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### MOVEMENT FLOW IN INTERIOR DESIGNS

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#### Abstract:

The flow of movement comes to enhance the functional aspect in the process of moving and moving within the spaces according to the coordinated harmony of the communication system between the interior and the exterior, and in it lie important points in the type of interior space through what it contains of complementary and furnishing components, from here the problem arises in dealing with the constants of construction and the variables of elements In the interior design, the characteristics of formal diversity are manifested as processors, including technical and performance ones, in order to reach the most appropriate realizations of the flow of movement, such as directionality, continuity, rhythmicity, and the exchange of links between the multiple spaces of public institutions with a continuous dynamic flow of users.

*Keywords:* flow, movement, design, space, interior, art, creativity, process, transition, communication, technology, elements.

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#### 1- Research problem:

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The movement of the user in the interior spaces in general, represents one of the most important considerations of interior design, on which the functional and performance aspect is based as an activity for the flow of movement and the flow of movement within the building, taking into account the transition through the uses of corridors, stairs and other levels, where the flow of movement of the user is determined to participate in The activities of other users within the same space, which causes some feeling of lack of space, which causes congestion in moving from one place to another.

Through an exploratory tour conducted by the researcher in some of the (elderly care homes) she spotted some weaknesses and difficulty of movement due to the lack of modern standards that determine the flow of movement within those internal spaces that are characterized by the effectiveness of movement at the level of activity and daily practice of individuals, from here a problem was formulated Research the question as follows: Is it possible to handle and facilitate the smooth movement of the user within the internal space?

2- The importance of research and the need for it:

A- Focusing on organizing the movement paths in the internal spaces of a role to ensure ease of movement and movement within the internal space of institutions with continuous communication of the flow of movement within the daily activity of individuals.

B - It contributes to providing a culture of specialization with processes and solutions to communicate with individuals within the flow of movement as a theoretical and practical aspect that benefits specialists, designers and workers in the field of interior design.

3- Research objective: The current research aims to:

- Detecting the flow of movement in the design of internal spaces for institutions with continuous activity of individuals.

4- Limitations of the research: The research is determined as follows:

A - Objective limits: a study of the flow of movement in the interior spaces of nursing homes.

B - Spatial boundaries: Iraq - Baghdad / Ministry of Labor and Social Affairs.

C- Time limits: the year 2021.

5- Define the terms:

Kinetic fluidity is defined as a group of physical factors that arise from the performance relationships among them, making up a set of functions that depend on movement, and their physical properties in designing kinetic paths within the interior spaces with solutions in functional and performance terms, thus causing a temporal and spatial change through internal movement.

The first topic: Interior space and the concept of movement:

Movement in interior spaces depends on paths and lines between space and its content in quantity and quality, and also depends on the presence of joints of openings such as doors to move between space and another, and they differ in their types, shapes and patterns between performance and another and between activity and another, so the meaning of movement in internal space means walking between space and another of Inside to outside and vice versa. As for the characteristics of movement with its good action, it is that all its corridors must be privileged to proceed with speed of access and in the event that the space is completed as a movement corridor in addition to its function, as it is a necessity in an additional flow that is sufficient for the purpose of the required design, Accordingly, we find that the movement has characteristics of its own and general types that appear in formal paths and patterns according to determining the directions of movement, as (the human movement has a speed and rate of movement imposed by other structural determinants such as the height of the list and the number of levels that determine the height of the roof or floor inside the building, and for this reason the user's movement is determined by foundations and standards It is related to the nature of the overall system of the structure of the interior spaces, which determines the latter with the user's performance function) (Faraj, 2018, p. 72). The environment is an important component (of bodies in nature and within the real space, in which bodies move and take their places and positions) (Norberg, 1971, p. 46). Space is also linked to human activity and experience within his physical formation, as it combines activity and human action, and space represents the third dimension. for spaces.

The inner space is related to the activity of the human being and his awareness of it, as it is characterized by the fact that the space is narrow, giving a sense of isolation or privacy, or in some cases it is characterized by safety. Multiple meanings, for example, closed or semi-closed, regular or irregular, wavy or broken, from here it can be divided according to the patterns of activity in it:

(a) The practical space is that space defined by the movement of the body.

B - The tangible space is the result of immediate, direct, dimensional adaptation and sensory and psychological effects.

C- The existing space, which is the real one, which constitutes a stable human view of the surrounding nature.

D - The tangible space is the space with specific physical dimensions and includes the architectural spaces.

E- It is the abstract space that depends on the logical relations) (Parson, 1966, p. 70).

From the foregoing, it is possible to formulate a general concept of movement as a dynamic state determined by the concerned request for the purpose of this movement and it may be independent or

closely linked to other kinetic systems that together constitute a unified kinetic system. And the movement that we study is the movement formed in favor of design as a system that governs the design of space, which represents an implicit movement of the general design of space, and movement as a system that connects the parts of the building and the embodiment of its spaces.

Here, the functional use movement resulting from the use of space that affects (the shape and design of space and the action performed by that space and the associated means, tools, complements, sequence of activities, intersection of functions and integration of parts to fulfill the desired purpose of the space) (Imam a.s. , 2016, p. 6).

The semantic values of the formal diversity and the difference in its structure is based on the system of kinetic communication of the angles of the form, which gives a shape with a movement with (a rhythmic system that transcends the limits of the space that surrounds the form, which contributes to providing mental perception with impressions with a virtual extension of space in an indefinite way) (Al-Bustani, 1975, pg. 103).

1- Mechanisms for classifying the types of movement systems:

Any design, composition, or internal space must contain connecting elements between the parts of that space in order to secure access to them and organize the relationships in their correct, appropriate and appropriate form between its components, whether at the level of the general form or at the level of a special perspective within the building or space, and this connection secures Intermediate movement to achieve the results of communication with minimal effort and without entanglement, which is an important work in addressing those spaces, so the types of movement can be classified into several forms and on different bases and considerations, including the types of movement known in modern mechanics, the transitional, rotational, and complex oscillatory movement, and detailing these types It shall be as follows (thaqfya, 2013, p. net):

- Transitional movement.
- Rotational motion.
- Complex oscillatory motion

A - Transitional movement: The transitional movement is known as linear movement, because the body moves in a straight line in one dimension and one direction, in contrast to the rotational movement in which the movement is rotational around the axis of the body, for example, if an arrow is drawn on the moving body only a transitional movement The arrow will still point in the same direction, but in theory the body does not move in the case of transitional movement in a straight line, as it moves in a curved way but does not change its direction, except that this case does not exist in reality, (The science specialized in the study of transitional movement claims transitional dynamics, It uses a number of laws

and equations, It depends mainly on Newton's laws of motion, and examples of forces that can affect objects are the force of gravity, and friction, and the principles of translational motion are used to explain the heat of matter, through the movement of molecules in it) (Al-Baldawi, 2005, p. 67).

b- Rotational motion: The rotational motion is the rotation of the body around its center or axis, as the distance (which is the determinant between the axis around which the body revolves and the point that was subjected to the force, it is the angle between force and distance, and thus bodies that rotate around its axis acquire kinetic energy) (Solomon) , 1997, p. 105).

C- Complex oscillatory movement: the oscillatory movement is a movement that arises from a repeated change of movement with time, that is, the movement repeats itself during a period of time, and one of the most famous examples of this movement is (the movement of a pendulum clock that moves to the right and then left, around a point located in the middle of the pendulum Name the equilibrium point in a specific time, then return the movement to the right and then the left in the same period of time (thaqfya, 2013, p. net).

2- Forms of movement according to its layout:

What the movement represents in terms of actual transitions between places and places that can be described and referred to, according to the coordinates of the spatial movement and can be measured because it is determined by time, every movement from one point to another can be described and analyzed, and the movement may be a gesture, a sign, an inclination, or a path in all directions and at all levels. Movement and its trends have forms that impose their presence on bodies, including (Editors, 2018, pp. 130-132):

First: Linear movement: It is a movement that is either straight, or curved, or curved, or parallel lines in the same axis, as the direction in it is clear and the activities are distributed on both sides of that movement. An example of this is like the movement of linear paths in spaces and others. to the parts, and examples are the passages (Al-Sayed, 1990, p. 90).

Second: Peripheral movement: It is a movement that is circular, closed, or spiral, as the movement is through a peripheral main axis, through which the various sections and various activities are reached, an example of this movement in open hotel halls, museums, gardens, and others. This system is characterized by that the movement is around a person, a major element in the design, or a sequence in display, as in the galleries of museums or exhibitions.

Third: Network movement: It is the movement in the form of perpendicular lines forming a grid of squares or rectangles, and examples of which are movement within restaurant spaces (Al-Qassab, 1998, p. 137).

Fourth: The organic movement: It is a natural linear movement with many zigzags and ramifications that grows naturally, as access to the different spaces is through a main axis from which a number of secondary axes branch. Spontaneously as a result of expansions and additions (El-Sayed, 1990, p. 95)

Fifth: The radial movement: It is the movement that is distributed and branched from a central midpoint, as all axes in it lead to a central focus and all the branches of those axes are secondary.

We conclude from the foregoing: that two or more of the aforementioned types of movement may participate in the space of the same building, it may be originally through the basic design scheme or as a result of the expansions that occur in the building, which creates a kind of suspense and pleasure in the openness of spaces.

#### 4- Types of movements in interior designs:

First: Horizontal movement: It represents the process of moving from one space to another at the same level or a slight difference in the levels. The straight line does not necessarily have the shortest distance between two locations in the design, but rather stress and human behavior are related to that. Curved lines give more comfortable paths than straight lines sometimes. The intensity and speed of motion have an influence on the decision on its trajectory, amplitude, and direction. The horizontal movement is also determined by a number of indicators, whether that movement is internal or external, and is divided into elements (physical, furnishing, complementary) (Salman, 1996, p. 146).

Second: Vertical movement: Vertical movement requires greater effort than horizontal movement, so single-storey buildings give a sense of tranquility and a comfortable life. Weight (Sherzad, 1985, p. 17).

Third: The movement between the interior spaces: It is the movement that is within the building or the facility itself and expresses the function and use benefit of the space, and it has many elements that define and control such as color, texture, lighting, measurements and proportions comfortable for the user, and this internal movement can be classified according to the spatial relations of the interior spaces on As follows:

A- Space movement within space: The movement in a content space is within a large main space, and the movement elements that you define for the content space depend on the movement elements of the container space, noting the difference in the content form despite the functional difference between them.

B - Movement in two overlapping spaces: the movement is in two overlapping space fields, forming a common space field, as the movement is in that independent resulting space (Al-Yasiri, 2006, pg. 72)

C - Movement between adjacent spaces: It depends on spatial continuity through the extension of the separating plane (Ali, 2002, p. 77).

The movement between two spaces is clearly defined for the functional and utilitarian requirements for each of them, and the mechanism of movement between them depends on the spatial continuity and the nature of the level separating them, and when (the movement between them is either through a visual-

physical barrier separating them, which enhances the independence of each of them, or a row of columns as a high level separator As for a change in the levels of floors and ceilings) (Al-Yasiri, 2006, pg. 40).

D- Movement between spaces linked to a common space: The movement is between two or more spaces separated by a third intermediate space. The shape and volume, so the connecting space results from linking a linear series of spaces and the movement in it as a corridor connecting them, or the connecting space has a distinctive volume or a large area that dominates the rest of the regular spaces around it, so the movement is from a main center to other secondary spaces, or the movement may be in a vertical movement space The basis of the movement is for the building or origin (Al-Yasiri, 2006, p. 24)

### 3- Characteristics of Movement Systems:

The most important characteristics of movement systems or kinetic paths in internal spaces in particular and external spaces in general is that formal unit that makes the movement system or movement path a spatial configuration with a distinctive and well-defined formal shape when it possesses a readable spatial identity and known and clear space boundaries by several factors, including:

(a) Continuity: the physical boundaries of space are defined through the continuity of blocks, surfaces, and elements that define it, and are characterized by unity, clarity of personality, richness, diversity in details, and the dominance of a particular element as an attraction.

B- Diverse repetition: Formal unity can be achieved by repetition of a specific element with a degree of freedom in formulating and enriching details by focusing on dominating elements that appear in specific places. The repetition is either complete through the matching of elements such as the alley, for example, or incomplete, so it is either an alternating repetition or a variable repetition in which the monotony found in the perfect repetition is broken (Norberg-Schulz, 1971, p. 83).

### 4- Orthographic movement:

It is a non-transitional movement, as it explains a psychological or mental concept. It is a fixed-site movement that carries an interpretation of the meaning of movement (Al-Rubaie, 1999, page 79), as it is the product of the mind's awareness of artistic phenomena that are supported by past experiences and human memory, provided that this movement is essentially fixed and impossible to occur. An actual movement within its spaces, but its occurrence is just an illusion, and it can also be considered a psychological stimulus that allows the realization of transitional perceptions through the mental space of the recipient (Al-Bazzaz, 2001, p. 16)

### 5- Location and direction as a movement effect in the inner space:

The locations and directions of things have a presence that achieves communicative values. The location has a great impact on the process of perception and reception, as organizing the signatures of the internal space elements is linked to several considerations, including the kinetic behavioral aspect, isolating the private from the general, achieving directionality (Al-Khalidi, 2000, page 56).

The location is not a direction, as it is a clear indication, while the direction is an indication towards a goal to represent the visual movement, as the formal treatments of the act of displacement and the location give the shape its identity, feature and personality so that it appears with the other elements a dynamic, transforming structure of the site of importance in determining the nature of the interior spaces and the method of its kinetic performance. The direction indicates a clear sign of expression as it is closely related to the subject of movement, given that there is no movement without direction. The kinetic and axial directionality represent symbolic properties that give space an expressive power and provide planning and design capabilities to integrate what is visual with what is symbolic, and this contributes to unifying and linking a group of elements in the overall structure within the general system. The principle of directivity is associated with the structural organization of interior spaces (Scholes, 1996, p. 28).

The second topic: Interior design and the priority of functional considerations

The realization of the design and the manifestation of the functional role in the space puts the users in direct contact with the motives of other functions on the one hand, and a sense of belonging, containment and reassurance on the other hand. And the effect of the idea in consideration, and selectivity here is an invitation imposed by the material sometimes as the idea imposes it at other times and the most important thing that determines this subject in priority to one over the other is the interrelationship between the function of interior design and the user, which the designer seeks to find through insight into his selection of elements and vocabulary. The interaction in the light of the stimuli of the manifesting material with the projections of the idea is the essence of what he calls interior design with the objective event of its function (Ch'ing, 1987, p. 161).

The inner space is a closed space separated from the outer space by horizontal and vertical determinants (walls and ceiling) that give the building its shape, and these elements or determinants determine the main general characteristics of the inner space, such as space, height, size, and windows from doors and windows act as joints for communication between one space and another. ((It is also considered as “the perceived space as a wide space that allows movement and the performance of functional tasks. The spatial aspects are the field of movement and activity of the body and the distances between things to highlight their entity in space))” (Al-Bayati, 2012, p. 36).

1- Interior design requirements for the movement of internal space users:

The interior design process requires complex and overlapping information about the expected behavior of users while dealing with the interior space, and the interior design process does not take place unless the designer has prior knowledge of the expected behavior of users, that interior design does not deal with interior spaces and form only, but deals with human activity and its connection to time and place. , and the factors affecting the design such as environmental and natural factors and safety factors (Al-Horstani, 2013, p. 5).

## 2- Transitional joints of internal spaces:

Transitional joints are a special category of life systems in various aspects of visible and latent nature that are governed by relationships and balances that give a major response to a functional need or necessity, and nothing can exist unless there is an organized relationship in the formation and construction of the phenomena of things, and this means that these phenomena in Our world is based on coordinated and integrated mutual relations, if the design is an internal environment, it is a design decision that meets all spiritual and health needs (Ch'ing, 1987, p. 201), and in the field of interior design and its internal spaces in general, they are linked to the same reciprocal and interactive relationships with different and various influences that determine The role of one another in the selection of everything that matches the design.

Hence, we find that any design consists of relationships, whether between the elements among themselves to form the accomplished or between the accomplished itself and the direct user of it, and this refers to the interconnected relationships of the composition between one part and another down to the whole of the concept of the integrated structure, in a process that starts from description to analysis, that The descriptive process when it begins, whether it is realistic or illusion of realism, imposes on the descriptor to resort to selection and selection, as a result of the crowding of things and details, the thing that necessitates activating some of them and warning the other, and this selection process is never done innocently, although it sometimes seems as if it was Automatic, because it necessarily draws a clear impact on the cognitive, psychological and ideological dimensions. Those dimensions that the game of selection and description translates, and this is what the relationships between things reveal, Which establish systems in the distribution of design elements from spaces or complementary elements and even movement by the user and vice versa also true if we say that the organization achieves relationships between the same vocabulary, for the harmonious exchange between the possibilities of the two, then the appropriate design for the movement of the elderly is the main challenge for any architect or designer Internal regarding the movement of the elderly inside the home, and the continuity of movement without obstacles and finding a means of communication that addresses the rest of the senses on which the elderly depend in their movement without relying on the help of others. Horizontal and vertical determinants have been set to facilitate their movement, and these determinants (Afifi, 1987, p. 53) .

The connection of doors between internal spaces made them affect the patterns of movement between one space and another, as well as the way of distributing and assembling furniture and activities within one space, and the number and size of doors in the interior space should not conflict with the distribution of activities and functions within this space.

The specifications and standards required for placing the stairs in the dwelling can be summarized as follows (Krier, 2012, p. 44)

\_ Do not use circular stairs or those that contain steps in the breaks

\_ The height of the steps should not be more than 15 cm and its width should not be less than 30 cm, and its grades should be equal.

Drawer edges should be round and not sharp (Krier, 2012; Krier, 2012)

\_ Putting an average rest when the level difference is more than 5.2 m and its length is not less than 120 cm and the width of the stairs (Time-Saver, 2012, p. 34)

Ladders differ in the materials they work from (Salman, 1996, p. 63):

Brick stairs: which consist of bricks and akkad and the use of shelmans or brackets.

Concrete stairs: which consist of reinforced concrete and are either on-site or pre-cast.

Iron ladders: which are made of iron with all its parts, such as emergency ladders.

Wooden stairs: made of wood with all its parts or the structural part.

Escalators: They are electric escalators characterized by the roughness of their horizontal surface to prevent slipping and are placed in the direction of intense movement in the building or facility. One of the most important points that must be noted when designing the stairs is the ease of access to be clear to people and there is no need to search for it. It must also be Adequate lighting is available in it, and the distance between stairs in public buildings should not exceed 40 m, which is an acceptable distance for discharging people during accidents.

The stairs also differ in terms of their shape and architectural design:

\_ Straight stairs: They are divided into the ordinary straight stairs that do not contain a plate, or the straight stairs with angles, which contain plates that change the direction of movement (Salman, 1996, p. 32).

Arched stairs: They are either circular, curved or spiral, and they are characterized by being sandwiched between two circles, one internal and the other external.

Vertical stairs: their slope angle is more than 4-5 degrees, and they are used for maintenance or escape purposes, and they have fewer symptoms than the usual, and the quarry is important in them due to the difference in the center of gravity, which requires a stronger hold on the ladder.

Electric elevators: It is one of the vertical transportation means that is somewhat modern compared to stairs because it depends on special electrical mechanical means that require techniques and provide more services especially for the elderly as they require permanent maintenance than in the stairs and are used to transport the elderly and those who use wheelchairs or Those who suffer from some diseases, as well as transporting goods, families and services between different levels with less or no effort, and the person makes an effort in the vertical movement, which shows some of the types of elevators used in buildings and generally differ in their dimensions and measurements according to the loads and their use, and the safety factor is important in them It is very dangerous because it causes major fatal accidents if it falls) (Al-Qassab, 1998, p. 39).

The construction of elevators requires the availability of a vertical space in the building for the movement of the elevator in it free of any horizontal obstacles, and many things must be taken into account during the design of the building in the case of the use of elevators in order to provide an integrated space for the movement of the elevator.

1- The effect of light on movement:

The sense of sight in humans is the most important sense in the process of recognition and the most comprehensive in perception and visual sense as a mental reaction to the means received from the external environment through the eye (Al-Badrany, 1991, page 3) and this sense certainly differs from one person to another according to the age of the user and the extent of his intellectual knowledge Therefore, the design of interior lighting is related to the human being used as well as to the type of events and the shape, size and area of the interior space Until it reaches the smallest details of the supplements, as well as the colors and textures of the surfaces, especially when it comes to the type of lighting, whether artificial or natural, and the relationship of these variables to the job, whether active or inactive, or between them. Industrial lighting (Littlefair, 2004, p. 59)

2- The effect of furniture on movement:

The designer must take into account the pluralism in the forms and types of fixed and mobile furniture, its materials and colors, and in harmony with the rest of the space components to facilitate attention processes for the elderly and reduce the processes of intersection in the movement. The process of communicating with it within the place and separating it from other places. Despite that plurality, all kinds of furniture must share its proportionality with the function of space (N, 1991, p. 169).

It is preferable when designing and choosing furniture that it be in shapes with curved ends, for the safety and security of its user, so as not to impede the movement of the elderly, and with measurements that impose partial conditionality on the activities with their proportion to the measurements of the human body and that the choice of colors in it is consistent with the rest of the space colors and complements to the rest of the space. It should be easy to clean, and not hinder movement. It is preferable that the furniture be close to the lighting units (Rosenthal, 1980, p. 36) with the possibility of using multiple types to give a distinction to specific pieces of furniture from others and that the measurements of the pieces of furniture should be proportional to international standards and in ways that give The space of the house is symbolic.

The distribution of furniture pieces is in proportion to the size of the space without hindering the movement of its occupants near the joints, especially the vertical ones, or in the middle of the space and in an expressive way that symbolizes in its organization the environment in which it is placed in the multiplicity and diversity of tables and chairs and in certain colors to draw attention to its reflection on the

beholder. As for the furniture, it is With a specific color pattern with its diverse and harmonious decoration with its conditional reflection on the space, it is preferable to have complements and accessories in part from statues, paintings, fountains, furniture, plant containers, waste containers, modular units for lighting, audio-visual devices, and air-conditioning devices, thus giving the space its final shape.

### 3-Effect of color techniques on movement in interior spaces:

Color affects the guiding process of movement and gives a sense of well-being and leads to distraction. The elderly begin to identify basic and saturated colors such as red, blue, yellow and green before shapes and then appear in response to complex drawings and for the majority of users, color and shape become equally important (Green, 2003, p. 48). The use of calm colors with a few saturated colors is the best in the kinematic pathways of the role (Marberry, 1995).

It shows the contrast between the levels of colors in the stands, as well as the contrasts between the walls and the floor in the spaces. As for their employment, it came according to the performance activities.

The use of strong colors, with their exciting and stimulating nature, is tiring to the eye, so it is recommended to use them in places of movement with short stays such as corridors and stairs, but for each material is equal Natural or artificial canopy texture, being the external visible appearance of the material used in the embodiment of the design idea, color is an inherent characteristic of the texture, because every material has a color and there is nothing without color, and the nature of brightness determines the quantity and quality of the reflected lighting (Sherzad, 1985, p. 182)

The outward appearance of the material is called texture, and it is a term that refers to the tactile properties of the surface. We may feel the texture during the actual touching process or through suggestion by the sight or the visual scene alone (T, 1980, p. 57).

The importance of the functional performance of the spaces of the homes for the elderly has an impact on determining the movement paths for the elderly who frequent these spaces. In view of the variation in the personal variables of the elderly, the designer worked to find a system for the movement paths to ensure the best possible efficiency in the design of these paths. The functional organization of the spaces of the elderly homes is the basis on which the movement planning process is based, and depends on two types of use (Bennett, 1977, p. 151) :

A\_ Basic use: It represents the first point of attraction for users of public space.

B\_ Secondary use: It includes secondary activities in space and not all frequenters use it.

And the spaces of homes for the elderly have certain places that determine the kinetic paths that can be divided according to the nature of functional performance into:

1- Places of movement: They are dynamic spaces that give a sense of movement and are of an unstable character, usually in the form of a relatively narrow longitudinal strip compared to the rest of the spaces.

2- The stopping places: They are stable spaces (squares) that give a sense of comfort and stopping, and they have space shapes that tend to form a square or a circle and can be used to sit and wait. These places are characterized by their need for environmental protection.

3-3-2 Space organization:

Public spaces have a set of organizations that affect the nature of our perception of them as visual axes. It can be summarized as follows (Ching, 1996, p. 18):

1- Linear organization: that is, the presence of a linear sequence of successive spaces.

2- Central organization: It means the presence of a dominant central space around which secondary spaces are gathered.

3- Radial organization: It means the presence of linear organizations of spaces extending radially from the central space.

4- Cellular organization: it means the relationships of convergence and convergence of spaces, or their participation in a relationship or a common visual feature.

5- Network organization: It means the presence of organized spaces within the domain of a structural or three-dimensional network.

And by studying the characteristics related to the movement's activities within the spaces (Imam A., 2016, p. 6):

1- Basic characteristics: it includes the number of times a distance traveled during a specified period of time. As well as the number and importance of this activity, as the distance is cut back and forth, as well as the specifications of the individual conducting this activity (gender, occupation, age, health status).

2- Derived properties: It includes the distance traveled in the movement (time, effort, ... etc.). In addition, all transfers at a certain time. Derivative properties include one or more basic rheological properties.

(Description and Analysis)

1- Description:

Elderly care home in Finland

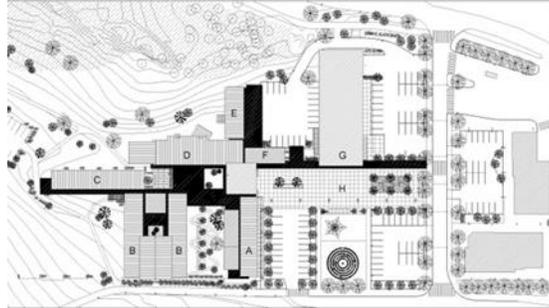
The name of the home/care center Une - Pokila, Finland

Founding year (2007)

Source: <http://www.architonic.com/aisht/welfare-centre-onni-l-m-sievanen-architects-ltd/5100622>

Photographer: Josie Tienen.

Bukela is a small municipality (population 2,000) in southern Finland, 100 kilometers from Helsinki. The social welfare center of Oni was only possible because of one man, Oni Nurmi, who was born and lived at an early age in Pokila. In his last will, he ordered that his assets - which include Nokia shares - be used for the recreational purposes of the elderly. The result of his gift was a design competition in 2004 and the center was ready in 2008.



Erja Sipilä Architect

Pauliina Mäkinen Interior Designer

Crista Suomalainen architecture student

Hiroko Kivirinta Landscape architecture (Japanese garden)

Anna-Kaisa Kaukola horticulture (green area design).

house site plan

## 2- Analysis:

It is noted that the area for the residents of that municipality shares its architectural design with the house, that is, the cafes with a high lobby form the heart of the building, which gives a distinctive overlap through the formation of the upper part of the balcony in the form of a lantern, which tends to open up to a Japanese garden, and the upper part of the building is characterized as It is divided into a basic wooden composition with long eaves and comprising a number of units corresponding to the different functions, creating a comfortable environment resembling an integrated village. The use of a lot of wood improves the acoustics of the building and creates a comfortable atmosphere for its elderly users.

The primary objective of the design was to support the elderly in engaging within independent activities, allowing unrestricted access to the buildings and the use of colors and wood materials to make the living environment attractive and comfortable The multi-purpose objective also leads to improved activity and the need for flexibility to adapt the buildings towards guiding the design of the building.

It is noted that the formal treatment between the outer space and the inner space came in accordance with a comfortable visual attraction to the eye, which indicates the compatibility of the interior and exterior between the openness and closure of space through the spaciousness of spaces and the use of wood as a basis in the structure of the formal structure, which gives the spaces a psychological dimension that is reflected in its users, with the treatment of activity The flow of visual power and relevance of designs from all its fields by relying on smooth, soft elements and a sense of simplicity of designs in the open space between homes in the form of a linear and central organization.

The importance of these components in the actual straight movement is also reflected in the formal reduction produced by the movement paths and the transition towards the formal view of the entrance to

the apartments through the use of glass at all vertical and horizontal levels, and this is reflected in the level of visual flow and stimulating activity in the elderly. It showed the flow of movement according to a suitable organization in which the functional dimension is aligned with the aesthetic dimension to achieve the maximum actual performance of movement and movement in a way that ensures a level of interest in the capacity of the interior spaces and the exchange of visual openness towards coordination between resting places and sleeping places, which is a kind of active contribution in trying to push the users of this The space to move from one space to another space without exhaustion, which gives them a harmonious state for the body sport. The movement between space and its neighbor came according to a harmonious pattern, as well as between two or more spaces.



The main entrance and the ceiling adjacent to the market square, the cafe with a raised upper part in the form of a lantern, the stone wall and the upper porch of the collective houses.



The open interior spaces.



## **Research Results**

1- Research results: The results of the analysis came as follows:

A- The levels of movement showed through the multiplicity of spaces between the interior and the exterior, which gave the building the feature of differentiation.

B - It was adopted in the distribution of spaces the straight flowing movement of linear movement according to multiple paths.

C - The formal treatments came to use wood and glass in a more appropriate and better form.

D - Space diversity is achieved through the diversity of space spaces in the simplified interior design to facilitate the transition.

E - The optimum performance of movement in all the joints of the building came through the communication between the balcony, the café, the corridors and the people's rooms.

The formal proportionality of the design elements is achieved by coordinating the distribution of places according to a functional and aesthetic function that reflects the users of those spaces with comfort and physical and psychological pleasure through ease of movement.

G- The flow was generated through directivity in organizing the paths of movement and movement through the basic and derived characteristics that effectively contributed to adding a qualitative treatment to the interior spaces.

2- Conclusions:

A - Movement in nursing homes is achieved through the expansion of spaces between the corridors of transmission and spatial communication.

B - The functional performance of the movement and its flow are based on the building orientation factors that give its users psychological comfort.

C - The optimal use of natural materials is reflected in achieving an environmental suitability in line with people's living requirements.

D- Achieving the openness between the interior spaces together is through opening parts of the specified space, as well as the openness between the interior space and the outer space is achieved through transparency as the glass materials that contribute to the visual extension.

E - Adopting linear movement in homes for the elderly contributes effectively in pushing the feeling of fatigue and exhaustion and provides the elderly users with vitality and activity.

3- Recommendations:

Through the results and conclusions, the researcher recommends the following:

A- The concerned parties concerned with caring for the elderly by adopting wide spaces in order to achieve smooth and more effective mobility.

B - The contribution of governmental and civil institutions to the treatment of interior spaces similar to those designs that take into account movement, kinetic flow, movement and places of rest and recreation for their role, which is reflected positively for the elderly.

C - Take advantage of those spaces to facilitate their adaptation and to address the technical aspects of the atmosphere (climate-environment).

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