





DESIGN DISCOURSE

PRODUCT DESIGN

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A product can be physical or metaphysical. This dissertation attempts to uncover the generic ideas behind the design of products while identifying physical and intellectual issues pertaining to industrial product design. Slack states (2006: 7) that a product design is an ambiguous idea that blurs the boundaries between specialist fields of lighting, furniture, graphic, fashion and industrial design. Perceptual and physical boundaries constantly erode as global communication improves.

Designers should clearly identify the relations between the past, present and future, and the potential effects of political, social and emotional influences within their environment. Technological developments in logistics and information systems bring global neighbours closer to each other and enable them to communicate and exchange cultural values through many vehicles of expression.

Products are designed with particular considerations valued by the designer, client, or end user that are then communicated through the products' purchase and use. Product life cycles shorten as fashion and technological improvements affect our product selection criteria.

NEW DESIGN: AN ERA OF HYBRID PRODUCTS

A hybrid product is formed when two or more objects are merged to create something new, but still has visible references to a past life (Slack, 2006). The act of hybridizing is a provocative way of questioning the relevance of an object, and signifies an element of progressive thought by which we challenge what is the basic truth behind the reason for the product itself. Certain qualities of each product can be enhanced or subdued to give the desired effect.

Designers, engineer and infuse an object with perceptual and physical values that reach beyond pure functionality. Function is often posited with form, yet such a purist approach to design seems to be less popular than the idea of layering other value-generating product offerings that go beyond form and function. An emphasis on other aspects of the object can induce a novel product through greater attention to intangible qualities

The marriage of certain characteristics makes a product stand out and even suggests a less recognised use. Ambiguity and challenging the traditional norms of form and function are mainstays for today.

ERGONOMICS

Ergonomics being the applied science concerned with designing and arranging products so that the end user and the product interact safely and in the most efficient way (Adler, 2006).

Design is not just about the application of technology, form and functionality; rather it is about people and understanding behaviour. Perhaps this is where we can locate the essence of designing the unexpected.





MULTI FUNCTIONALITY

Multi functionality is demanded within the sustainable context of our everyday life. Static forms that once served a single purpose now provide dual or multi functionality. The simple way the end user can interact with the object is not confusing, but beneficial when the product reinforces its rightful presence within context.

Chameleon products either have a function that is out of sight when not in use, or change to move from one use to another, producing a more ambiguous affect. Still other products make a show of this added functionality.

LIFE CYCLE AND SUSTAINABILITY

The life cycle of a product will be the various stages through which a product passes from introduction to the market to withdrawal or obsolescence (Hanaor, 2006). There are many considerations that relate to a product's life cycle. These include: growth and decline of market, changes in style and fashion, availability, reliability, systems for maintenance, opportunities for upgrades, and ecological considerations.

Slack reminds us (Slack 2006: 66) that a product with an ephemeral nature will have a short life cycle due to factors such as fashions, trends and technological obsolescence. Waste is a key; of product specific concern. There are two main types of waste: physical and perceptual. Perceptual waste is caused by cultural forces that determine value and desire; physical waste relates to tangible material waste – direct or indirect residues from a particular process and/ or use.

There are means by which we can improve life spans, and not only by using ecological materials. We can consider: redesigning within the areas of waste management; reuse; restorative waste cycles in which one man's waste is another man's fuel; ease of repair; durability; flexibility for choice; and add-on components with improved upgrades (Hanaor, 2006). We need to devise new methods of working and communicating beyond geo- and socio-political boundaries, to question material applications, and also take on the consequences of our imagination should the design fail in some way.

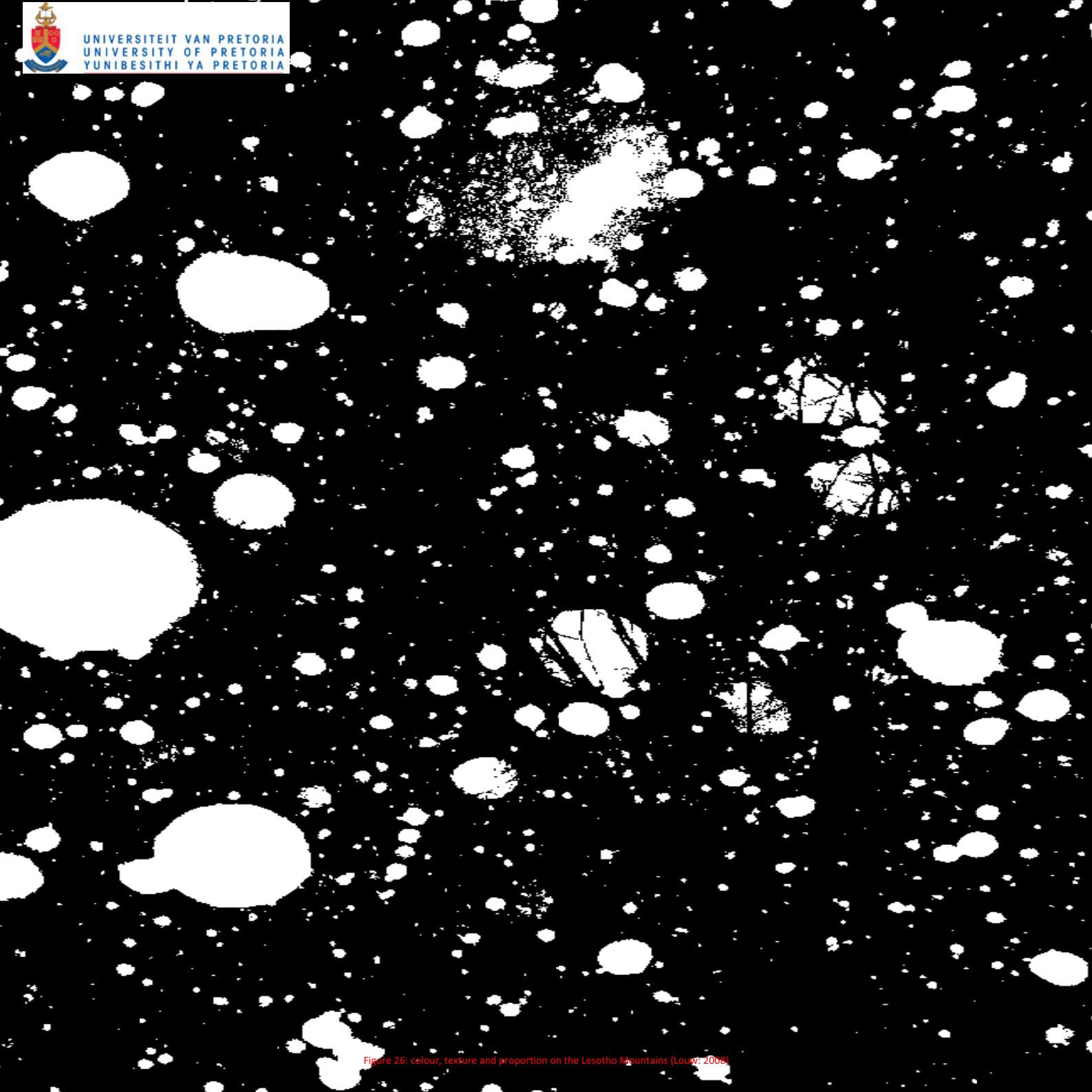


Figure 26: colour, texture and proportion on the Lesotho Mountains (Louw, 2008)



COLOUR

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Colour is like visual poetry to the eye and should be considered thoroughly in product design. Colour has a psychological effect on our moods and behaviour; it affects how we respond to our surroundings. Colour is not purely a visual manifestation – it affects the mind on a subliminal level.

The selection of a colour depends on the relevance of the product in use and in the end user's context. Vivid colours create a strong impact that attract and draw attention. Colour can highlight and reinforce, or blur a detail of a product; it can unify and simplify the general form. Designers, for example, usually apply a monochrome approach to colour within their designs or use the naturally occurring colour of a material.

Product design needs to take on a greater understanding of both colour and both the tangible and intangible effects it has on the end user and their decisions (Slack, 2006). Colour is usually considered toward the end of the design process and is rarely the starting point. Colour is dependent on the end use of the project and the mind of the designer.

TEXTURE

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A product's texture can provide a tactile experience or a visual play on its perceived tactility upon contact. The skin of the product is a human/ product interface where, practically, the internals are concealed and protected from everyday use, and, experientially, the user perceives sensory responsiveness (Lupton, 2002). There are many ways to induce an intended response through the selection and application of a multitude of materials, finishes, and processes to create the desired properties of the product "skin".

Texture can be given to a surface in many ways to add to the product experience: Printing, embossing, lacquering, painting, polishing, brushing, layering, adding textile structures and more variants.

In a visual and tactile sense, the play of a flattened or enhanced surface provides more information to the end user and can heighten or dampen the user's response to the objects hidden or accentuated attributes (Lupton, 2002). Texture can highlight overall or specific areas of functionality, shape, and decorative effect.

The application of different textures provides the user with information in order to assess and understand the placement of a product within their environment.

PROPORTION

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The proportion of a product needs to be set in the mind of the observer as a specific object in the context of particular surroundings or other designs.

Designs with pleasing relationships between the parts of a whole and its surrounding, require a consideration not only of the actual object, but also of the relationship of the object to its environment.

Individuals interpret the placement of products within an environment in their own, personal way; the result can be intrigue or a sense of peace and beauty. A designer questions the recognised "truths" about proportion, and their application, through the design process.



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BRANDING

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To brand a product is to place it in a new context, to make it familiar, to leave a mark in time, and add another dimension to the way it is viewed (Olins, 2008). Branding is an important element of the design process and demands consideration in a world in which it is increasingly hard to gain visibility.

According to Olins (2008) brand identities are created when visual, auditory and written messages are sent consistently. He also reminds us that a brand is what consumers remember about a product after being exposed to marketing stimuli.

A name can convey perceptual qualities: a Diamond Chair must be precious and should be treasured. Often a name relates to the main characteristics of a product's appearance or to a certain function it can offer.

The key consideration in branding a product is problems that might arise from direct translation and whether the name is inventive or evokes certain experiences or observations. To give a product a name is a difficult undertaking in a global setting, where linguistic diversity, translation issues, pronunciation, and meaning must all be considered. The name of an object should flow off the tongue and be pleasant to say in as many languages as possible.

Branding can be a powerful means of offering a direct visual image of a product or adding a layer of ambiguity, with an indirect or completely fictional interpretation of the product (Interiors Forum Scotland, 2007).

A good name is a powerful force in branding and can help differentiate or add emotional context to a product to engage your customer. If one can conjure a certain feeling in the user by emphasising the intangible qualities that indirectly reveal the product, one will have an edge on a less evocative competitor (MINE™, 2005).

Brand recognition and other reactions are created by the use of the product or service and through the influence of advertising, design, and media commentary. A brand is a symbolic embodiment of all the information connected to the product and serves to create associations and expectations around it and therefore very important in the success of the product (IFS, 2007).





FACTORS TO CONSIDER

1. Alternative format

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General considerations

An alternative format describes a different presentation or representation intended to make products and services accessible through a different modality or sensory ability. By providing all input and all output, i.e. information and functions, in at least one alternative format, for instance visual and tactile, more people, including some with language/literacy problems, may be helped.

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Alternatives to visual information

The type and texture of surface finishes can be important in providing tactile feedback which can reinforce instructions and warnings for those with visual impairment. Where the principal form of instruction on a product or in a building is written, alternatives would be:

voice (instructions 'spoken' by a product or service)

sound (feedback from clicks, bells and buzzers) or

touch (tactile marking or grip).

Wherever feasible, visual information which is presented should be available in audio or other sensory stimuli for those with a visual impairment including those who cannot read Braille, as well as for those who have difficulty with reading or are unable to read. Printed visual information should be available in alternative formats (electronic audio, large raised letters or Braille, etc.) which are readable by individuals without vision and in large print for those with low vision.

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Alternatives to auditory information

Wherever feasible, sound signals should be supported by visual or other sensory stimuli for those with a hearing impairment (e.g. communication in writing, graphical symbols, vibration or sign language). In particular, audible warnings, such as fire alarms, should also activate, for example, visual stimuli, such as flashing lights which are well sited and clearly indicated.

2. Location and layout of information and controls and positioning of handles

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Location

The position of information and controls on a product, or in a building are important. They need to be prominent for someone with a visual impairment or language/literacy disability, visible from the angle of view of someone standing and seated in a wheelchair, and easily accessed by seated or standing users without bending and stretching.

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Spaces

The design of spaces can incorporate simple measures that enable people to feel more confident in the physical environment, such as well-placed, sturdy handrails. Controls and door handles within easy reach facilitate use by those with impairment in dexterity, manipulation, movement or strength.

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Layout

The layout of information and controls will also determine how easy they are to read by someone with a visual or cognitive impairment. Factors to consider include logical grouping of information and controls, line length of text, relevance of information and relationship of controls to actions to be undertaken.



оставете вратите да функционираат сами !!
двери открываются и закрываются автоматически
laisser les portes fonctionner seules !!
do not try to open or close the doors !!
bitte nicht die turen ziehen oder schieben !!



SAFETY INSTRUCTIONS

DURING REGULAR OPERATION, IT IS FORBIDDEN
→ TO MOVE AROUND AND TO CAUSE THE GONDOLA TO SWING
→ TO OPERATE THE DOOR OPENING DEVICES
IN CASE OF A PROLONGED STOP, YOU MUST AWAIT THE INFORMATION
WHICH WILL BE GIVEN BY THE OPERATING STAFF



3. Lighting levels and glare

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Provision of lighting

Appropriate lighting ensures that those with a visual impairment are better able to see instructions and controls. This should also be considered for those with a hearing impairment to assist with lip reading or sign language communication. By default lights will always be on and should be switched off should it cause hindrance.

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Spaces

Adjustability of lighting levels in a space is desirable to suit different needs but sudden changes in lighting levels should be avoided.

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Avoidance of glare

Too high light levels and strong directional light can result in deep shadows or glare. Reflecting surfaces on information panels should be avoided, to reduce the possibility of glare.

4. Colour and contrast

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Choice of colour

This is important for ease of recognition and ease of seeing. Some colour combinations are also more effective. Like black and white.

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Colour combinations

The best colour combinations depend on the purpose of information, whether it is for guidance or a hazard warning, and the lighting conditions under which it is most likely to be viewed. For example, black on yellow or light grey are general purpose combinations which provide strong definition without too much glare, pastel shades on pastel backgrounds or red lettering or symbols on light grey are difficult to see and should normally be avoided.

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Colour coding of information

All information conveyed with colour should also be available without the perception of colour. Colour coding should not be used as the only means of conveying information, indicating a response or distinguishing a visual element.





5. Size and style of font and symbols in information, warnings and labeling of controls

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The required size of font for information, warnings and labeling of controls, relates to the probable viewing distance, level of illumination and colour contrast of the text against its background. The choice of font, whether with or without serif, in upright form or italics and light, medium or bold appearance also has a significant impact on legibility. Standards developers should also be aware that text written in CAPITAL letters is more difficult to read.

This is significant for those with a visual impairment. Consideration should be given to specifying size and style of font and symbols for warnings.

6. Clear language in written or spoken information

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Information available as text

Information should be made available in text format wherever possible, in addition to other forms, to facilitate recognition and translation into speech and other languages for those who have trouble seeing, recognizing or deciphering non-text information presentations.

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Pictographs/pictograms

Pictography is a form of writing in which ideas are transmitted through drawing.

Pictograms can often transcend languages in that they can communicate to speakers of a number of tongues and language families equally effectively, even if the languages or cultures are completely different. This is why road signs and similar pictographic material is often applied as a global standard, expected to be understood by nearly all.

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Complexity of information

Instructions or operations which are too complex will often deter older persons and persons with limited intellect from using a product or device. Simple written or spoken messages are also clearer to understand by someone with a visual or hearing impairment. All safety instructions in the funitel should thus be kept direct and simple.

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Spoken information

The context should always be given to ensure that information is meaningful and instructions should be provided in a logical order. Key points should be reinforced by repetition. People with hearing loss are at an increased risk or disadvantage if spoken announcements are not loud enough, or if the pitch is too high or too low. All this should be taken into account when voice recordings are played in the enclosed funitel.

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Multiple languages

Where instructions are to be provided in more than one language, written information in each language should be presented in separate sections of a manual rather than interleaved on a page; spoken information should be preceded by a clear statement in the language to be used.





7. Graphical symbols and illustrations

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The use of meaningful graphical symbols or illustrations, in addition to text, should be considered in instructions and also on a product, for ease of assembly or use. For example the same symbol should be used on the respective ends of parts to be joined, when assembling a product, or in the labels on controls.

8. Loudness and pitch of non-spoken communication

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People with a hearing loss are at increased risk or are disadvantaged if warnings are not loud enough, or if the pitch is too high or too low. Where possible, volume should be adjustable over a wide range. Information should also be presented in multiple frequencies where possible (e.g. an alarm signal could consist of a strong component at multiple frequencies). Sudden changes in volume should also be avoided.

9. Slow pace of information presentation

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Announcements spoken at a slow measured pace allow listeners to pick out the message; pauses between instructions give time to understand and act on the information. Consideration should be given to the length of time information remains in view when presented on moving displays, or when information is temporarily displayed and then removed.

10. Distinctive form of objects

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Identification by form

A distinctive form can make it easier for those with visual impairment and reduced touch sensitivity to identify an object, to interpret the parts of a product to be joined during assembly and to distinguish between different controls. A familiar form can also aid those with impaired cognitive ability, such as identification of seating and the control panel in the funitel.

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Orientation of objects

Where possible, the form of the object or control should also indicate the orientation of the product or control, so the top or bottom, front or back, can be easily located by someone with a visual impairment.

11. Controls

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Handling

The force required to twist, turn, push or pull controls or fastenings is significant for people with various impairments. Operating controls should allow comfortable grip, avoid twisting of the wrist, avoid the need for simultaneous actions and offer minimal resistance. Textured surfaces, to increase friction, assist the application of force. Provision of alternative controls offering greater leverage or power-assistance should be considered. Preprogrammable operation and personal preferred settings can be effective, particularly for people with cognitive impairment.

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Spacing

Controls should be spaced to avoid interference when another one is being operated.

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Timed responses

Whenever possible, users should be able to control any limits on the amount of time available to them to read or respond.

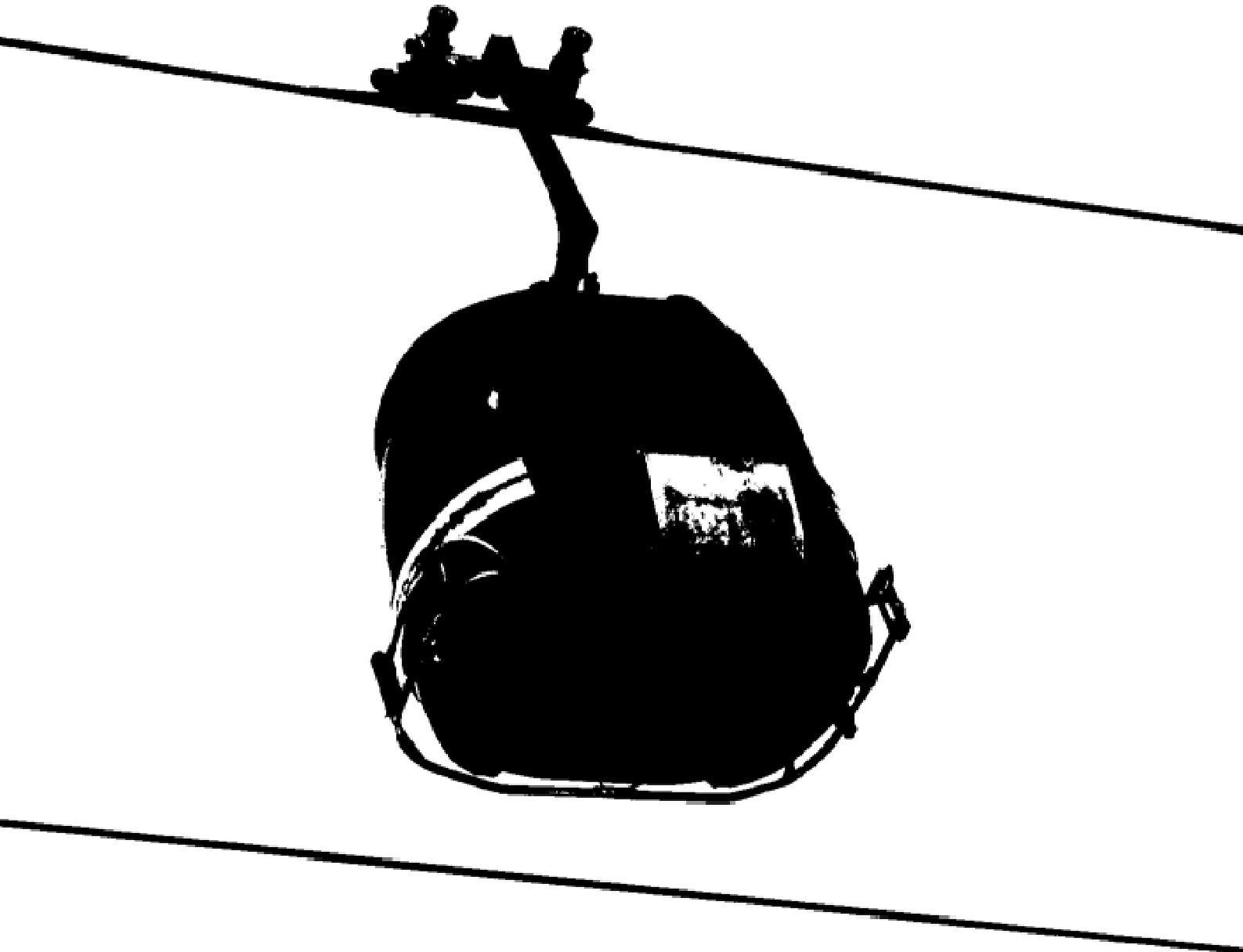


Figure 32: gondola in Bulgaria (Louw: 2005)



12. Accessible routes

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Flooring

Flooring should be reasonably slip-resistant, firm and stable. Floor guidance for visually impaired people should be provided.

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Swing, sliding or powered door-closing systems

Automatic opening door systems in emergency situations controlled manually. These can injure people and should incorporate appropriate safety mechanisms. Consider alternative audio indication on opening and closing of funitel door.

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Seating

This should be provided at appropriate locations in a facility or environment to enable users to rest.

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Coverage

Accessibility should be planned for all areas where people normally work or use the environment; it should be ensured that the accessible routes connect those areas by the shortest possible path. Care should be given to the inclusion of sanitary facilities within the accessible routes.

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Route information

Guidance on accessible routes through a building is of particular value to those with a visual, movement or cognitive impairment.

13. Surface finish

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Slip-resistance and texture

The surface finish of any space is important for all people. A non-slippery surface aids gripping and manipulating.

14. Non-allergenic/toxic materials

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Avoidance of toxic and allergenic materials is particularly important for people with impaired tasting or smelling ability and those with contact, food or respiratory allergies. Examples of everyday objects that contain nickel or chromium, which can create an allergic response, include doorknobs and window frames. People with visual impairment who rely on touch or tactile feel may be at risk if they come into contact with allergenic materials.

15. Fire safety of materials

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Consideration should be given to the fire-resistance qualities in products and buildings used by people with disabilities. Materials susceptible to ignition by a small source such as a cigarette, match or other small flame present a potential hazard if they continue to burn, producing toxic smoke or result in rapid growth of fire. People who