brickwork facade of the Benziger Hospice Home by Srijit Srinivas Architects, showing a glare-free, non-institutional identity.

The main facade has a striking double-slanted, louvered brick feature wall that shields the recreation areas and patient balconies. By choosing red clay bricks and leaving them in their raw, natural texture, the design avoids the intimidating, sterile feel of a typical hospital building. Instead, the macro-textured envelope filters the harsh tropical sunlight, lets cooling breezes through, and creates a constantly shifting pattern of light and shadow that feels genuinely calming.

2. Development Strategies (Methodology)

This study follows a qualitative, comparative design approach, based on real material behaviour and established case studies, and deliberately avoids getting into complex mathematical or physics-based formulas.

The analysis cross-checks material properties taken from standard architectural catalogues — manufacturing specifications for wire-cut bricks and raw travertine blocks — against the visual glare and environmental comfort observed in the Benziger case study.

The procedure roughly follows three steps: first, texture mapping, where the physical depth of different textures (rough brick projections versus pitted travertine) is catalogued; second, light-interaction analysis, which studies how changing sun angles hit these rough surfaces and turn harsh glare into softer micro-shadows, using the Benziger louvered walls as the baseline; and third, zoning applications, where these observations are translated into a simple "Proposals Matrix" for exterior surfaces.

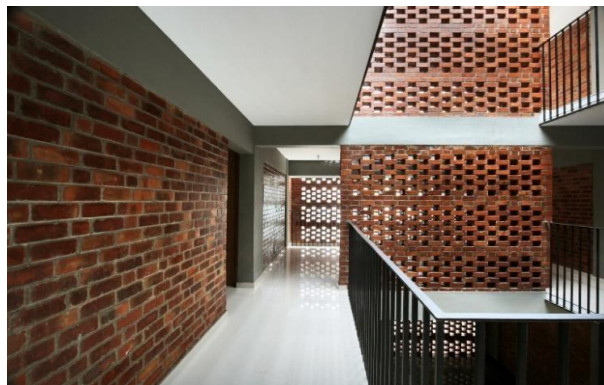


Figure 2: The landscaped central courtyard of the Benziger Hospice Home, showing how un-plastered brick textures interact with natural daylight.

3. User's Preferences & Implications

Key Factors: Palliative care users, especially those with declining eyesight or heightened sensory sensitivity, generally prefer low-glare environments, muted earth tones, and tactile surfaces that feel warm and stable rather than cold and reflective.



Strengths: This framework gives a practical, visually pleasing design standard that can be applied to almost any existing structural grid or massing without needing to change the internal column layout or room planning.

Limitations: Exposed brickwork and natural stone need skilled masons for correct execution, and they also cost more upfront compared to basic plaster and commercial paint finishes.

IV. Result — Modern Era Designs

This research puts together a fairly clear material framework for modern palliative care facilities, showing that natural textures can genuinely act as a sensory filter for patients. The comparative results of applying these finishes are summarised in the table below.

Elevation Component	Standard Material (Clinical)	Proposed Material (Haptic Envelope)	Primary Sensory Benefit	Precedent (Benziger Hospice)
Primary Mass Skin	Smooth plaster and high-gloss paint	Wire-cut exposed brick masonry	Cuts down specular glare and gives a grounded, human-scale texture	Used on all three structural wings to keep the mood calm
Entrance Portals & Transition Nodes	Polished granite or ACP sheet cladding	Raw, open-pore travertine stone	Softens harsh sunlight and absorbs heat instead of throwing it back onto walkways	Matte, earthy transitions at entry points ease arrival stress
Shading Elements & Ventilation Screens	Metal louvers or concrete fins	Perforated / louvered brick patterns	Breaks harsh wind into gentler breezes and creates moving light patterns	Cantilevered, double-slanted feature wall that also protects patient privacy



V. Conclusion

This paper lays out a fairly straightforward, low-risk method for selecting and organising exterior building skins in palliative design. By combining the structural depth of exposed brickwork with the softer, light-absorbing quality of travertine stone, architects can create an exterior environment that is both therapeutic and low on glare. As seen in Srijit Srinivas's work on the Benziger Hospice Home, choosing to leave materials in their raw state turns out to be a genuine act of care. These material choices show that the outer skin of a building isn't just a passive cover — it can actively help calm a patient's arrival experience and ground the architecture within its local landscape.

Recommendations & Future Scope

To effectively communicate the intent behind a raw material palette, final design presentations and technical drawings should emphasize detailed wall sections—particularly at the junctions where exposed brick meets smoother materials like travertine. Explicitly labeling these detailed intersections as "Haptic Therapeutic Buffers" provides immediate clarity on how tactile material choices are intentionally leveraged to enhance the sensory and therapeutic quality of the space, justifying the use of an entirely exposed brick envelope.

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