

https://dspace.org/

Kwa Thema Plaza, Arts and Crafts Center

Phailane, Vusi James

2009-09-17T06:45:46Z
http://hdl.handle.net/10539/7283

Downloaded from a DSpace repository. https://dspace.org/

Form, function and tectonic___01
Flexibility, multi functionality of space___02
Arts and Craft Center___03



"Wonder the Herdboy"
(Author 2007)

Form, function and tectonic

In psychology the term 'function' is defined as 'ability' or 'power'. The dictionary amplifies this definition by adding 'special kind of activity' or 'mode of action' (Van Wegen 2005: 1).

'Functional' refers to the functioning or functions performed by something, in this case a building. Thus, the functional ability of a building means its ability to fulfil the functions envisaged for it" (Van Der Voordt 2005: 3)

The function of a building include: protection function; protection of people and property against harmful influences and dangers.

Domain or territorial function; buildings make it possible to operate in a place of one's own, without disturbance of others. Key aspects: **privacy, safety, and security**.

Social function: buildings create spaces and places in which people can carry on their activities optimally. Primary elements are welfare, communication and quality of life.

Cultural function: a building must satisfy requirements relating to the **form** and character of the spatial environment. The cultural function involves aesthetic, architectonic, urban design, planning and environmental factors. Culture also includes the notion of civilization, one of whose implications are that buildings and the activities they accommodate should not be nuisance or cause damage to the environment.

Architectural forms and language responding and corresponding to the needs, heritage and lifestyle of the people, to create identity and place making for the township square (cultural district) so it maintains its character and does not loose its essence. "City character is blurred until every place becomes more like every other place, all adding up to Noplace" (Jacobs 1962:338)

Dewar has describe regionalism as "a recognition of the inextricable interdependence between the characteristics of a place, peoples activities in that place and the emergence of cultural expressions [Ubuntu] and forms – the triad of 'PLACE, WORK, FOLK" (Dewar, Uytenbogaardt et al 1977:13). The wholeness which Lewis Mumford calls "the territorial basis of civilization" (Mumford, 1939). Mumford further describes the modern, expanding metropolis as "an image in place of the 'non-plan of the non-city," (Sennet 1990: 34).



Interiors of Yale Center for British Art 1953; Louis I Kahn
(www.greatbuildings.com; cited 06/07/2008)



Yale Center for British Art 1953; Louis I Kahn
(www.greatbuildings.com; cited 07/2008)

Hillier and Leaman (1976: 2) distinguish main functions of a building:

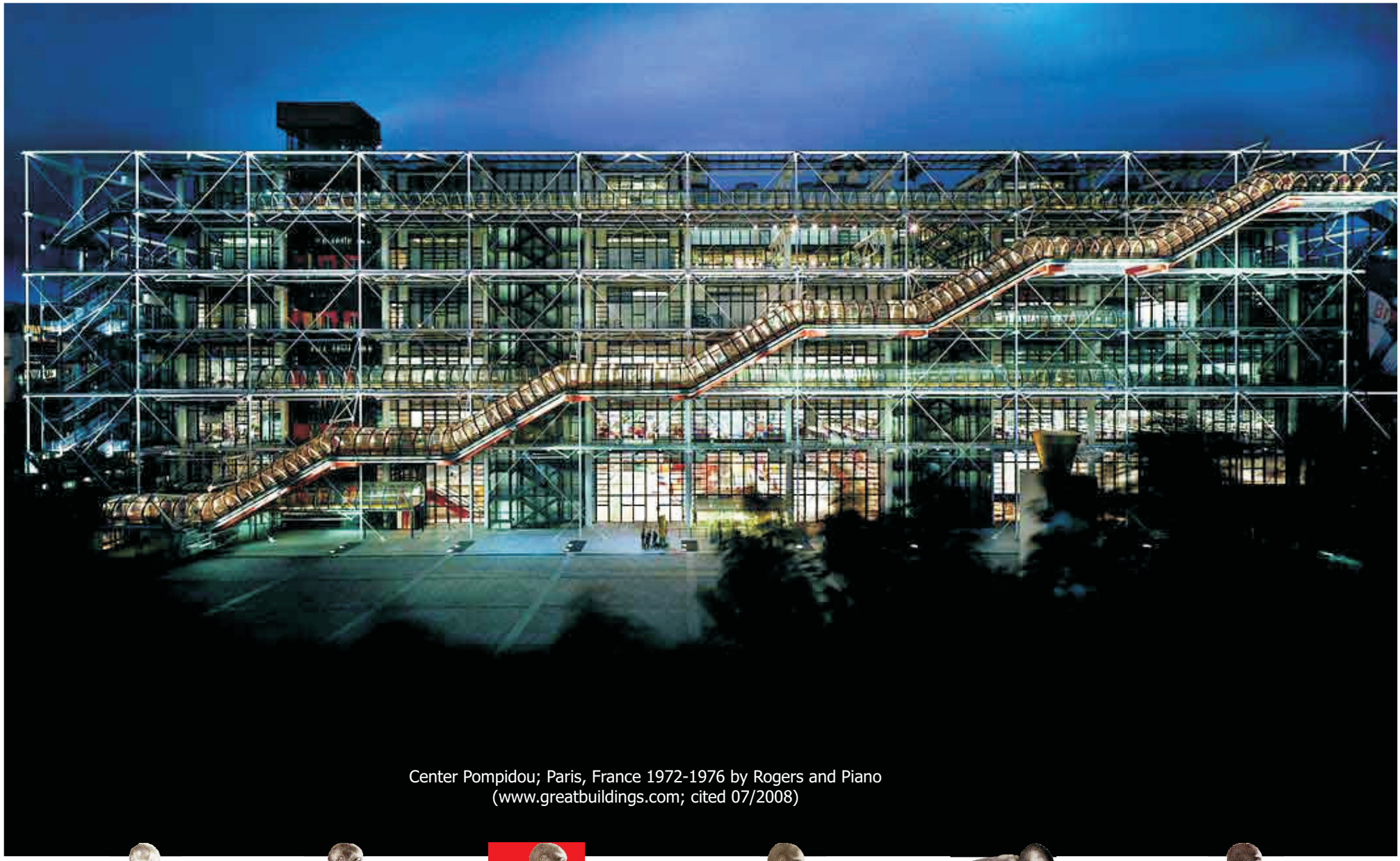
Spatial organization of activities, a building needs to provide optimum support for the activities desired properly arranging the available space. By siting related activities next to one another and providing efficient communication between them, and by separating activities that are likely to conflict with one another.

A building must provide optimum interior climate for the user's activities and property. Inside the building, elements which separate and connect and the equipment of the different rooms must make it possible to adjust the interior climate of each room to suit its own particular use.

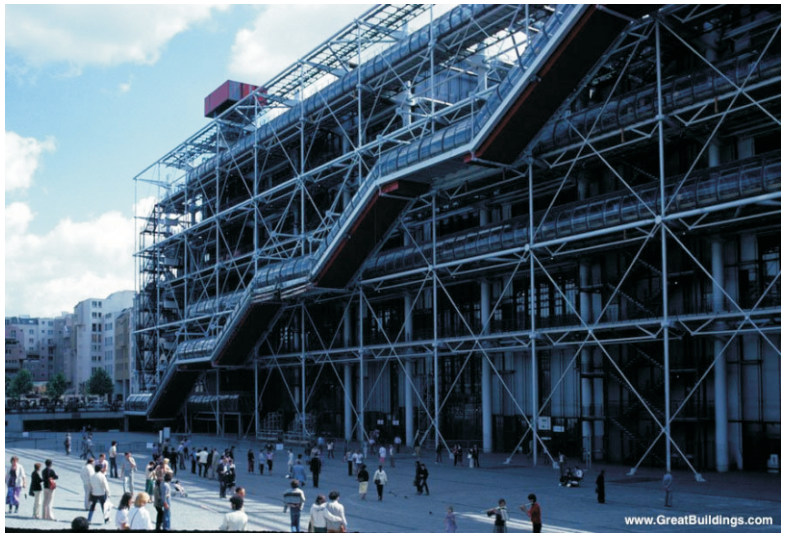
A building can be seen as the material embodiment of the specific ideas and expectations of the designer, client and user. This makes it a cultural object, an object with social and symbolic significance and meaning.

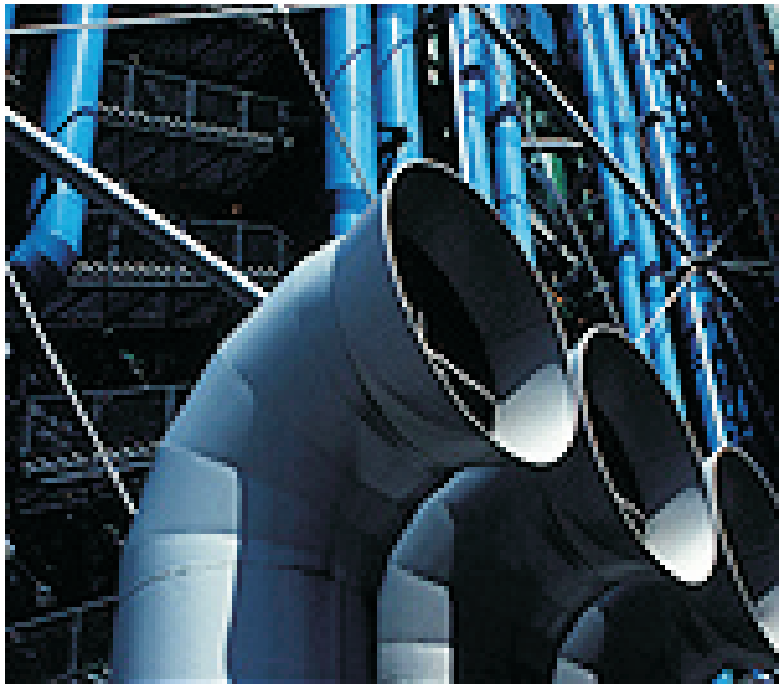
"Primary functionality means utility value or effectiveness of a building. Secondary functionality is concerned with function as a bearer of meanings ... a building as a means fo expressing status, evoking a sense of beauty or representing the experiential values that are described in terms such as 'pleasant', 'pleasing' or 'attractive'" (Van der Voordt (2005: 3)

The Yale Center for British Art, the structural elements of a building are revealed, and their function is expressed



Center Pompidou; Paris, France 1972-1976 by Rogers and Piano
(www.greatbuildings.com; cited 07/2008)





Structural expressionist and function is revealed
Center Pompidou; Paris, France 1972-1976 by Rogers and Piano
(www.greatbuildings.com; cited 07/2008)

The context in which the building takes place also plays an important role in the choice of form. The qualities of the location, the time of construction, social conditions, fashion, economic and legal restrictions, all individually influence the design and form of a building

'Architectonic' or rather **'tectonic'** refers to the use of parts as expressive signs that comprise the language system of the building. The term is also used to describe an approach to designing where the structural elements of a building are revealed, and their function expressed

'Tectonic' is linked primarily with visual and compositional qualities and symbolic or cultural meaning, so that it comes to be seen as complementing or sometimes even contrasting with functional quality" (Van Der Voordt 2005: 4).

Tjeerd Dijstra, former government architect, states that: "It is essential that the form of a building is derived from the user requirements and the possibility of achieving efficient construction with available materials and techniques and taking into account the urban design context. And this should be done in a way that is both stimulating and appealing (Van Der Voordt 2005: 4)

The relationship between the form, function and construction, consistency and context is emphasized.

Components of architectonic quality, according to Dijkstra (2001: 5)

Utility value: the extent to which the building is suitable for the use envisaged suggests this use and gives it an extra dimension.

Clarity and complexity: the composition of the building should structure the way it is perceived, making it clear, comprehensible, recognisable and familiar. The building should be stimulating, which requires a degree of complexity. Complexity exists when a composition combines a number of different themes: for example when the structure of the building derives not just form its function but also from its urban design context.

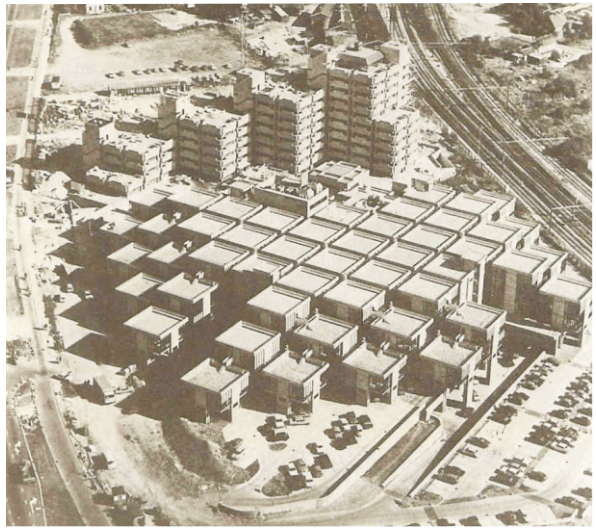
Object and context: internally, this refers to such things as the treatment of the transition between public and private, between collective use and individual use; externally, it refers to the contribution the building makes to (and the influence it exerts on) the quality of public open space.

The manner in which use is made of 'tectonic' resources such as size ratios, materials, texture, colour and light.

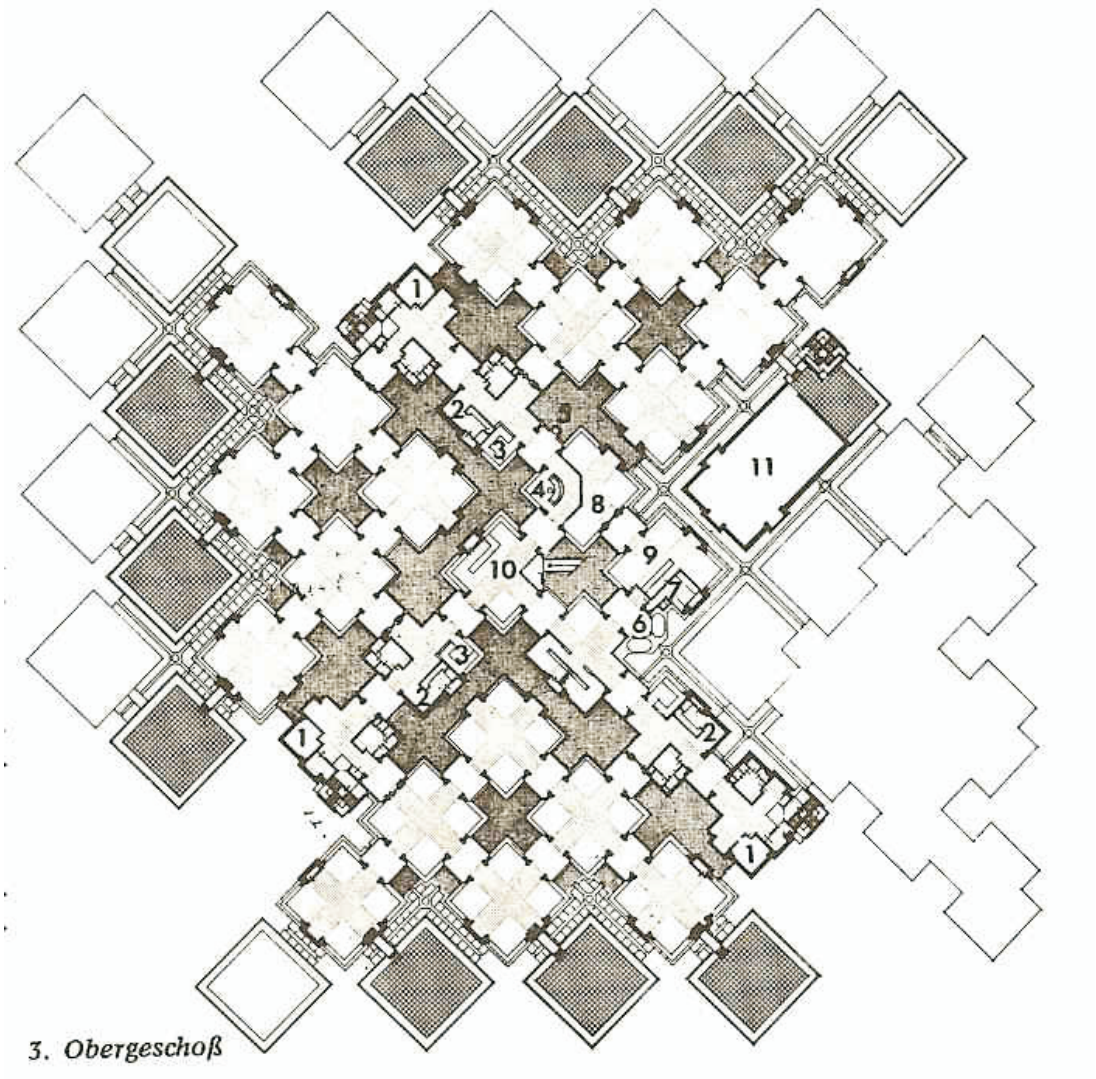
Flexibility, multi-functionality of space



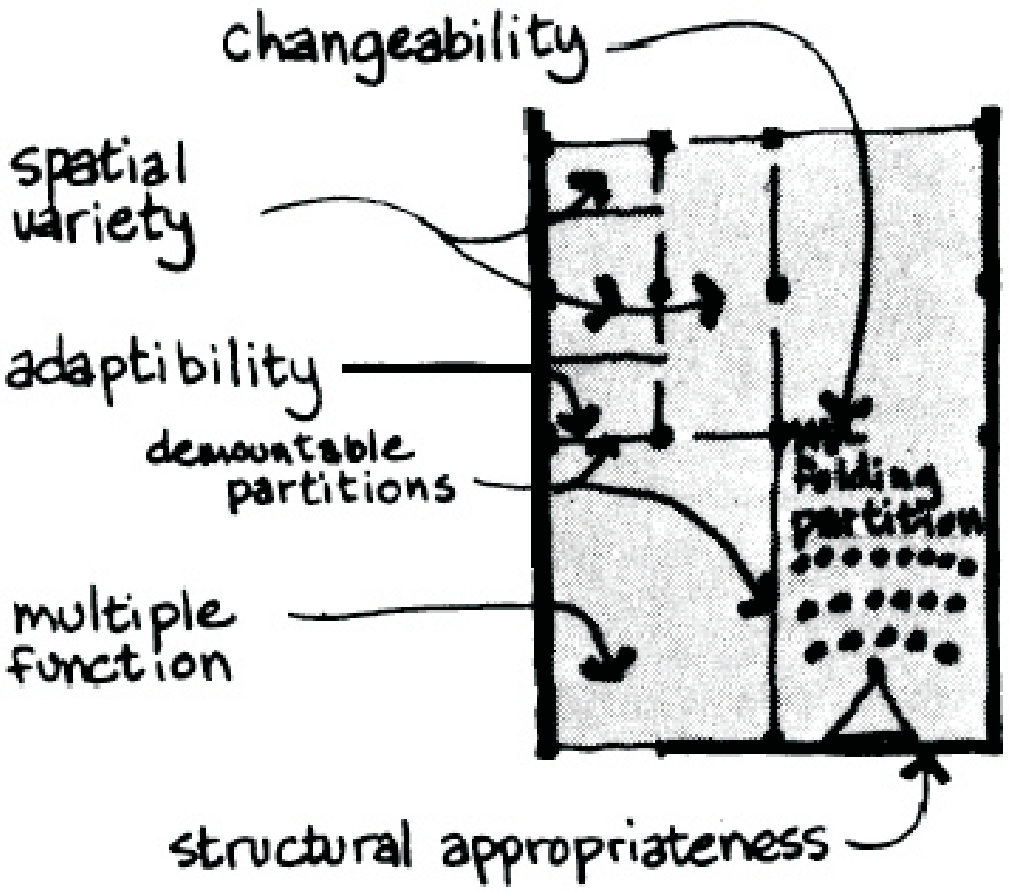
Aerial View of Central Beheer by Hetzberger
(www.greatbuildings.com; cited 07/2008)



Central Beheer by Hetzberger
(www.greatbuildings.com; cited 07/2008)



Floor plan of Central Beheer by Hetzberger
(www.greatbuildings.com; cited 07/2008)



Physical flexibility
(Unified Facilities Criteria, Arts and Craft Center 2005: 16)

A space that has been designed to suit only one function is often rather badly suited to other functions. However, both use and user change with time. Structures that are designed suitable for multiple use allows the for the individual interpretations and interventions.

A characteristic feature of Hertzberger's designs is the way that the interior is deliberately left unfinished, so challenging the users to make the space their own **('appropriation of space')**. Over-demensioning is required if space is to be used multi-functionally. The same idea can be found in the work of Mies van der Rohe, whose designs were strongly influenced by the effort to achieve a degree of independence from function, location and climate.

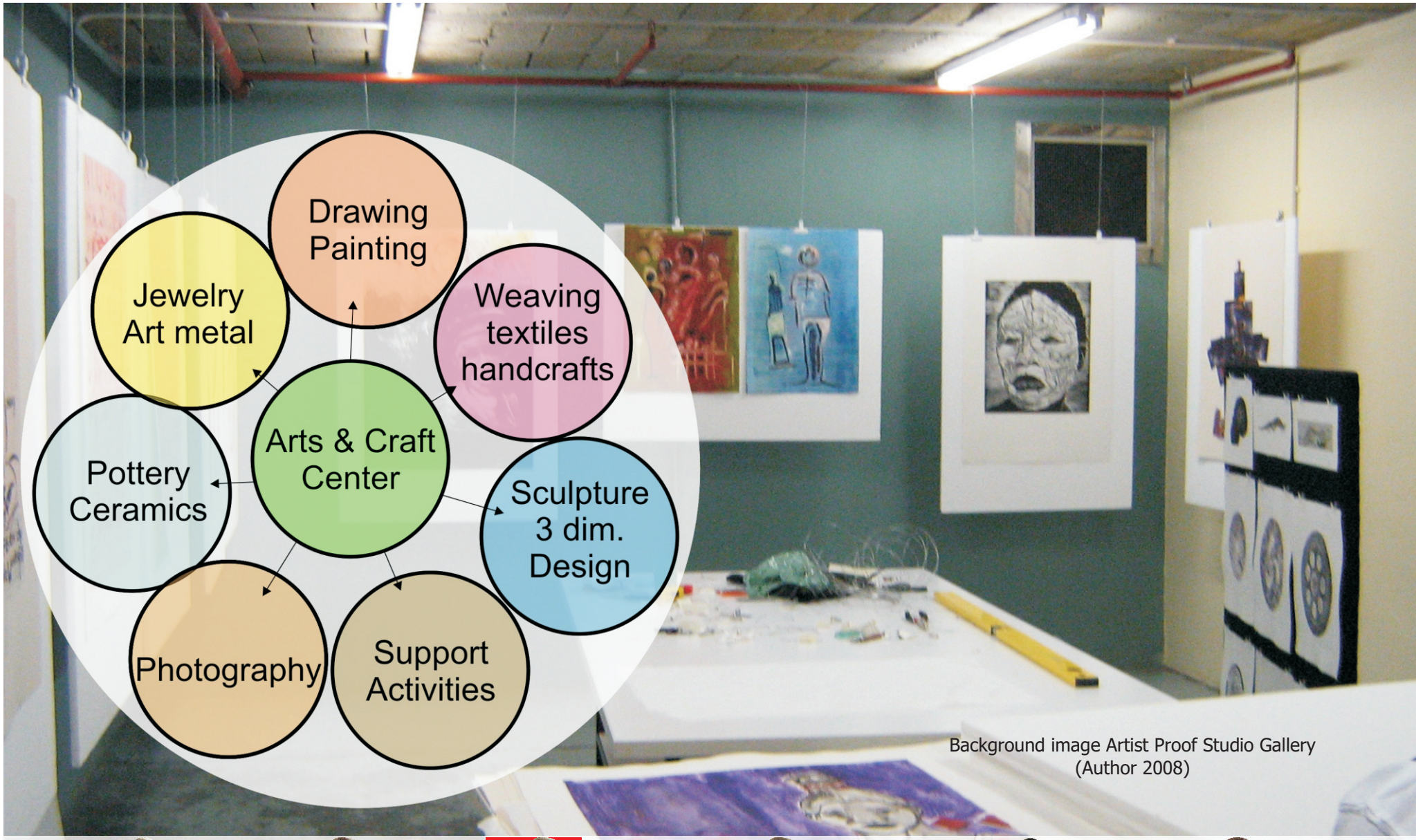
Mies believed that good architecture can accommodate a variety of different functions, as can be seen from the way his designs provide simple, generous spaces which can be equipped and used by the users to suit their needs in any way they think proper.

Arts and Crafts Centers will continually change as new trends and interests develop. Flexibility can prolong the usefulness of a facility to serve these ever changing demands.

Physical flexibility is a function
of and can be symbolized by five terms: Spatial variety, adaptability, changeability, multiple function and structural appropriateness.

Spatial variety implies that different kinds of spaces are provided for different needs. Adaptability implies that changes can be made in response to new or different needs as they arise. Changeability implies that changes can be made easily in short periods of time. Multiple function implies that the space will accommodate a multitude of activities.

Structural appropriateness implies that spatial changes can occur without changing the building structure. Unless the facility is designed to allow for easy modification, changing requirements could make the centers functionally obsolete before their physical life is depleted.



Background image Artist Proof Studio Gallery
(Author 2008)



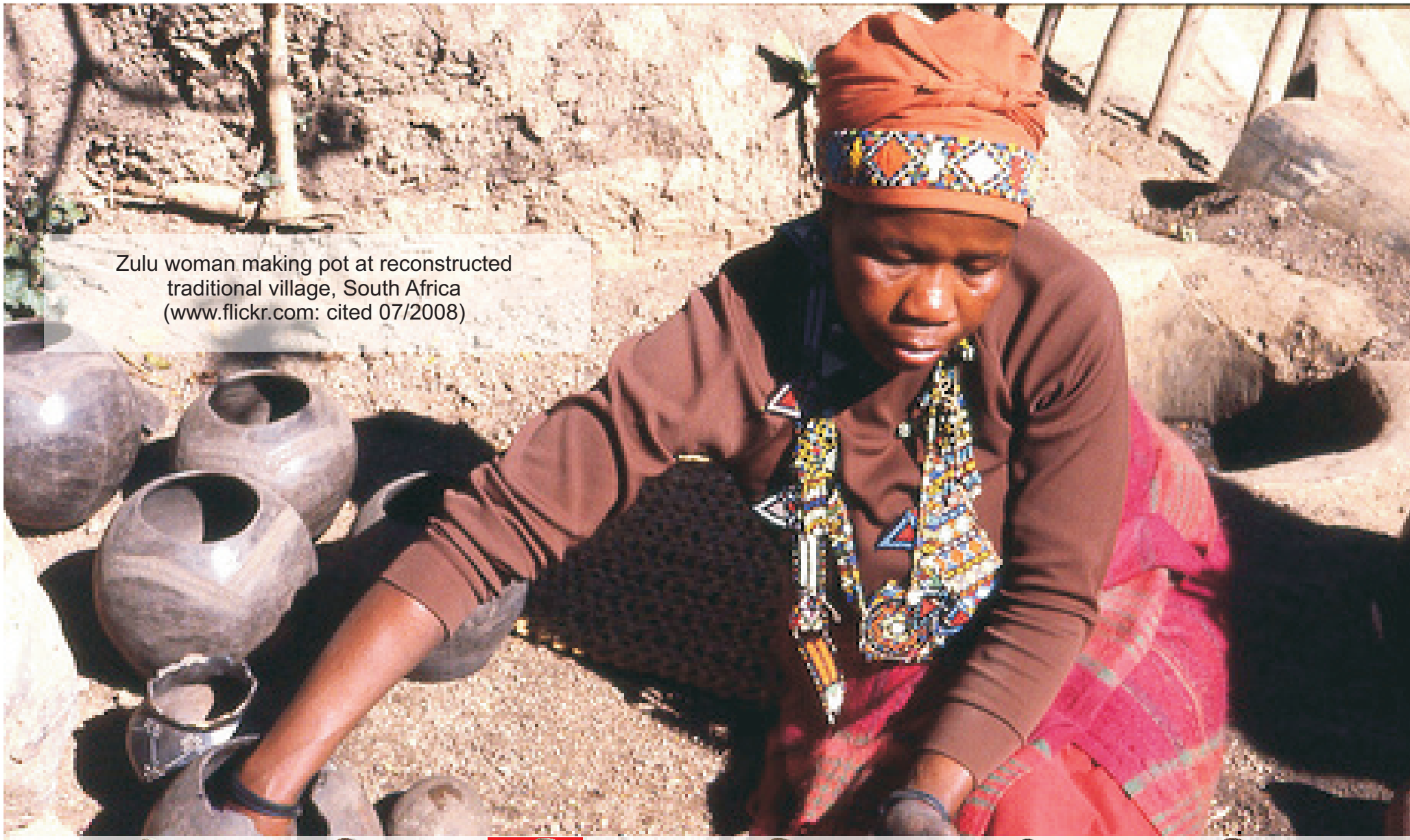
A typical Arts and Crafts Center may be dividied into four basic functional areas; a shop for woodworking; an area for photography; a multi-purpose studio for arts and crafts; and utility and service areas.

The participants of the Arts and Craft Center include the entire community the center must be accessible to and usable by the physically handicapped.

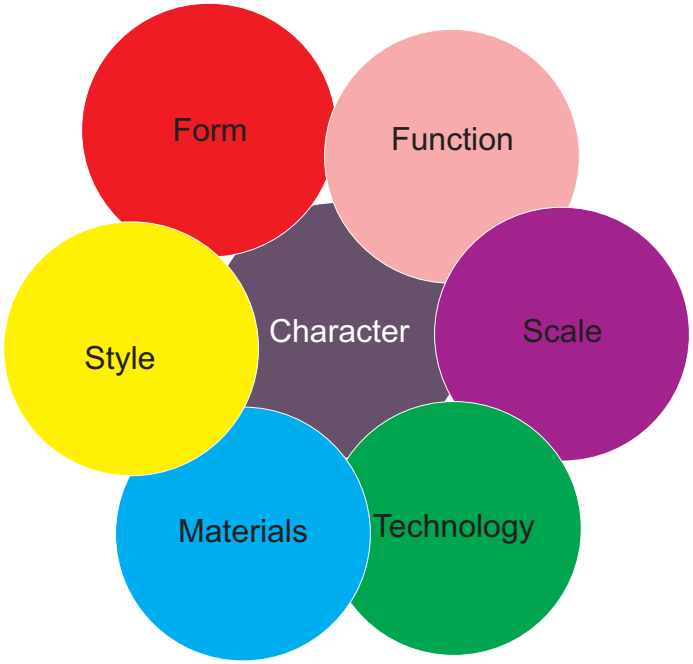
Arts and Crafts Centers generate a large amount of activity. They are places of excitement where creative things happen. Although traffic and noise problems which result from the operations of the center must be considered. The facilities themselves generally do not disturb their neighborhoods and therefore need not be isolated.

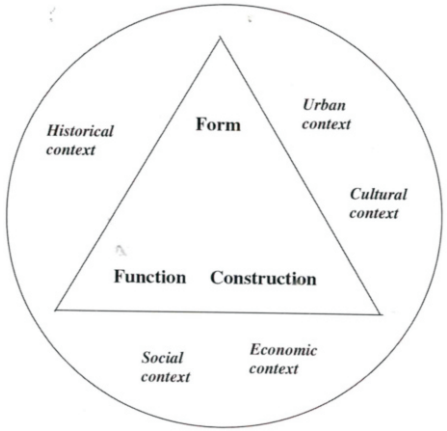
The Arts and Crafts Center might well be part of a larger social/recreational complex which offers numerous leisure activities. Libraries, theaters, recreation centers and snack bars are all compatible facilities that might be mutually supportive of a large complex.

The center should be sited in a complex with other facilities for leisure activities, or into a central core area of shopping, recreation and service facilities, then the entire complex can be more easily served by both public transportation and service vehicles.



Zulu woman making pot at reconstructed traditional village, South Africa (www.flickr.com: cited 07/2008)





Factors influencing form
(Van der Voordt 2005: 66)

In Arts and Crafts Centers, emphasis is placed on the creation of objects of beauty and function. Therefore, the centers themselves should reflect similar concerns with good design and functional planning.

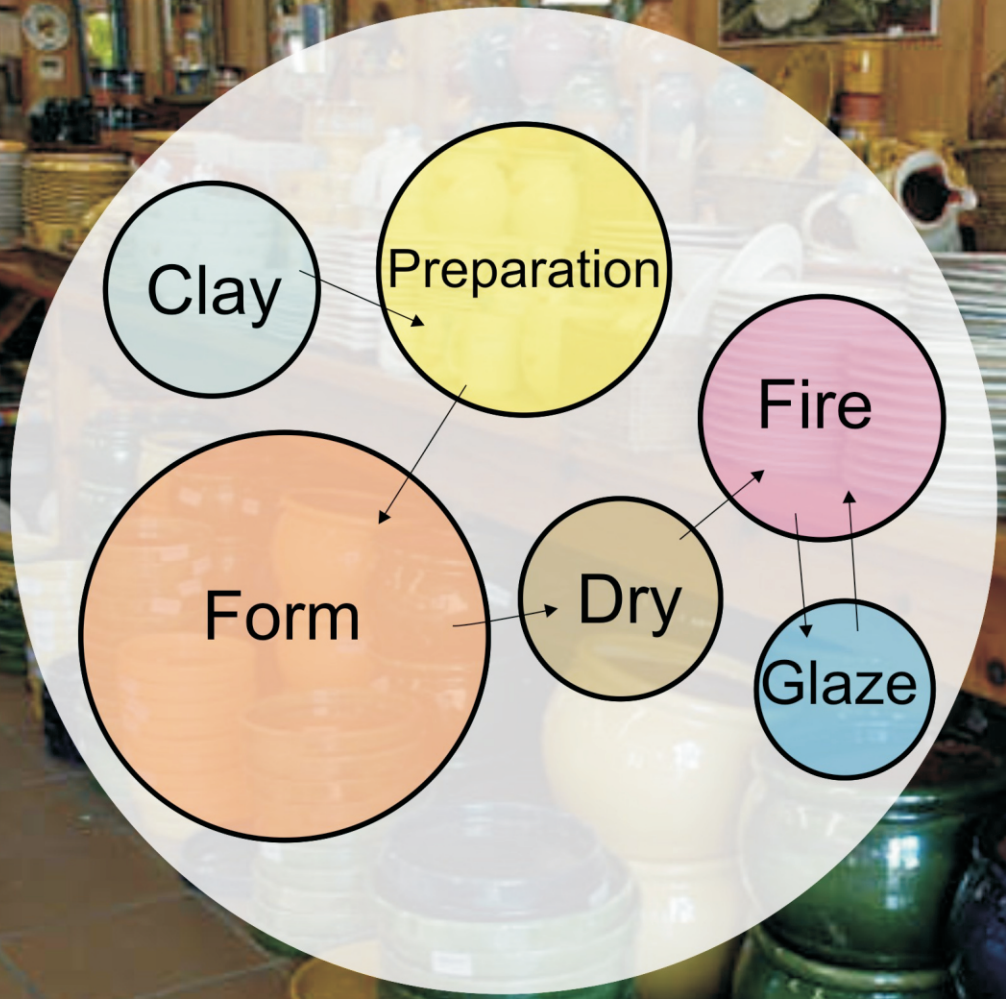
The architecture should be sensitive to regional characteristics of architectural style, scale, form, materials and composition. Architecture expresses the culture and technology of its own time. Architectural character should be an outgrowth of function and form and for an Arts and Crafts Center, it should humane.

Arts and Crafts Centers should be inviting places whose exteriors express some of the excitement of the activities within. Tasteful bulletin boards, window displays, signage, entrances and landscaping should all attract
the casual passerby.

The appropriateness of building materials and scale will depend on the nature of the installation and the character of the surrounding buildings. The building should
exemplify desirable characteristics of local construction practices, with materials chosen on the basis of availability, economy, durability and capability to generate visual interest through colour and texture.



Ndebele dolls, South Africa
(www.capespirit.com: cited 07/2008)



Pottery & Ceramics

Pottery and Ceramics

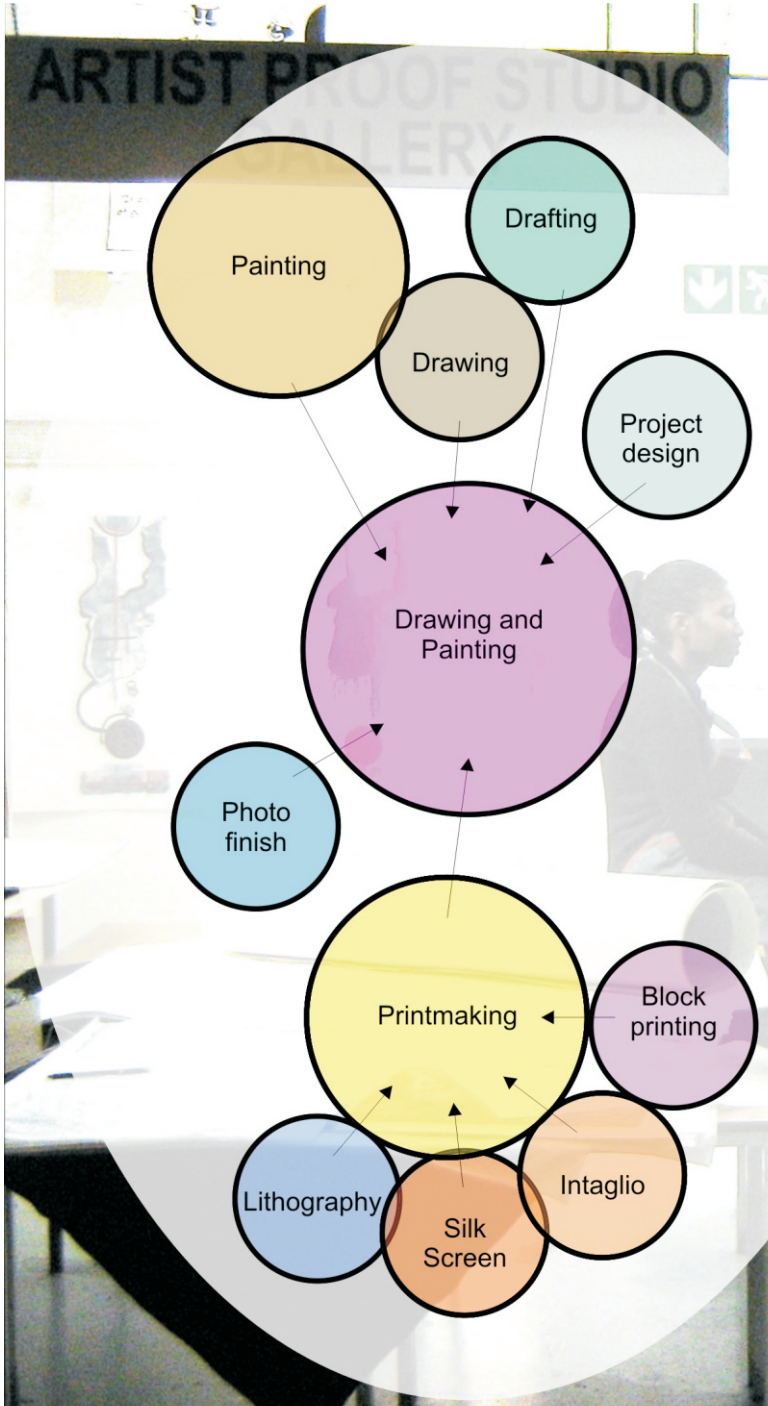
The process whereby earth clays and minerals are transformed into utilitarian and decorative objects is one of civilization's earliest forms of expression. Clay is worked by several methods including hand modeling, throwing on a potter's wheel, and casting. After pieces have dried, they are fired to form a bisque, glazed, and fired again.

A comprehensive program includes clay preparation, forming techniques, decorating, firing procedures, and glaze formulation. The process by which a novice is familiarized with the techniques includes demonstrations, lectures, graphic presentations, and practice.

Additional activities in the clay and mineral category involve working with glass. Mosaics, stained glass and etching, designing, forming and dumping of glass can be performed in the general arts and crafts studio as they are compatible with most other craft processes.

Ceramic/pottery activities may be conducted within the common area of the general arts and crafts space. This includes work areas for designing, forming and glazing. However, kilns, which generate a great amount of heat, should be separated from the general work area.

Working with clay can be dusty and, where possible, should be separated from other craft works. Materials often come in large containers, so storage rooms should be convenient to service entrances. Room surfaces should be nonporous and easily cleaned. Sloped floors with drains are desirable. Storage for drying of pottery is required in an area separate from the general work space.



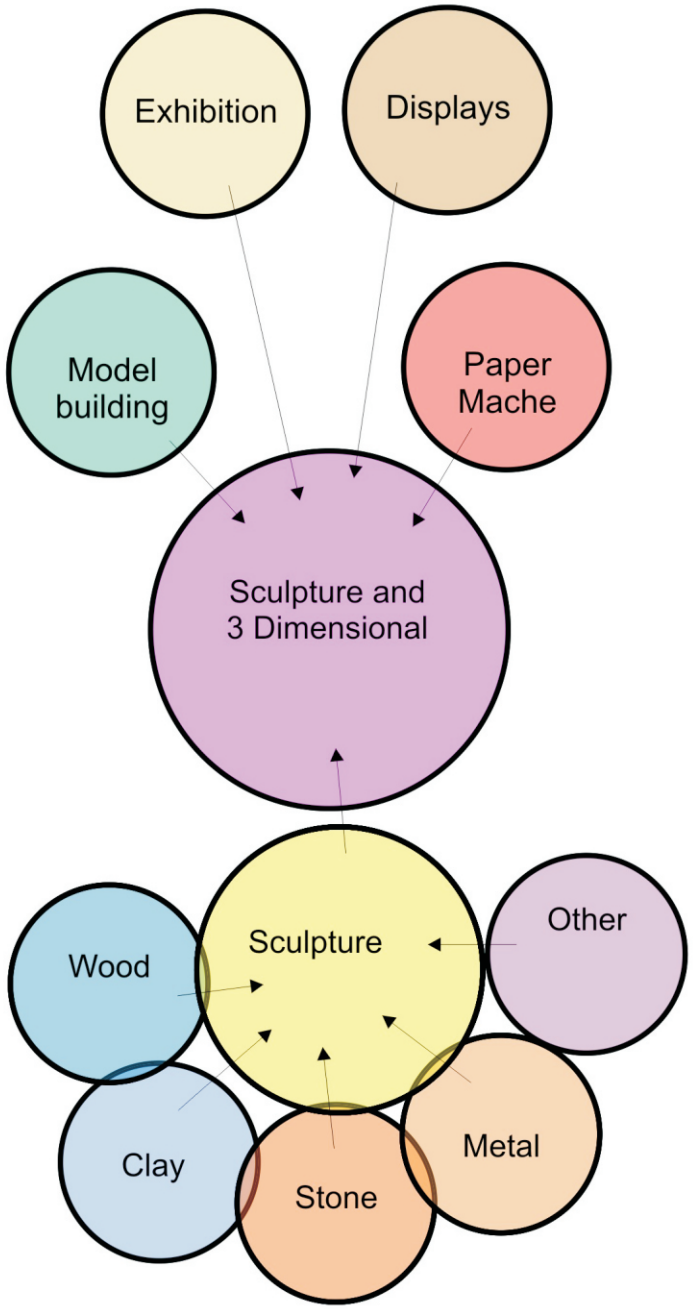
Painting and Drawing

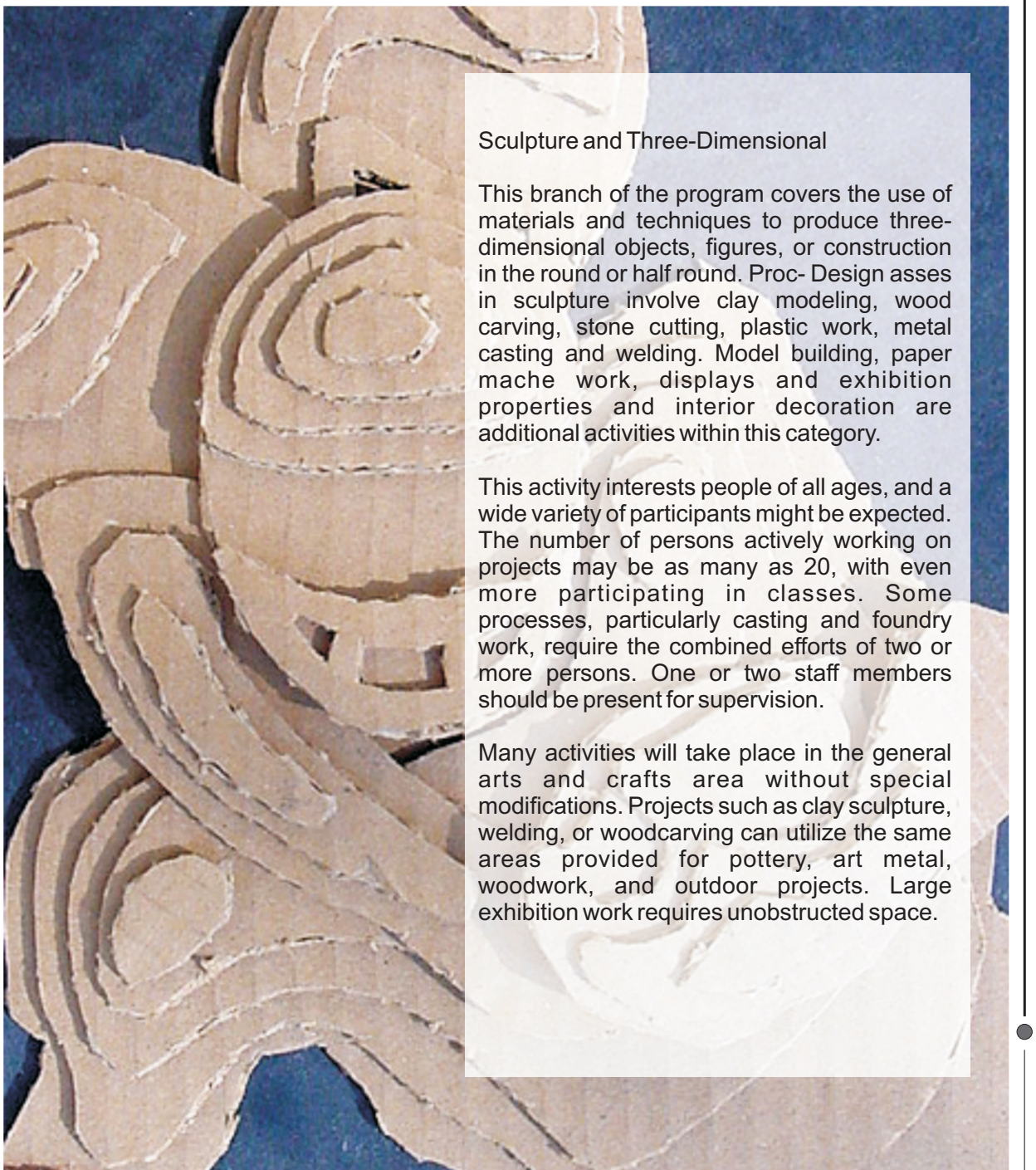
In addition to painting and drawing in a variety of media,the graphic arts program includes design projects, drafting, wood and linoleum block printing, etching, lithography, and silkscreen painting.

If properly scheduled, as many as 40 to 50 users with one or two staff members can be accommodated at one time in the space normally allocated in a 1918,448 square meter center.

The general area used for graphics can be typical studio space. Painted block or panel walls and acoustic ceilings are adequate. Surfaces should be washable. Acid-resistant, impervious floors such as treated concrete or quarry tile are very desirable in graphic arts areas.

Natural north light is desirable for painting and drawing areas, as is convenient access to an outdoor painting court. Toxic chemicals are used in etching and silkscreen processes and for safety they should be used away from other activities. An outdoor area for cleaning silkscreens or an acid room is desirable. Storage may be required in a general storage area with secure provisions for acid storage





Sculpture and Three-Dimensional

This branch of the program covers the use of materials and techniques to produce three-dimensional objects, figures, or construction in the round or half round. Proc- Design asses in sculpture involve clay modeling, wood carving, stone cutting, plastic work, metal casting and welding. Model building, paper mache work, displays and exhibition properties and interior decoration are additional activities within this category.

This activity interests people of all ages, and a wide variety of participants might be expected. The number of persons actively working on projects may be as many as 20, with even more participating in classes. Some processes, particularly casting and foundry work, require the combined efforts of two or more persons. One or two staff members should be present for supervision.

Many activities will take place in the general arts and crafts area without special modifications. Projects such as clay sculpture, welding, or woodcarving can utilize the same areas provided for pottery, art metal, woodwork, and outdoor projects. Large exhibition work requires unobstructed space.

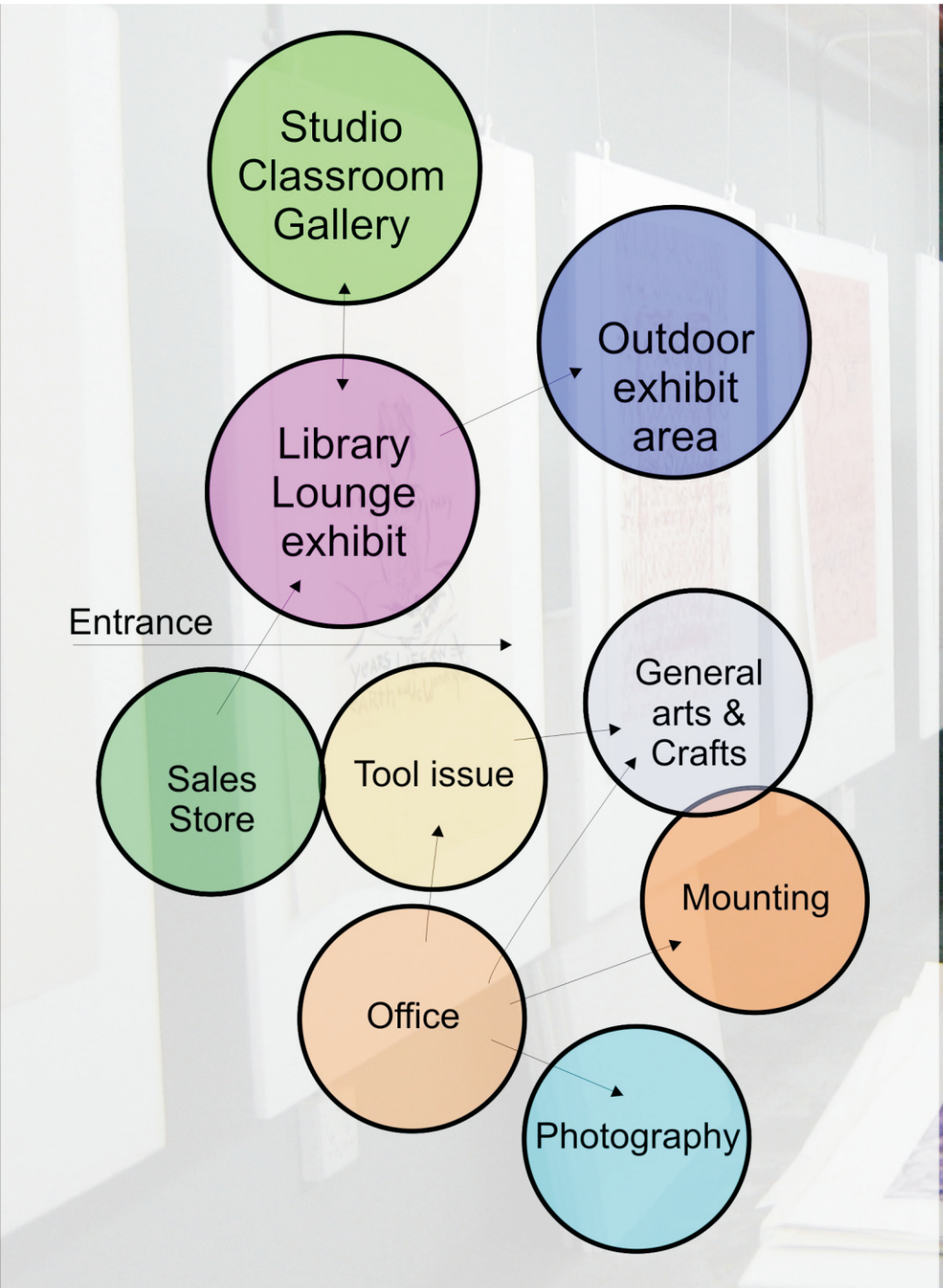


Photography

Basic processes of photography remain the same although there are wide differences in sophistication of equipment, techniques of still and motion pictures, and variations between monochromatic and color film. Film processing consists of loading, developing, enlarging, print washing, drying, trimming, and mounting. Other elements of the center's photography program include studio work, film and slide projection, demonstrations, classroom instruction, and exhibits.

There are three basic functional areas in a photography department: the studio/ classroom/ gallery which may be shared with the other craft activities; the photographic laboratory where film processing takes place; and the finishing work area where prints are dried, trimmed and mounted. The photographic laboratory should be divided into two separate areas when both monochromatic and color film are processed.

Photography is one of the most popular activities in the arts and crafts program. This size of facility will accommodate a maximum of 50 participants at any one time: 25 users and one or two staff members in the studio/classroom/gallery with a similar number in the laboratory and finishing area.



Support Activities

This category covers those functions which are not assignable to a particular program. Spaces for these include the office, sales store, tool issue and storage, library/lounge/exhibit areas, studio / classroom / gallery, circulation, lobby, lockers, utility, and service areas.

All participants of the Arts and Crafts Center use the support facilities at various times. The lobby and circulation areas serve as the transitional zone for all participants entering the center. There might be as many as 200 participants in the building at one time. The office, sales store, tool issue and storage room will generally each have no more than two staff members present. Seating in the Library / lounge / exhibit area should accommodate about 15. Depending on its use, as many as 30 participants might be in the studio/classroom/gallery at one time.

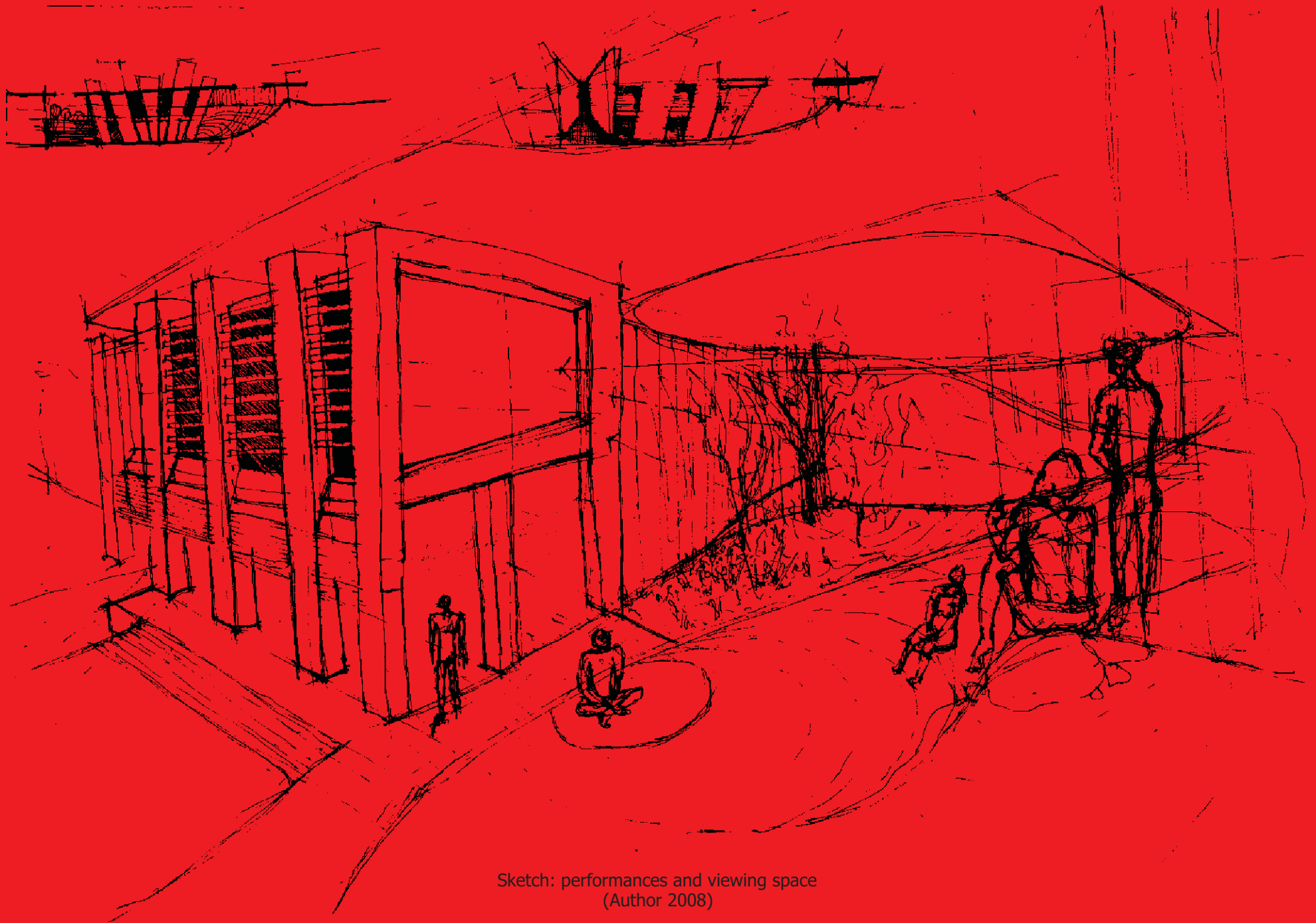
The office and its related space should be centrally located for supervision of both entrance and work areas. The sales store and tool issue area should be adjacent to the office and in direct visual control of the lobby. It is here that materials and tools are dispensed and completed projects are displayed for sale. It is desirable that the tool issue and storage room be adjacent to the sales store so that one supervisor can control both areas.

The library/ lounge/exhibit area is in reality an adjunct of the building circulation area adjacent to the entrance. The library itself is an informal collection of reference material relating to various arts and crafts and activities. It also must be visually supervised. The character of this space should be one of relaxation. It is the principal meeting spot for those taking part in the various programs and, as such, it is an important location for the interchange of ideas and display of work by participants.

Summary of Space Allocations		
SPACE	UNIT AREA (m2)	ACTIVITY AREA (m2)
Handcrafted Pottery and Ceramics		148,645
General Work Area	92.903	
Kiln Room	18.581	
Storage Area	18.581	
Exterior Work Area	18.581	
Drawing and Painting		163,509
General Work Area	111,484	
Acid Room	5,574	
Storage Area	27,871	
Exterior Work Area	18.581	
Jewelry and Art Metal		111,484
General Work Area	74,322	
Enameling Room	18.581	
Storage Area	18.581	
Weaving, Textiles and General Handicrafts		157,935
General Work Area	92,903	
Weaving Area	37,161	
Storage Area	27,871	
Sculpture and Three-Dimensional Design		130,064
General Work Area	92,903	
Storage Area	18.581	
Exterior Work Area	18.581	

Summary of Space Allocations		
SPACE	UNIT AREA (m2)	ACTIVITY AREA (m2)
PHOTOGRAPHY Monochromatic Processing Lab	55,742	
Color Processing Lab	18.581	
Film Loading Room	6.039	
Finishing Area	37,161	
Storage Area	9,290	
Studio/Classroom/Gallery	46,452	
Exterior Work Area	18.581	
Total		191,845 square meters
SUPPORT ACTIVITIES		
Office	27,871	
Sales Store	18.581	
Tool Issue and Storage Area	27,871	
Library/Lounge/Exhibit	55,742	
Studio/Classroom/Gallery	46,452	
Restrooms	27,871	
Lockers and Vending Area	9,290	
Circulation	74,322	
Total		287,999 square meters





Sketch: performances and viewing space
(Author 2008)