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Article

Promoting Social Interaction through Participatory Architecture, Experimentation, Experience, Evaluation in a Social Housing Complex (Grand'Goule, Poitiers, 1974–2021)

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Abstract: Has the increase in social life and conviviality commonly imagined by the designers and decision-makers taken place? There are few systematic post-project evaluations of the methods and tools used to answer this question. Therefore, this article wishes to draw lessons from a housing experiment from the end of the 1970s, the Grand'Goule residence in Poitiers, the objective of which was to create a dense social life through design and means of participation. Some devices consisted in the creation of *Surfaces d'Activités Partagées* (SAPs, shared activities surfaces), which are common spaces where residents can intervene in both the interior design and the function of space itself. In this study, we analyze the Grand'Goule project, which has been displayed as a participative experiment, with the objective of creating a dense social life through original architectural and social devices. We use different sources (interviews of the inhabitants, project owners, and architects, alongside press articles and the architects' archives) to dissect the practices in order to lead a retrospective analysis of the participative process, its successes and failures. We show that, as a very complex and fragile process, enabling the active participation of people in the design and use of a large-scale architectural project is far from obvious and suffers from several kinds of difficulties. We highlight the gap between initial intentions, final realizations and actual uses in the Grand'Goule project, and how it can inform every participative architectural project.

Keywords: social housing; experimentation; evaluation; public action; participatory design

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1. Introduction

This article is set in a general context of expanding socially engaged forms of design and architectural practices [1]. This undertaking includes the involvement of future users in the design of architectural projects, from pre-programming to place management [2]. Of varying degrees of importance, this initiative can be in the realm of simple consultation, manipulation, can either generate real possibilities of co-design with future users, or even grant them the total control over a project [3]. It invites the rethinking of the traditional role of the architect and the project owner [4,5].

The idea of working on the elaboration of a project with its future users was born from the social upheaval of the 1970s [6]. At that time in France, there were criticisms of the policies of large housing estates—the *grands ensembles*—which gave rise to the *Plan Construction* (Construction Plan in English) and the beginnings of a new urban policy. Throughout the West, there was a rise in local movements, municipal action groups, experience of participation by inhabitants and a reflection within certain regions on the modernization of public action. In *Le Droit à la Ville*, Henri Lefebvre was one of the first to proclaim the emergence of a new reality: the urban *praxis* by the inhabitants [7].

The reflections on “participatory” architecture and on “innovative” housing testify to numerous experiments from the 1970s. However, there are few systematic post-project evaluations of the methods and tools used [8]. Has the increase in social interaction commonly imagined by the designers and decision-makers really taken place? In order to answer that question, in this paper we analyze a case study, the Grand’Goule project in Poitiers, France, as an emblematic example of participatory social housing in the 1970s. It is an architectural complex of 274 dwellings, with the particularity of providing shared spaces to support a social and community-driven life organized by the inhabitants themselves.

Our ambition is twofold: (1) we aim to analyze the participatory process at hand: what were the intentions of the architects to create a form of increased participation in the uses as well as in the design, which would improve the living conditions in social housing. Thanks to a retrospective analysis based on interviews and archives, we try to identify the undertakings of participation and the discourses underlying the design process through comparing them to the process actually implemented and experienced by the stakeholders. (2) About 50 years after its construction, we want to understand how this project, presented as a trigger and a support for social interaction in collective social housing, succeeded and still succeeds in supporting inclusion, sociability and interaction between the inhabitants.

The first section presents an overview of current participatory issues in architecture and draws on the *grands ensembles* reaction theory. We then present our research section and methodology. Section 5 describes the project and its influences, with a specific emphasis on the goals of social interactions in the building. In Section 6, we describe the participatory process on two pillars: participation in the design process and participation in the usage (appropriation of the building and of the shared surfaces in particular). We then analyze and discuss the difference between the project statements and what has been actually experienced by the stakeholders.

2. State of the Art

2.1. A Theoretical Reaction to the Grands Ensembles: *Le Droit à la Ville*, by Lefebvre

Le Droit à la Ville, by Lefebvre in 1968 [7], defended an inclusive and radical approach to urban production. It is a key reference for the project (Interview with Martin Robain, 19 April 2020). At that time, the critique of the socio-spatial effects of the capitalist model, notably the construction of the *grands ensembles*, was omnipresent on the intellectual and architectural scene [9]. In this book, urban quality is based on the quality of use. In contrast to post-war functionalism, which reduces urban society to some functions defined and imposed by the architect, it is a question of recovering an integrated urban life capable of participating in the city. It can only emerge in the context of a *praxis* of the city by its inhabitants. The model of self-management is presented as ideal. At that time, after 20 years of massive public investment in the *grands ensembles*, the government was experimenting with other types of social housing, as well as interest in individual housing [10]. Thus, the monotony of mass housing was challenged with the help of social science and philosophy. Fifty years later, this article evaluates some architectural and social innovations that the reception of Lefebvre’s ideas allowed in the 1970s.

2.2. Co-Design in Architecture

Thus, the practice of architecture is only one facet of a much larger paradigm. The Design Studies examine the role of design and architecture in shaping present and past personal and cultural values, and how it may define the future [11]. This paper draws on this field to question the meaning of architectural practice and the influences as well as the effects of architecture on citizens and their environment. Sanders is the main reference for the methodology. She defines the practice of co-design as the collaborative exploration of future situations of use [12]. The term co-design in this article is understood according to this proposal, with the postulate that this exploration must include the end-users. Similarly to Fry [1], we claim that ethics is core to architecture. If co-design continues to be a particularly common approach in information and communication technologies today, user

involvement in design is also becoming an important issue in all other creative domains and is experiencing a growing interest, especially following the large-scale development of design thinking [13,14].

One of the challenges of co-design research today is to be able to go beyond the media or militant aspect of certain approaches to enable rigorous proof that they keep their promises [4,15,16]. We find six main recurring promises: to produce more innovative ideas by involving future users and stakeholders in the creative process (1), to guarantee that the projects carried out are as close as possible to the real needs of future users (2), to encourage the ability to work together and develop trust between the different groups (3), to develop the power to act of each person (4), to involve audiences that are usually not mobilized (5) and to encourage adherence to the project (6) [17–19]. Yet, this invoked empowerment seems to show limits in the short term [20] and requires a long-term investment to show results [21]. The retrospective analysis of the Grand'Goule residence allows us to verify points 3, 4, 5 and 6.

2.3. Distinction between Participation in Design and Participation in Use

The term “participation” holds several meanings. We understand participation in two ways: participation in design and participation in use. The now classic participation in design is characterized by an approach that aims to involve future users at a very early stage of the project. Participatory design is seen as a way to fully anticipate use with future users before it takes place. If it is sometimes complicated for architects to involve future inhabitants in the design of their living environment for several reasons that we describe in the chapter 8 of this article, then participation in use is sometimes considered to be able to integrate these users. Participation in use, or meta-design for Ehn [22], suggests postponing part of the design and participation after the design project, allowing design at the time of use with the goal of creating more space for the inhabitants. Participation in use is thought of as a way to allow future users to realize projects that really correspond to their expectations and needs after the design project, for an optimal global design. We understand here that within the framework of the project of the Grand'Goule Residence, participation in use counts for a big part of the desired participation process.

3. Research Questions

This article proposes to evaluate an emblematic experience of the 1970s to find feedback of a collaborative design method. The goal of this case study is:

- To describe with a case study what were the promises of the project, in terms of participative processes as well as expected impacts on social life. The aim is to produce a form of history of citizen involvement in a project, to identify its potential developments and its limits.
- To understand what participatory processes have been actually set up in the course of the project.
- To identify what have been the actual short- and long-term uses of the architectural spaces and the impacts on inhabitants' social life.
- To assess the impact of the concepts on social interaction and more generally of the successes and failures of the project, in relation to initial intentions, and to draw hypotheses of determinants of these successes and failures.
- To draw conclusions that may feed contemporary approaches of participatory design in architecture.

Our approach is based on the identification of what we call the initial intentions of the project stakeholders in terms of participation, and on the systematic comparison of these intentions with feedback from almost 50 years of the building's existence.

4. Material and Methodology

The case study we analyze, the Grand'Goule residence in Poitiers, is considered a typical participative experimentation of the 1970s in France. The project's main goal was to

create a dense social life through original architectural and social organization. We were inspired by the method proposed by Robert Yin, and the 6 axes he develops for a case study analysis: plan, design, preparation, data collection, analysis and reporting [23]. Within the framework of an analysis based on archives and retrospective data, the case study allows us to measure the complexity of the project, particularly in terms of its long duration, as well as to understand the complexity of the conditions of emergence of the project. It will also allow us to assess social interaction. Social interaction can be evaluated according to three constitutive properties: motivational, interactional and structuring [24]:

- Motivational processes are the ones that energize actors and mobilize them to interact.
- Interactional processes concern the way actors use gestures to signal and interpret.
- Structuring processes are the behaviors of motivated individuals. They allow them to rehearse and organize interactions in time and space.

We will look at how motivational processes were set up, and the extent to which they helped to encourage structuring processes.

We used different sources to analyze it, from archive data to site visits with inhabitants in order to collect retrospective histories. The review of existing studies suggests that long-term retrospective histories provide reports of nearly as high quality as those provided by short-term retrospective histories [25]. Cross-referencing the data with multiple interviews allowed us to pay particular attention to misreporting. The archive documents allow us to dissect the intentions and to compare them with the retrospective data from the users and professionals. The data are (Table 1):

- Site visits which are video recorded, with inhabitants, architects, project owners, officials, services and external partners (Figure 1). Common spaces meant to develop dense social interactions were a key focus.
- Interviews: one individual interview of each architect of the project, an interview of a project’s contractor from the 1970s, as well as an interview of a tenant since 1988. The main topic of the interviews was the conditions of emergence of the project, their point of view about participation and social interaction, their impression about the project at its beginning and their feedback about the state of the project today.
- Press articles from 1974 to today. From specialized architecture newspapers to local daily journals. The topics of the articles are mainly about architecture and the main concept, since some articles from local newspapers also examine the result of the SAPs in terms of social interaction.
- The archives of the architects: complete set of technical plans, architectural notices, research drawings and photographs. In order to identify and understand underlying intentions, we focus on produced documents that promote the participatory approach. Our objective is to analyze these documents to understand what the discourses around the project are, what was the process, what were the emblematic representations, in order to understand the evolution of the project.
- The archives of the project owner: photographs from 1978 to the 1990s. In addition to the archives from the architects, they show public events that happened in the 1990s.

Table 1. Table showing the different sources of knowledge used to analyze the project.

Source	Type	Nb.	Years	Grouped or Individual
Recorded site visits	With inhabitants	2	2021	Grouped
	With project owner and officials	1	2021	Grouped
	With architects	2	2020/2021	Grouped and Individual
	With services	1	2021	Grouped
	With external partners	1	2021	Grouped

Table 1. *Cont.*

Source	Type	Nb.	Years	Grouped or Individual
Interviews	With inhabitants	1	2020	Individual
	With project owner	1	2020	Individual
	With architects	3	2020	Individual
Articles	Local newspaper	18	1978/2022	
	Specialized press	10	1974/1980	
Plans	Complete architectural files	More than 500	1974/1980	
	Participation documents	18	1974/1980	
Drawings	Sketchbooks	3	1974/1976	
Photography	Archives from architects and project owners	More than 500	1974/1980	

**Figure 1.** Photo from a group interview recorded on site visit with tenants, 10 November 2021.

5. The Architectural Project and Its Context

The analyzed project is a *Réalisation Expérimentale* (experimental realization) carried out by Poitiers' social housing office, subsidized by the Ministry of Equipment within the framework of the *Plan Construction*. It was designed and built between 1974 and 1980 by the *Atelier d'Architecture* (Robain, Galmiche, Laval), which became *Architecture-Studio* in 1978. It is composed of 274 social apartments. The experimentation consisted of creating common spaces—*Surface d'Activités Partagées* (SAPs, or Shared Private Areas in English)—for the building's inhabitants, between the apartments. The general idea of the architects was that several families could cooperate to live as neighbors and friends and share common spaces to develop daily relationships. Each family has its own apartment, while the group benefits from common interior and exterior spaces.

5.1. Context: Turning the Page on Large-Scale Projects

In France, the social housing stock increased sixfold between 1945 and 1975, from 500,000 to three million units [26]. Public construction became industrial and was very dependent on drastic technical, temporal and economic constraints. It created what is called the *grands ensembles*. The *Plan Construction* emerged in reaction to this social development. Created in 1971, it drew on the architectural profession to detect innovative projects that

needed to be “taken out of the box” [27]. It subsidized the research budget and the overruns of the price ceilings and the extra costs linked to the experimental character of the produced buildings [28]. The Grand’Goule residence project and its SAPs were the result of this program.

The idea of SAPs was born in the great upheaval of the seventies. Martin Robain, Jean-François Galmiche and Yves-Jean Laval were students together in the architecture workshops of the *Grand Palais (École des Beaux-Arts)*. Pierre Colombot, an engineer who taught a course called “Perception of the Environment” at the *Université de Vincennes* joined them as a psycho-sociologist. The OTH technical design office completed the project management team. The construction company Dumez was integrated into the groupement and ensured the financial and constructive viability of the project. The project was presented to the *Plan Construction* and was then retained as a *Réalisation Expérimentale* (Experimental Realization) proposal. It did not yet have a project owner, nor a site. Then, the Ministry of Equipment proposed the SAPs project to the city of Poitiers, who validated it. The Place de la Grand’Goule, located in the ZAC (a concerted development zone) of Beaulieu in the eastern suburbs of Poitiers was chosen by the office for this project. The population of Poitiers increased from 44,000 before the Second World War to 81,500 in 1975. In this major construction effort, the city needed to find financing. The OPHLM (public housing office) of Poitiers was interested in one of these category 1 projects, allowing direct financing from the Ministry.

5.2. Socially Committed Architecture Inspirations

The work of Georges Maurios, Bernard Kohn and Jean-Luc Le Roy in the operation *Les Marelles* (1973–1975), in the Val d’Yerres (Figure 1), constituted an important inspiration for the SAPs (Interview with Martin Robain, architect, 19 April 2020) (Figure 2). Among the first *Réalisation Expérimentale* of the *Plan Construction*, this project offered to the future inhabitants the chance to compose the interior arrangements of their apartment by working on a 1/10th scale model. The primary structure was fixed, while the secondary elements could be moved. The structural principle was experimental: the concrete posts and structural beams were hollow in order to allow a flexible configuration of the networks. They were called “column-sheaths” and “gutter beams”. Unfortunately, resident participation had not lived up to expectations. Of the 70 to 104 dwellings planned for co-design, only 16 future residents actually participated [29]. On the other hand, this project was a great success within the architectural community. The idea of bare surfaces left to the initiative of the inhabitants is its main concept that has been reused in SAPs.



Figure 2. *Les Marelles*: Photograph of the raw plateau at the end of phase 1 before the interior layout chosen by the future inhabitants (DAF, CAPA, Archives Maurios).

In the preliminary design brief of October 1974 for the *Plan Construction*, the reference was also made to the Servicehouse of Sollentuna in Stockholm (Preliminary design brief (Notice APS) by the architects (Robain, Galmiche, Laval) for the Plan Construction, Paris, October 1974. Archives architecturestudio). Constructed between 1968 and 1972, the project suggested that the community took total responsibility for the individuals; the supervision and play of the children, the preparation of meals, the shopping, etc. These various procedures were organized in a collective way for 1246 dwellings, for only 4% above the normal amount of the rents according to the architects. All apartments were connected by corridors with services such as stores, nurseries, elementary school, a center for the elderly, gyms, recreation rooms, a restaurant and a staff for services to tenants. All spaces were open and had a public amenity character for all tenants [30]. It was assumed that the more complete the social organization was, the more it helped simplify the constraints of human contingencies.

The architects of the Grand'Goule residence saw these solutions as interesting although radical. They also used the new autarkic rural communities and urban activist committees as references. All these projects were seen as models in terms of social interaction and in the way they reshaped social and family life.

5.3. *The First Concept: A Social Manifesto in the Wake of the Seventies (1974–1976)*

Two years before Poitiers selected it, the project was designed without any urban context (Figure 3). The architects chose to realize rather small dwellings, the minimum allowed by the standards in terms of surfaces, to reduce the extra costs linked to the SAPs. They estimated the extra cost to be around 11% if one compares the construction cost with housing of higher social housing standards without specific common facilities. The Ministry of Equipment suggested a large-scaled project (300 dwellings), which was more ambitious than the architects' initial proposition (100 dwellings) (Interview with Jean-François Galmiche, architect, 17 April 2020).



Figure 3. The SAPs project: photography of the project at its delivery in 1980 presenting a space of conviviality appropriable by the inhabitants. The space is meant to be reversible and flexible in time, with separation walls that can be added if needed (archives architecturestudio).

The presentation text by the architects was socially militant and questioned the family structure. The separation between private and public space was perceived as too sharp.

It was from then on up to this ambitious project to propose a new social organization (Preliminary design brief (*Notice APS*) by the architects (Robain, Galmiche, Laval) for the *Plan Construction*, Paris, October 1974. Archives architecturestudio).

5.4. The Final Concept: Integration in the New Urban Area of Beaulieu in Poitiers (1976–1980)

When the project was accepted by the social housing office of Poitiers in 1976 on the advice of the Ministry of Equipment, it evolved with the organization of housing around a square (Figure 4). In this type of project with financing aid from the ministry, the project owners did not really have the choice of the type of architecture and had to follow the experimental nature of it. Despite this “arranged marriage” and a certain feverishness, the project owners wanted to believe in the success of this approach (Interview with Michel Servouze, project owner, 13 March 2020).

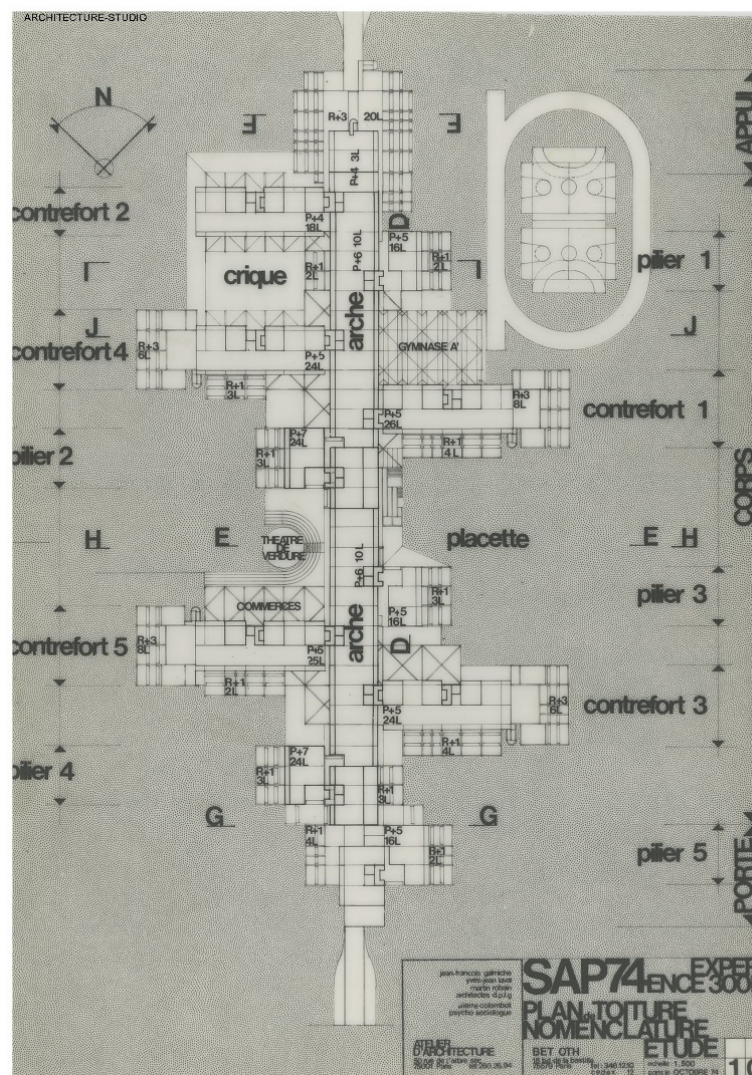


Figure 4. Project S.A.P. 74 *Expérience 300 logements*, roof plan in October 1974. This project is made without any existing site, as a general model for potential project owners (archives architecturestudio).

6. The Intentions

This section is based on archives—plans, drawings and photographs—as well as press articles. We will analyze what the intentions of the architects were in terms of participation in the design of the project, and in terms of participation in use when the project was built. In the preliminary design brief, they wrote a strong manifesto with a big desire for use value and service exchange (Preliminary design brief (*Notice APS*) by

the architects (Robain, Galmiche, Laval) for the *Plan Construction*, Paris, October 1974. Archives architecturestudio.). They affirmed that participation is one of the driving forces to get housing out of the crisis of large housing estates. Community and individuals were described as a way out of the consumer society. The “power of the inhabitants” was claimed in exchange for “knowledge” and “culture”. The participation was seen as a social practice capable of promoting urbanity and conviviality. It was also considered as an antidote to repetitiveness and anonymity. They argued that the meaning of architectural creation is to be found in its relationship to “social reality”.

6.1. Participation in Design

The analysis of the project shows that the direct participation of users in the design process has been envisioned on three specific aspects of the building.

6.1.1. Outdoor Space

For the outdoors, they suggested to involve the inhabitants as much as possible and to multiply their communication with the developer and before the realization, in order to discuss its design. The final development was then the result of a decision made together with the inhabitants and according to their actual habits.

6.1.2. Shared Interior Spaces

In an explanatory note of the architects from 1976, it is specified that SAPs “will have to be developed by the inhabitants, or at least the users will have to influence the development of these surfaces” (Explanatory note (*Notice explicative*) by the architects (Robain, Galmiche, Laval) for the *OPHLM de Poitiers* (Goupy), Paris, 31 July 1976. Archives architecturestudio.). It is wished that a facilitator will present the project one year before its delivery. Furthermore, in a note by the architects for a local newspaper (Note by the architects (Robain, Galmiche) for *Centre Presse*, Paris, 15 January 1979. Archives architecturestudio) while the project was under construction, the architects specified that the development of the collective living space should result from a project expressed by its inhabitants. They said that the participation of the inhabitants should not be “participation-information-caution”, but the opportunity for a reversal of the process, and “planning with”, rather than “planning for” the future inhabitants. This involvement was to be done through meetings in neighborhood committees, understood as a refinement of democracy. It was also specified that the buildings were deprived of an elevator on purpose, with the one exception, in order to encourage meetings.

6.1.3. Community Building

Pierre Colombot, the proclaimed psycho-sociologist of the team, cautiously explained that one can “reasonably hope” that the devices put in place in this project will allow for a richer social life than in a conventional building (H.A, (1980?). *Un nouvel immeuble à Beaulieu. Habitat Actualités*). It seemed essential to him that the neighbors could choose each other.

It seems that the co-design aspect of the project has been limited to these general intentions, and Colombot declared regretting not having integrated such requests upstream, and hoped that the residence of the Grand’Goule by its characteristics could give rise to rich social life (*Ibid*). As we will see below, the participation in use was indeed much more developed in the project.

6.2. Participation in Use

- (a) *The following projects are proposals for Experimental Achievements that have recently been accepted by the Construction Plan, but do not yet have a project owner. They benefit from the experimental grants available to the Construction Plan. These projects are listed here for the information of project managers and owners*

- (b) *Shared activity area/300 housing unit experiment/Jean-François GALMICHE, Yves-Jean LAVAL, Martin ROBAIN; Architects DPLG; /Pierre COLOMBOT Psycho-sociologist; O.T.H. technical design office*
- (c) *WORKING HYPOTHESIS/The project of experimental realization starts from the observation that the family, reduced to its simplest expression, is isolated in its dwelling in the middle of an urban structure of large scale./PROPOSAL/The project proposes to create an intermediate environment that rebalances social life of the individual by integrating the cell into a human-scale organization./This environment is a hypertrophy of the landing that becomes a place of shared activities for a group of six families./The spaces of the cell are distributed according to the hierarchy: private, private outside, common./The exterior private spaces at the scale of some families are the shared activity surfaces./The common spaces at the scale of the neighborhood are the group territories.*

The extract of the catalog of *Réalisations Expérimentales* selected by the Plan Construction from 1974 describes the working hypothesis and the proposal of the project (Figure 5). The social interactions are meant to happen in a “place of shared activities for a group of six families”, which are called private outsides. They are located on the upper levels of the building. There are also shared spaces at the neighborhood level called Group Territory. They are thought for a first-floor location. In the end, they were not built.

REALISATIONS EXPERIMENTALES

Les projets qui suivent sont des propositions de Réalisations Expérimentales qui ont été retenues récemment par le Plan-construction, mais n'ont pas encore de maître d'ouvrage. Elles bénéficient des aides à l'expérimentation dont dispose le Plan-construction.

Ces projets figurent ici à titre d'information des maîtres d'œuvre et des maîtres d'ouvrage.

(a)

surface d'activités partagées expérience 300 logements

Jean-François GALMICHE, Yves-Jean LAVAL, Martin ROBAIN ; Architectes DPLG ;
Pierre COLOMBOT Psycho-sociologue ; O.T.H. Bureau d'Etudes Techniques

(b)

HYPOTHESE DE TRAVAIL

Le projet de réalisation expérimentale part du constat que la famille, réduite à sa plus simple expression, est isolée dans son logement au milieu d'une structure urbaine d'une échelle trop vaste.

PROPOSITION

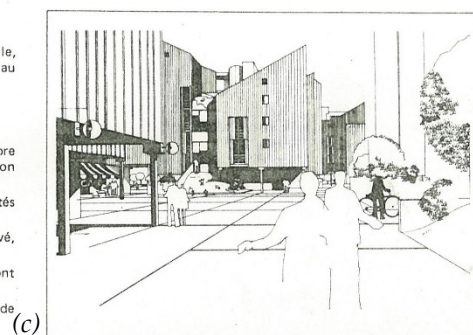
Le projet propose de créer un milieu intermédiaire qui rééquilibre la vie sociale de l'individu en intégrant la cellule dans une organisation à échelle humaine.

Ce milieu est une hypertrophie du palier qui devient un lieu d'activités partagées pour un groupe de six familles.

Les espaces de la cellule sont distribués suivant la hiérarchie : privé, privatif extérieur, commun.

Les espaces privatifs extérieurs à l'échelle de quelques familles sont les surfaces d'activités partagées.

Les espaces communs à l'échelle du voisinage sont les territoires de groupe.



(c)

Figure 5. Extract of the catalog of the *Réalisations Expérimentales* selected by the Plan Construction presenting the Surfaces d'Activités Partagées (archives architecturestudio). The project is presented with others as eligible for a state grant to potential project owners by the Ministry of Equipment. Translation below.

In general, in the figures below (Figures 6–8), it is necessary to underline first the use of atypical drawn supports to encourage a comprehensive awareness of the project; and secondly, it is important to emphasize the will to radically modify the conception of the separated functional spaces through innovative conception, which aims to go beyond the limits of appropriation between the private and the public, the intimate and the social, to propose a space of friction, to see the rupture, between the two. This illustration will show us what the architects' intentions were in terms of participation in use.

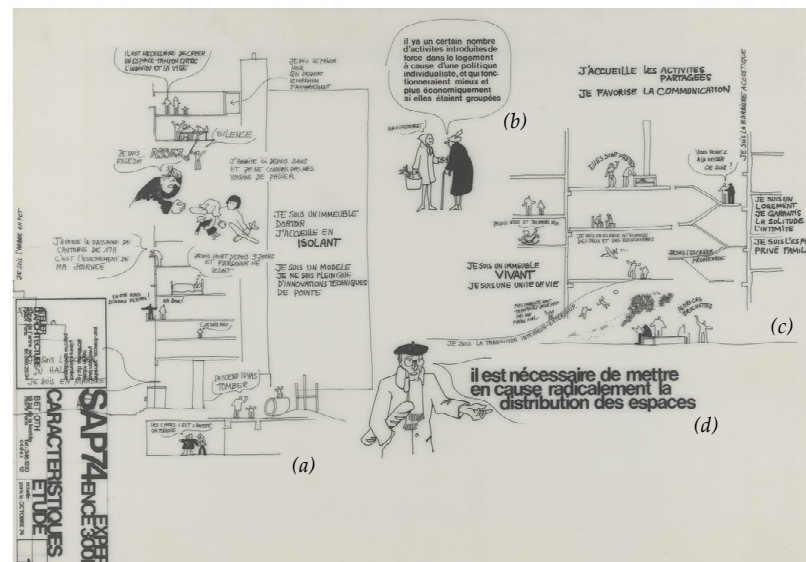


Figure 6. Project S.A.P. 74 *Expérience 300 logements*, extract of the architectural notice realized in October 1974 for the *Plan Construction* (archives architecturestudio). Translation below.

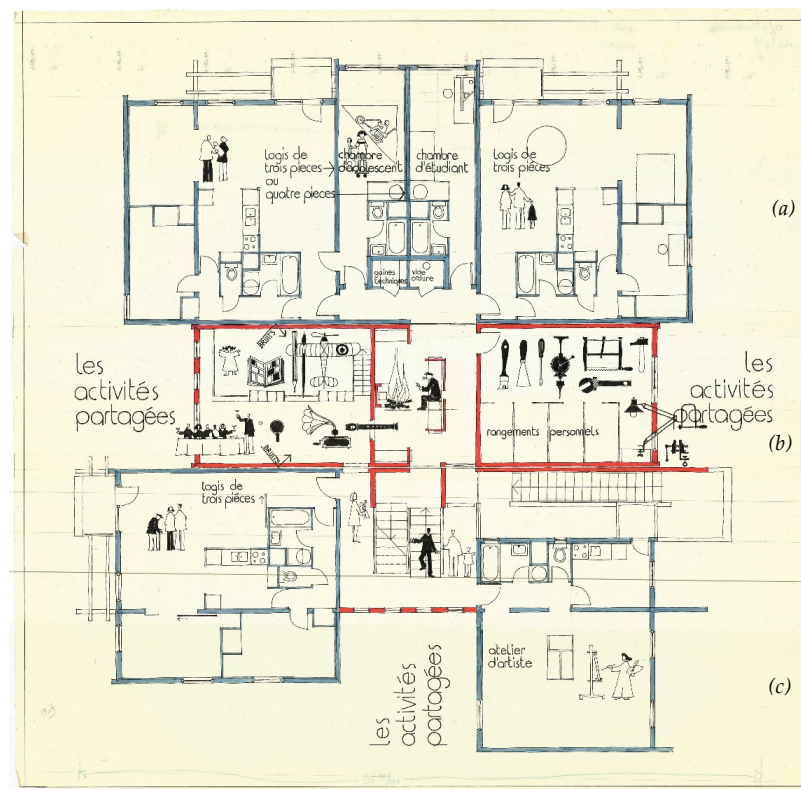


Figure 7. Current floor plan of one of the four corner buildings, called pillars, with the common spaces marked in red in 1976 (archives architecturestudio). Translation below.



Figure 8. Poster presenting the project and the common areas available in 1978 (archives architecturestudio). Translation below.

- (a) / Building on the left (a classical building type grands ensembles): I am the black landing, which serves the maximum number of apartments/I am the tree in a pot/I am a dormitory building, I welcome by isolating/I'm a model, I'm only full of cutting-edge technology/I am the staircase of the hall, I am in marble
- (a) / People in the building on the left: It is necessary to create a buffer space between the individual and the city/I am exceeded, enough/SILENCE/I've lived here for three years and I don't know my next-door neighbors/I'm waiting for the 5pm bus to pass, it's the event of my day/I've been dead for 3 days and nobody knows it/In the summer, we dine out. Do we?/I am me/Come down, you'll fall/The cellars it's nice we laugh

- (b) *There are a number of activities forced into housing because of individualistic policy that would work better and more economically if they were grouped/Obviously*
- (c) */Building on the right (the SAP): I welcome shared activities/I encourage communication I promote communication/I am the sound barrier/I am us and always me/I am a space for games and encounters/I am the staircase/I am a home, I guarantee solitude and privacy/I am the private family space/I am a living building, I am a living unit/I am the transition from inside to outside/*
- (c) */People in the building on the right: They are ready/Are you coming tonight?/Are you coming to the wake tonight?/My parents are quiet, I cannot be hurt/So, the skewers*
- (d) *It is necessary to question the distribution of spaces*

The illustration from the 1974 architectural note depicts some of the architects' intentions to develop participation in terms of use by the inhabitant (Figure 6):

- The building speaks in the first person, and proclaims to be alive (a, c). It aims to promote communication, and for that purpose welcomes shared activities (c).
- The building guarantees intimacy when it is chosen, in particular within the framework of the private family life, with an acoustic barrel (c).
- The distribution of spaces is questioned: the transition between the purely public sphere and the private sphere is generated by spaces of conviviality such as spaces for grilling, for games, for meetings, etc. (c, d).
- It is compared to a classic building (a), described as favoring isolation, although technologically advanced, with narrow and dark circulations, apartments without transitions between the private and the public sphere. It is seen as a dwelling without common life, where the noise produced by the neighbors is an inconvenience.

(a) *Three or four room dwelling/Teenager's room/Student's room/Three room dwelling*

(b) *Shared Activities/Personal Storage*

(c) *Three-room apartment/Shared activities/Artist's studio*

(a) *Hum hum..., What if we did something together?*

(b) *What is this building?/It's an experimental project of the Poitiers Housing Office, subsidized by the Ministry of Equipment. The idea is that there are large common rooms on different levels. There are places on the ground floor where the inhabitants can build other common rooms. There are accessible terraces. There is a greenhouse. There is a budget available for the residents to build all this. Oh, I forgot the most important thing: there are apartments of course! 274 social housing units for rent/And how do you go about living there?/You have to be a group of several families who know each other and get along well (neighbors, friends...), each family has an apartment, while the group of families develops and uses the common premises, the terraces, the greenhouse, etc... In addition, you have to be entitled to social housing, of course... Meetings are planned from December 1978 onwards to discuss with people who are interested, to allow them to meet each other—If you are interested, come to the office to ask for information!*

Figures 7 and 8 illustrate the architects' proposal features aimed at allowing the participation in use. We can see:

- The common horizontal circulation, which is thought as an interior street with a sitting over and a fireplace (Figures 7b and 8). It is meant to be an extension of the private dwellings and is also open to family storage;
- On the upper floors there are shared activity areas (SAPs), one and a half floors high (Figures 7b and 8). Activities are seen such as a do-it-yourself workshop, laundry, childcare or a sports room. A rooftop for barbecues is also available (Figure 9);
- The units are in direct contact with the vertical circulation, not enclosed, without elevators, in order to multiple informal meetings (Figure 8);
- In a desire to create outdoor meeting places, there are "green theaters" and "cricks", a game of bowls, vegetable gardens, a greenhouse and "meadow" garden with games for children (Figure 8);

- Flexibility is also given in the design of some apartment plans, with rooms that can become independent from the main dwelling (Figure 8a).

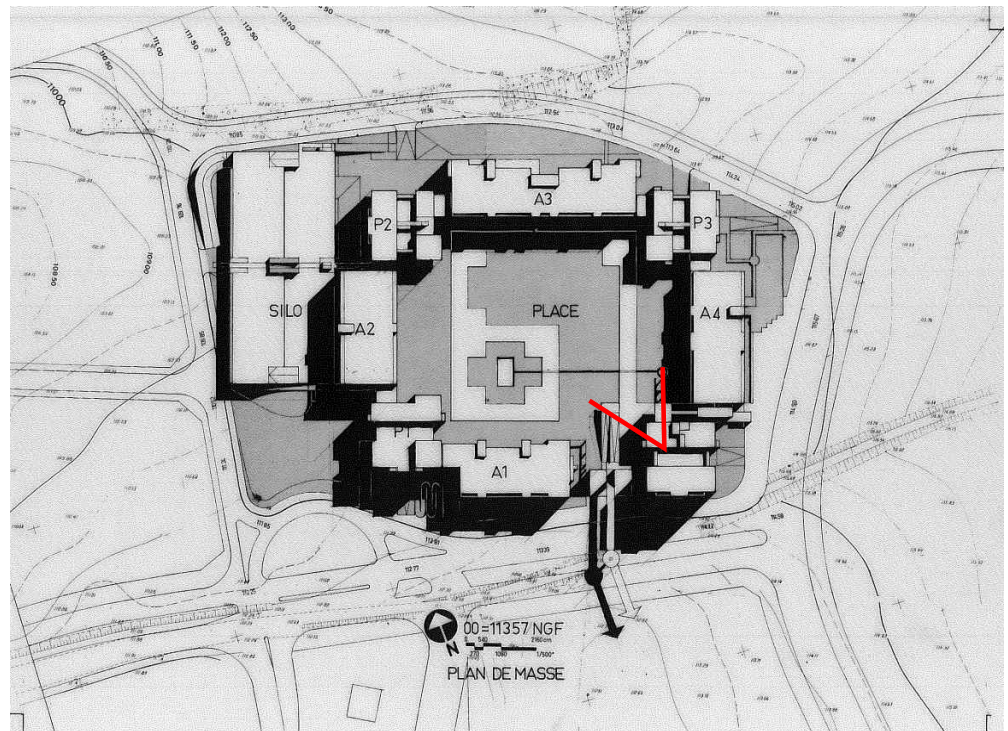


Figure 9. Project «SAP.76», final masterplan in 1978 (archives architecturestudio). In red, the shooting location in Figure 10.



Figure 10. Interior square view of the Grand'Goule residence at its delivery in 1980 (archives architecturestudio).

The architects also affirm that groups with similar interests can be associated around an SAP. Co-optation is imagined to be carried out with the organization of lunch and dinner meetings, allowing contacts to be made quickly. For the architects, the Grand'Goule residence requires an in-house animator. However, this idea will not be implemented. Additionally, there is already in the mind of the architects the possibility of the failure of the approach. The notice specifies that in case the participation in use does not work, it is possible to go back and replace them by traditional housing spaces.

7. Experience Feedback of the Actual Project

7.1. Shared Spaces Built in 1980 at the Reception of the Building

After 6 years of development and construction, final choices were made:

- In the large common horizontal circulations, six concrete benches in front of the chimney have been built.
- Eleven interior SAPs, six of which are one and a half stories high, and three outdoor SAPs on rooftops. One-third of the residents, the ones who live in one of the three corner buildings (called 'piliers', pillars) have a direct access to an SAP from their level.
- The collective sanitary facilities connected to these SAPs have eventually not been built. Only one has been built in the outdoor place.
- The dwellings are organized around an enclosed urban place, designed to promote conviviality. The place is around 70 × 90 m, 6300 square meters (Figures 9 and 10). The greenhouse has not been built.
- The flexibility given in the design of some apartment plans with rooms that can become independent from the main dwelling has not been developed.
- The management of the SAPs is left to the residents, without any professional animator. A budget exists to help finance the development of common areas.
- It is not possible for the inhabitants to choose their neighbors.

7.2. Feedback on Participation in Design

This section is based on the site visits and interviews we made with the inhabitants, as well as press articles.

During the design phase, the direct participation of the users is only considered through the set-up of the central outdoor place, while the involvement of the inhabitants in the architecture of the dwellings and the common spaces is proposed in the use of a space already defined by the architects. It can be seen that during the programming, sketch and study phases, the involvement of the inhabitants in the design of the project is lacking. During the construction phase, communication was made through leaflets and meetings, without including any feedback mechanism. At this design stage, the participation remains without consistency, nor a real participative framework. Due to organization difficulties, financial shortages and a lack of social investment into the project from the project owner, even the outdoor spaces have not been developed with the future tenants, despite the discourse of the designers calling for the involvement of the future inhabitants. Inside the very top-down framework of the *Construction Plan*, the project has been carried out according to conventional processes.

A shared time of conviviality is organized in order to carry out meetings with the future inhabitants. There were then some evenings of conviviality. The intention here is a search for adhesion from the inhabitants to an already existing project. It seems to be a weak point of this approach. Craig and Porter [31] would describe this process as primarily instruments of control, rather than participation.

7.3. Feedback on Participation in Use

SAPs took place in three "pillars", which are corner buildings; 77 out of 274 dwellings have close access to it. The journalist Jocelyne P. describes that each pillar has a different history and different uses (P. Jocelyn, (10 March 1981). P.A.N. Un espoir pour développer les relations humaines (P.A.N. A hope for developing human relations). *La Nouvelle République*).

In 1981, one year after installation, the inhabitants of the first pillar with a SAP had already almost abandoned the project. At the beginning there were some successes: a photo laboratory and common DIY equipment. The photo lab was eventually installed in the homes because there was no water supply in the SAP. The absence of sanitary facilities in the common areas limited the use of the SAP to the very close circle of the premises. The DIY equipment also circulated only between apartments without common use. The question of access arose, which had not been solved. How to close these spaces with valuable equipment, while ensuring a wide access, without remunerated animators? In a general manner, we know with Sommer [32] that the success of this type of common device is made way easier thanks to a facilitator.

In a second pillar, young people had installed a ping-pong table in one of the SAPs. Several neighbors could enjoy it. It was a place of conviviality. The inhabitants have invested in the room without financial help, even though the social housing office had a budget to help with the interior design. On some evenings, neighbors sat around the fireplace for barbecues. It is therefore a relative success.

In the last pillar, all the inhabitants were already seeing each other before coming to the project. The group was formed and was looking for a place that facilitated their meetings. So, the project seemed fitting perfectly for them. It was the organization “vivre ensemble” (*living together*), a community that attracts Catholics. They had enriched the building with several modifications: the metal railing was replaced with wood, the fireplace room was invested with plants, decoration and cushions (Figure 11). The SAP housed a library, a prayer room, and a TV room (Figure 12). A creperie was set up in an unoccupied apartment where convivial moments were organized. The experience was therefore relatively successful. The reason for this success was perhaps to be found in the fact that these were people who had decided to live together beforehand, in an already established community. New encounters with other inhabitants did not take place there.



Figure 11. The common circulations, with a guardrail in the foreground designed and built by the inhabitants after the reception of the project, in replacement of a metal guardrail. In the background, the concrete bench decorated with plants with its chimney in front (archives architecturestudio).



Figure 12. An SAP set up as a place of prayer (archives architecturestudio).

The majority of the apartments are one or two bedrooms, which essentially leads to the installation of young couples or singles. Because of the proximity of the University of Poitiers, there were many students at the beginning of the installation. They were rather mobile and generally only stayed for a few years. They already had a student life on campus and did not necessarily feel the need to meet new people in the Grand'Goule. The students seemed to have little capacity to ensure the success of this project.

Nevertheless, this project has had consequences in terms of usage. Meetings by the fireplace, in the square and in the ping-pong room show that the project has indeed increased social life in the beginning. The residence is described by several residents who moved in the 1980s as particularly convivial. "Thirty years ago, it wasn't like that at all [as it is today]. We had a lovely conviviality. We used to dry laundry in the spaces, you could go from there into the hallways, you would go downstairs, you would go upstairs. I had colleagues who lived all over the place, and we managed to meet up" (Extract from a recorded site visit with a tenant since 1986, 10 November 2021). The central square is also described as a place for conviviality and sharing, with tables brought out by the social housing office in the spring, and neighbors coming to eat outside with their children playing. The place is considered more convivial than another classic social residence.

Around 2000, the residence changed. The middle class present at the beginning of the project disappeared progressively, following their residential path to buy a house elsewhere. The new population that replaced them was more precarious. From that moment on, the Grand'Goule started to be identified as a problem residence. The residence had become the second most important point of drug trade in the city of Poitiers (Interview with social housing maintenance manager, 17 November 2021). Secure doors appeared. The roof terraces were closed. Shrubs and flowers were removed. The use of the fireplace was stopped because of noise pollution. In 2020, a young man was shot in the square and did not file a complaint (E. Gérard with Antoine Morel (2 August 2020). Poitiers. Un jeune homme blessé par arme à feu dans le quartier de Beaulieu. *France Télévisions*).

The senior population feels abandoned by the public authorities, the mistrust towards the teenagers and young adults occupying the area is great. One elderly person said: "One time we had a rodeo on the motorcycle, it wasn't funny" (Extract from a recorded site visit with a tenant since 1986, 10 November 2021). The residence is described as particularly dirty, degraded and dangerous. "Yes, even when we have something they break everything" (*Ibid*). Some young adults are described as being constantly present in the square, with no activities. Most of these young adults on the area during the day are not residents. They often do not share much with the community of the residence. From the inhabitants' point of view, they act as a distinct autonomous group, not accountable to the other inhabitants (Interview with one senior tenant, 12 March 2020). Graffiti saying "ici c'est chez nous" (here

it is ours) testifies to this state of mind. However, they also describe themselves as victims abandoned by the public authorities, with no official place to meet. A facilitator who said he can speak in their name explained that they suffered from a lack of job opportunities (Interview with user of the square, 17 November 2021). The conviviality of the beginning of the project has been lost.

8. A Systematic Factual Diagnostic

The analysis in previous sections highlights several differences between what was primarily intended by the architects, and what has really been set up in the project. We propose an analysis on these differences showing two dimensions of participation: participation *in the design* (Table 2) and participation *in the use* (Table 3). For each topic, we draw a synthetic table showing the difference between intended and actual forms of participation. This overview of the participatory processes and features will provide a basis for identifying the factors that have contributed to gaps between the intentions and the processes put in place, in Section 9.

Table 2. Table showing the differences between intended and actual forms of participation in the design and their plausible underlying causes.

Intentions Speech	Expectations		Reality		
	Planned Features	Expected Induced Use	Implemented Features	Actual Usage on Delivery	Actual Usage 20 Years Later
Practicing co-design	The architectural creation will have to be co-designed including decisions regarding uses and flexibility of the common spaces	Facilitate the involvement in the use and conviviality on a long run	Inhabitants can only do the interior design of the commons within the spatial limitations such as concrete benches	Some commons have been redesigned by the inhabitants. Involvement exists during the first generation	Commons spaces are all empty. There is very little involvement
	The design of the central outdoor place should be co-designed according to actual tenants' habits		No co-design, the design of the central outdoor place is made by the architects	A strong conviviality exists on the square	
	Co-design is to be done through meetings in neighborhood committees		The neighborhood meeting took place few months before the delivery of the project	Some involvement exists during the first generation	There is very little involvement

Table 2 presents the intentions of participation in the design of the project as thought by the architects, put in parallel with the end result. It shows that, although the project at that time has been presented or understood as participatory, direct participation of inhabitants is rather limited. It seems that progressively, initial desired involvement of users in the project's design has progressively moved towards their participation to the development of activities in the dedicated spaces (participation in use).

Following this latter form of participation, Table 3 presents on one side what was intended by the architects (the public discourse on the participative opportunities, the architectural features imagined to support these discourses and the expected uses by the inhabitants), and on the other side what has actually been done and how it has been used, according to feedback from the inhabitants and stakeholders.

First of all, we can see that the project did not go as planned on most points. The dense social interactions did not occur as expected. Indeed, if a certain conviviality and a particularly rich social life has been able to develop over a period of twenty years, this has not gone hand in hand with a formalized organization of the tenants nor with a sustained use of SAPs. Social life took place rather in the outdoor spaces. Unlike the SAPs, the free access and the central location of the square facilitate the appropriation of the area. The SAPs may have been a space dedicated to a particular activity for a time, not very conducive to the creation of new encounters, but they have strengthened pre-existing dynamics over a longer period, as in the case of the religious community.

Table 3. Difference between intended and actual forms of participation in the use and their plausible underlying causes.

Intentions Speech	Expectations		Reality		
	Planned Architectural or Social Features	Expected Induced Use	Implemented Architectural or Social Features	Actual Usage on Delivery	Actual Usage 20 Years Later
A new social organization is valued as a way out of the consumer society, with a strong desire for service exchange/The project should encourage a second layer of human relationships/It should allow individuals to meet each other and get together	Creation of several SAPs	A new nuance of human relationships is developed, between the private and the public.	11 interior and 3 outdoors SAPs on rooftops. One-third of the residents have a direct access	The social life is mainly happening when a group dynamic is pre-existing.	The SAPs are not used by the inhabitants
	Creation of large common horizontal circulation thought as common space. No elevator	Development of informal meetings and a strong conviviality on a daily basis	In the large common circulations, 6 concrete benches in front of the chimney have been built	Some appropriation happened	No appropriation
	The dwellings are organized around an enclosed urban place	Encourage meetings and conviviality	The place is around 70 × 90 m, 6000 square meters. The greenhouse has not been built	A strong conviviality exists on the square	Some conviviality still exists, although the conditions are degraded
	Neighbors can co-opt each other.	Dense social interaction on a daily basis and adhesion to the concept	Neighbors cannot co-opt each other.	New tenants arrive without any particular adhesion	<i>idem</i>
Encourage involvement to the process through mediation	Hire a salaried facilitator	Involvement of residents	Distribution of communication media/ Explanatory meetings	Little involvement outside pre-organized groups	Almost no involvement
Being open to all residents	Commons have open access	Different occupations can take place by different groups over time	Circulations and roofs are accessible without keys from the outside. The SAPs are usable independently	Little exchange of commons between stairwells.	No exchange between stairwells. Installation of secure entrance doors
Being open to all the inhabitants of the district	Some common spaces are thought as being available	Opening the residence to the neighborhood	Commons spaces have been built on the ground floor	The inhabitants of the district do not use it	<i>Idem</i>
The users will have to influence the development of the SAPs.	The common areas are left raw with a budget to design it	Encourage the appropriation and personalization	The common areas are left raw with a budget to design it	Some spaces are invested. The allocated budget has not been requested	The common areas are left empty
If the SAPs do not work, it is possible to transform them into housing	Adding walls and opening doors	Make the project evolve over time	It is possible to transform SAPs by adding walls and opening doors	No empty common space will be turn into housing	<i>Idem</i>

Then, we find that this approach has to be observed over time. While a lot of social interactions may occur at the outset, over a long period, most have deminished. Overall, there was a mixed appropriation of the SAPs from the start, since half of them were unused one year after the project was delivered, and this proportion increased over time, reaching an almost 100% vacancy rate today (Recorded site visit with inhabitants, 10 November 2021). We think that this type of system can only develop over a long period with a population capable of settling in over for a long while, assisted with mediation [32]. The turnover of the first generation of inhabitants made the existing tacit rules of the game disappear progressively. It was the triggering element of the SAPs’ decline at the turn of the years 2000.

Overall, the architects have designed a form with a participatory use in mind and have drawn a shape by projecting participatory use on it. This table helps us to clearly understand that the transfer of the architects’ usage intentions for the user did not live up to the initial expectations. This study is a clear illustration that this transfer is a complex mechanism [33] that has to be properly designed and managed over time.

9. Discussion: Success Factors of the Project and Participation

In this section, we lean on the previous factual diagnosis to infer and discuss factors underlying the project’s “successes and failures”, on both the participation in design processes and the participation in use. We focus particularly on two failure factors: continuity and administrative constraints.

9.1. Success and Failure Factors

9.1.1. Success Factors

We notice that the participation in use depends a lot on the people who dwell in the place. In this bottom-up use, communities seem to be the most likely to invest in the shared management of a space, the success of the interior common areas seems linked to the existence of a community. In the case of Grand'Goule, a pre-existing community seemed to be the most relevant factor that can explain the success of 'pillar 3' social life in the first years of usage.

9.1.2. Failure Factors

The factual diagnosis shows that on most participative features, there have been large gaps between the discourses about participation and social life, and the inhabitants actual experience. Several "factors of failure" may explain these gaps. We identify the following:

- The lack of continuity between upstream and downstream participation (see below).
- Administrative constraints related to the architectural process (see below).
- Administrative constraints related to social housing. The statutory impossibility of selecting people specifically involved in these processes also seems to be a limitation on the creation of a group dynamic. Moreover, participative design is particularly difficult to implement in the context of a large-scale new social housing. It would have been useful to go beyond the traditional conditions of allocation for social housing, and to accept that new criteria and approaches are more likely to facilitate the success of the project.
- In relation to that point (and mirroring the success factors), the composition of the community seems to be a crucial point. Students who lived there at first focused their social life elsewhere and remained there temporarily, they did not invest in the place.
- The lack of political will. The project owner was not a driving force, but a "follower". If the commitment of the architects is essential, the involvement of the project owner seems to be even more so, regarding the numerous logistical, administrative and financial difficulties.
- The lack of mediation, has been strongly regretted
- A certain lack of knowledge of the architects. The architects' intentions did not live up to expectations. One of their main errors of judgement was to assume that inhabitants would behave in the same manner as them.
- Some decisions were miscalculated. For example, the absence of sanitary facilities in the common areas profoundly limited the flexibility of the SAPs. While this may seem trivial, in the opinion of several residents it was an important limitation to the appropriation of the place. A stronger participation in design should have permitted to anticipate this issue).
- The tension between intimacy and conviviality. The management of the nuisances produced by the moments of conviviality were also a weak point of this project. It resulted in either ignoring them or completely condemning these moments.
- The lack of a long-lasting bond to (re)involve the newcomers.

Interestingly, it seemed that the budgetary aspects (except for the professional animator) were not considered as a strong barrier for participation and the extension of social life.

We will focus on two of these factors: the lack of continuity during the process and the administrative constraints related to the architectural process.

9.2. The Lack of Participation Continuity.

Finally, we can notice that if the architects have regularly invoked inhabitants' participation in the architectural conception of their building, at no time co-design happened beyond the interior design. The process focused on the participation in use. The whole project has always been conceptually and firmly held by them. If the inhabitants have a real power over the development of common spaces, in an autonomous way, this openness is confined in spots predefined by the designers. This project, beyond its particular spatial

characteristics, was carried out according to a protocol almost identical to that of a classic project. Following Rendell's approach [34], we can consider that in this project the intention was that while the building is physically conceived by the architects, it is the inhabitants who continue to make the project, long after the construction has ended. This model of "participation-in-use-only" seems too short to encourage genuine adhesion. It would probably have been more efficient to take the problem by the other end, and to start from the people's concerns. It may have allowed them to develop their drive to act on the place and their ability to work together [35], and also to facilitate the implementation of future projects associated with these SAPs. It is possible to argue that, given the novelty of the approach, it was due to a lack of knowledge on how to do so.

As soon as the project was delivered, the owner treated it like a generic project. However, it would have required a particular management given the framework of the experimentation, since the SAP does not seem to be very conducive to new encounters or social life. Thus, the fact that the future inhabitants arrived without any particular expectations for the SAP, with the exception of the religious group, did not allow for more united groups to gather around common values.

This case study illustrates a fundamental process of participation in architecture. Participation cannot be constructed as a time-bound process, nor can it consist solely of a framework in which users are given complete freedom. It should neither be a "one shot" nor a "blank page" process. We can understand from this study, and in particular for sustainable social life, that participation requires continuity (before, during and after the architectural process).

9.2. Administrative Constraints Related to the Architectural Process

This project was first carried out in a very top-down way, from the Ministry of Equipment, without the final project owner and without its future inhabitants. Thus, the architectural process is all the more classical and constrained since it was carried out within the framework of a contract whose core agent was the construction company, with profitability as a main priority. Getting out of the classical design process to rethink the project and modify the roles of everyone with a co-design approach is then very challenging, because there is no existing framework in the signed contracts. Following the example of Bouchain [36], we can see here the coercive character of the regulated processes, which narrows the spirit of freedom that blew in the first intentions. It was not chosen to push the concept completely. This project, in touch with the users' needs, required a different method. However, the project owner was not particularly motivated by this experimental path, as he was mainly concerned with financial profits. Even if he looked at the concept with hope and goodwill, he did not take the risk to steer away from the already known top-down approach, which was indeed necessary to meet the initial intentions of the project.

10. Conclusions and Perspectives

The general objective of this article is to promote the democratization of co-design in architectural and urban projects, by evaluating methods and tools that have already been tested. Co-design is seen here as a commitment process for citizens and users in the design of projects they are involved in. Users, architects and contractors of a participatory project built in the 1970s were confronted with the researchers' viewpoint through grouped visits and individual interviews in order to collect retrospective data that are cross-referenced with the existing archives. Today, more and more initiatives are appearing that allow users to participate in design processes, which is usually reserved to professionals. They are no longer considered only as passive subjects of a consultation, but as actors and initiators of proposals. However, there are still obstacles to its generalization, which we proposed to identify here in order to better overcome them. Therefore, this article wishes to draw lessons from an emblematic participative experience—the social housing residence of the Grand'Goule in Poitiers (France)—in order to consolidate the knowledge gathered from these occasions. We have tried to re-create a form of history of citizen involvement

throughout this project, to identify its potential improvements and also its limits, via the analysis of the completed project and its design process, in order to make general progress in these approaches in terms of quality, efficiency and inclusion. As an open-ended initiative, our aim is to disseminate this theme as widely as possible, as a way of reinforcing the cross-nature nature of participatory approaches, which are at the heart of projects that combine living spaces and lifestyles.

Under the general term of participation, two forms are conceived: in design and in use. We see that the project is essentially based on the second pillar. In conclusion, we can say that, if in terms of motivational processes, a lot of effort has been put into specific architectural facilities in order to favor dense social interactions, few social devices have been put in place to accompany them, contrary to the initial wish of the architects. Without these social devices, the architectural processes seem to be unable to develop long-term structures to support the motivation of individuals and maintain dense social interactions.

The project is currently being re-designed. In this context, Architecturestudio is committed with Ekidom (the social housing office of Poitiers) in a mission for the renovation of the site, resulting from inhabitants' involvement. This demanding approach of co-design and the collaboration of inhabitants requires real preparation and know-how in order to be implemented and not to be counterproductive. As a very complex and fragile process, enabling the active presence of people in the design and realization of the common areas is far from obvious, and thanks to this paper, we understand that there is a large gap between intention and realization. Indeed, if it is not well implemented, the involvement of residents can create conflicts [37]. For this reason, the retrospective analysis of the method used primarily on this site has been questioned, adapted and cross-referenced with methods from Sanders [38], Kimbell [39] and Rosanvallon [40]. The current paper could be developed by the analysis of other factors of progress described in part 9.

Lastly, we understand from Grand'Goule experience that two main points must be considered for an efficient and successful participation, especially in the context of architecture (in contrast to other domains of design), where the produced artefacts are highly complex, long-lasting and where users evolve over time: on the one hand, participation must be envisioned as a continuous and sustained process, and on the other hand legal, technical and administrative framework can bring forth obstacles that need to be bypassed in some way.

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