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Spectracentric: colour and light as intrinsic design tools

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SPECTRACENTRIC:
Colour and Light as Intrinsic Design Tools

This thesis aims to show that colour choices in architecture should be considered as intrinsic to the design process. Colour will first be discussed in terms of what it is and how it functions, including the fact that colour and light are inseparable elements. We also see how our eyes function in terms of colour and why we perceive it as we do.

If colour is inseparable from light, and if varying light conditions change the appearance of colour, more attention should be paid to context in terms of natural light when choosing colour for building projects. Africa's unique light qualities will be considered as different to other places and some reasons for this will be touched on.

In relation to built space, colour is a large factor in our perceptions of spatial quality. We look at some of the reasons for this and how we can use this colour behaviour to our advantage to manipulate space. This leads on to how colour and light can be used in other ways to relate a building not only to its localised geographical context, but also to its place in time. We look at natural colour and light progressions over days, months or seasons and then explore ways to harness this in our designs.

Finally, further to contextualising a project in place in terms of natural light quality and cultural colour ideals, and beyond utilising nature's cycles to position a building in its time-line, we look at the greater scope of colour and light, their origins in the Universe, and how a design can consider a wider contextuality, revealing a building's position on the earth and, indeed, in relation to the cosmos.

The resultant project is an observatory for amateur astronomers in the Karoo. The astronomy component operates alongside art related activities, accommodation and a Visitors' Centre.

From conceptual stage, the design endeavours to position the building in its context, and to use colour and light to create solutions unique to the environment.

Materials and structural solutions have been selected to reinforce context in a rural, semi-desert region.

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