

## *SYMPOSIUM: NOFIM: CASE OF A PDR AND A POE*

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### **ABSTRACT**

Since it is so rare that a POE follows use of PDR, this symposium proposes to have only two papers, the pre design research, followed by the post occupancy evaluation. Having only the two papers at more length allows the audience to hear more and inquire more in depth about a case that moves from PDR to POE. While NOFIM is a case history of an elderly community building its own environment, it is also instructive for other populations participating in the design process.

## **NOFIM: The Beautiful Vision of A Retirement Community in Israel**

*Robert Bechtel, University of Arizona*

### **ABSTRACT**

Nofim, a 157 unit building for retired people, was designed and built in Jerusalem by a group of retired Canadian and American emigres. The group formed a non-profit corporation, sought government funding and hired a social scientist and architect to help them make design decisions. They used social science data and a committee system to decide on the priorities of design components. The method is innovative in participatory design in that the clients controlled the process themselves and made their own interpretations of social science data. Decisions were organized around four central elements: Admissions and discharge policy, size of units, extent of services made available and policy of hiring residents within the building. Research on life styles using Barker's techniques ----- revealed aspects of behavior that were both peculiar to Jewish culture and universally relevant to elderly in any culture.

In the mid 1970s a group of retired American and Canadian professionals living in Israel decided to design and build for themselves a community that would be tailored to their needs. This group was remarkable in many ways. Most outstanding was its desire to control the outcome so it would be sure to conform with what they wanted. Realizing that they needed expertise in this matter they hired a firm which is now called Building Technology, Inc. (BTI) of Silver Springs, Maryland and BTI subcontracted with the author for the social science research.

### **Background**

The retired persons who formed the group were responding to a lack of suitable housing in Israel. Some felt the housing provided was more intended for poor persons than middle class yet they could not afford the private housing. Others felt that the quarters they were occupying were now too big and/or difficult to keep up in their retirement years. Mrs. Celia Margolin, a widow, provided the spark that drew the group together and they formed a non-profit organization called the Association of Americans and Canadians living in Israel (AACI). In March of 1976 they sent out a mimeographed brochure asking others of

their same age category to subscribe to a 150 unit building. The third paragraph of the brochure expresses the original intent of the group:

Middle income persons do not need or want "charity housing," nor do they wish to lose their independence in decision making. They cannot, however, afford to live in the senior residences available at the other end of the social scale and available on the private market.

They quickly filled the subscription list of 150 units and went beyond to a waiting list near 100. When a delegation from the AACI went to the Israeli office on Aging, known as "Eshel," they were enthusiastically received because having an elderly group design and build their own housing was unheard of in that country. The government agreed to help fund the project.

As it turned out, it is, as far as I can tell, unheard of in any other country as well. After polling all my colleagues who do research in the elderly, there was not one who knew of another example. This was only one of the ways that the organization and its final building were innovative.

When I arrived in Israel I encountered a group of extremely intelligent retired elderly, mostly school teachers and professionals who would take no nonsense from anybody and were as independent and outspoken a group of individuals it has ever been my pleasure to work with. In the end, I learned more from them than they from me. To this day I do not know of another elderly group in the world who commanded the design process and successfully gave form to their own environment.

This, then, is the story of a process which became a model for working with elderly groups whether or not they control the design decisions, but especially, if the desired outcome is one in which the residents of the future community are to participate in the design and planning.

The design process consisted of two simultaneous phases: research into the life styles of the future residents and a committee system for making the important design decisions. I helped set the deliberations in motion. They reached their own conclusions.

At the same time the committees were formed, Mark Flamm, a young architect from BTI became part of the team and was the author of the architectural program worked out in conjunction with the committees and the social science research results.

It is especially important to note here that the committees took the social science data from the research and made their own decisions about it. They critiqued the data, argued over its meaning, and finally decided what it meant and how they would use it in making decisions. After an initial exchange, the social scientist left the country so that the temptation to consult would not be easy to fulfill for either party. This is a unique feature of the use of social science in the design process. It is not easy for a social scientist to leave data in the hands of lay people. Yet, this was such an intelligent group that it proved a success. I would feel very much at ease doing it again.

It took six years for the building to reach its final form but that was because of the conditions in Israel, the slowness of raising funds, and the thoroughness of the procedure.

### **Beginnings**

A series of meetings with the executive commit-

tee of the AACI and with members at large set the agenda for research and decision making. Prior to and during these meetings I consulted statistics for aging populations in general and for populations in retirement homes in the US and Israel.

Two pertinent facts seemed to dominate the data. One was a steady 4% death rate for persons over 65. This seemed to hold steady for the US population as a whole and for people in retirement homes as well. The other fact was a similarly steady 11% turnover rate in retirement homes. This meant that after the 4% death rate was subtracted, 7% would move for some reason. Investigation showed that a fair number of these were people who had become incapacitated and had to move to another place for more intensive care.

These data present the central dilemma of designing a retirement community: what to do with the members who become incapacitated? Does the design try to accommodate the incapacity, or is it necessary to force to move?

The policy of admissions and discharges is the most important economic and emotional decision in planning any retirement community. The decision to care for an incapacitated person is so expensive that it is literally not possible given present circumstances. To try to accommodate everyone who would become incapacitated would involve making each unit into an intensive care hospital room, something that is economically impossible. Yet, where does one draw the line? Even a relatively mild handicap such as needing a wheelchair increases unit cost by ten to twenty percent.

The emotions surrounding this policy decision were equally difficult. Each person or family was going to own the unit. This was not a retirement home where space was rented for a fee. Most of the residents wanted the units as an inheritance for their children! How do you remove an incapacitated person from their own home? And, if they were going to pay their money for a place, only to be thrown out when they got sick, why bother at all?

It also became evident that incapacity was the most feared element in the lives of these people. Nearly all had reconciled themselves to death in some fashion. When I would ask where they ex-

pected to be in five years, many would sputter, "Why, six feet under, of course!" The real fear, but nearly always the unspoken fear, was of being incapacitated to the extent of needing constant care and using up what little savings there were.

Yet these fears and difficult decisions had to be resolved to the extent that a community could be built that was economically feasible. It was not possible to force this decision upon them nor was it possible to shield them from it. It had to be met squarely and decided with maximum participation.

Nor was this the only decision to be made. Almost as emotionally laden was the decision of apartment (unit) size. Should those who were able to give more money get a larger unit than those who were only able to pay the minimum?

Services was another problem. Every retirement community had a list of services available to clients. What services should they provide? The money available for services was also closely tied to the amount spent for each unit.

Finally, there was also the policy of whether to pay residents for work done in the community. Should a retired hairdresser be permitted to open a shop on the premises? Should a retired carpenter be hired as the handyman?

Committees were formed to handle these and other decisions: The health committee was to decide on the admissions and discharge policy, the private space committee to decide on the sizes of apartments, the shared spaces committee to decide on spaces like dining rooms, laundry facilities, etc., the community relations committee to deal with relationships with the surrounding neighborhood, a food committee to deal with the complicated handling of food according to Jewish custom and finally, a management committee to pull all the information together. Each committee deliberated over the social science material, the collected statistics and recommendations of such experts as Powell Lawton, Sandra Howell and Koncelik and then would reach a conclusion and submit it to the general membership who would then vote. Voting would also take into consideration the social science research. Mark Flamm attended all the meetings in order to know the feelings behind each decision. In order to better sample the flavor

of the committee decisions, the somewhat terse written report of the food committee meeting of October 5, 1977 will be shown below:

It was resolved that:

1. Cooked food brought in from outside sources for the project's public dining rooms is unacceptable due to likelihood of problems in the following areas:

Quality

Cost

Unreliability

Inability to meet complex dietary requirements.

2. Although it is anticipated that only 30-50 servings per meal will be needed, equipment and space for preparing and serving the meals to the entire project and a few guests (i.e., 250 persons) should be provided.

3. Two separate kitchens will be needed. These may be operated differently with regard to ownership, scale, service, etc. (i.e., a snack bar and institutional restaurant).

Once statements like these were finally voted on, they were bound together in a notebook and presented to the programmer who used them as the basis for the program.

### Research

The framework of the questionnaire administered to subscribers was based on the methods of Roger Barker (1968, see also Behavior Settings, by P. Schoggen 1989). The basis of these questions is the concept of the behavior setting as a fundamental unit of human behavior. A behavior setting is a standing pattern of behavior tied to a time and place. Essentially, behavior settings are common place events like meetings, parties, classes, etc. Residents were asked about their participation in the daily events of life and these were translated into hours of activities. Usually behavior settings are observed over a long period of time, but the author (1977a) developed questionnaires for asking retrospectively about behavior settings for people in housing environments. More details of the research are available in the 1977 report to BTI (Bechtel 1977b).

At the time when research began there were 98 persons who had paid the original \$2,000 initiation fee for the AACI. A sample of 65 of these was

taken, stratified by age. Forty two (64.6%) completed the questionnaire and interview. Some of the attrition was due to travel. There were 16 married males, 13 married females, 10 unmarried females and 3 unmarried males. The average age was 70.04 years. The sample had a higher income (\$812.67 per month) than the remainder of the group (\$516.81) and this difference was statistically significant ( $t=2.68$ ,  $p=(.01)$ ). A lot of the differences in income were due to under-reporting of income on the original application and an increase in income since the original application was made. The income range was from \$70 to \$2,000 per month.

The research focussed on the life styles of the AACI members so that the building could be designed to accommodate or improve the life styles as much as possible.

1. Daily activities. About 43% had the use of an automobile as their chief means of transportation which meant some provision would need to be made for automobiles, but this also meant that 57% had to depend on public transportation so the site had to be located on public transportation routes.

Daily activities ranged around a mean of about 11 per day but these did not turn out to be of the same significance as yearly activities in terms of design consequence. The main design configuration evolved around the annual practice of the Seder. This was a religious meal at which the entire family would gather. Most significantly, the family would gather around **grandmother's** table so the table had to be big enough to accommodate a large family. Given the constraints of size, the Seder dictated an L-shaped apartment within which the kitchen-dining table could be extended into the living room. The architect would make drawing to reflect these data at a committee meeting and a decision made to proceed or change.

Visiting was a favorite pastime with an average of 1,538 visitor hours per year for each unit. This translates to an average of 4.2 visitor hours per day, seven days a week! The range is also critical because some only have 12 hours per year while the highest was 5,960. The distribution was skewed toward the lower figure, indicating the apartments had to accommodate both isolation and heavy visiting.

Recreation was a heavy need. 78% of the residents reported that more than 50% of their waking hours were spent in recreational activity. This is a common pattern for retired persons. Interestingly, television was not as important, taking up only 9% of waking hours.

Religion was an important part of each life style. 98% reported religious activity in the home. Resting and visiting were heavily concentrated on Shabbat (Saturday). There was also a conflict between the more conservative vs. the liberal practicing Jews. The conservative groups believed the women should be separated from the men in synagogue. It was interesting that the liberals compromised and allowed segregation of the sexes, necessitating a balcony for women in the synagogue. 74% reported use of a maid for an average of over 6 hours per week.

2. Policy questions. 77% favored an impairment limitation on residence and 86% wanted a restriction on admissions to only independent or near-independent people. Not a single respondent voted for an upper age limit but about a third did not want younger people in the project. 45% felt residents should be discharged if they required permanent hospital care.

68% felt that units should not be the same size and that there should be a choice. The final result was four types of apartments: a studio apartment with an alcove, a small one bedroom apartment, a larger one bedroom apartment and a one bedroom apartment with den. In order to deinstitutionalize the interior it was also decided that certain finishes (flooring, closet doors and paint) would be left to each tenant and other amenities such as large balconies, window sills and glass doors would be sprinkled throughout the project. These larger units would be priced to subsidize the smaller ones.

91% felt residents should be employed to work in the building.

Of all the possibilities for services, the most popular was the use of a handyman which 100% of the residents wanted. 90% wanted a registered nurse. Community kitchen and dining room was next with a tied 90%.

3. Changes in Life Style. When asked what aspects of their present lives they wanted

changed, 24% indicated they wanted more storage space. This was a difficult question to assess because most of the residents automatically assumed they would have less storage space in the new building. This is a common assumption for most elderly anticipating a move from their pre-retirement dwelling. Yet, it is clear that if they had a choice, most wanted more not less storage space.

66% considered themselves kosher in their eating habits, indicating a division of milk and meat kitchens, not an inconsiderable expense.

Visiting seems also centered around eating so the dining area becomes a focal point of socializing. Nearly ten people per week are invited for meals (including relatives) so it becomes important to accommodate this need.

4. Conclusions. The pattern of recreation, including visiting, was central to the life styles of the residents. This centered more in the dining than living room area. Given the importance of the Seder, the emphasis on the dining table becomes the focal point of the household. Communal dining seems to be another key although most also want to be able retain the kitchen-eating focus in the unit.

There are many aspects of this environment which are peculiarly Israeli in nature. The religious practices of the Seder, kosher cooking, sex-segregated worship. Yet, there are many aspects which are universal such as the visiting, use of public transportation, the admissions and discharge policies, choice over size of units. Perhaps the casual reader will be disappointed that a building designed by elderly does not differ radically from one designed for them by an architect who did not use the participation process. Such a conclusion misses the point. The aim of the participation process whereby the residents make the principal decisions about design is not to produce a radically different physical environment, but to create an environment over which residents have control of their own lives.

The exact same physical design can produce opposite reactions in residents depending on whether they participated in the design decisions. Let us say that the decision was made not to include more storage space in the units because the money was needed for more living space. The

resident who moves into such a place without participation concludes that the storage space was eliminated so the owner could make a profit. This generates a low-level resentment that probably never surfaces so it can be discussed. The resident continues to live in a place where the physical environment slights him or her daily.

By contrast, the resident who participated in the process remembers the reasons for eliminating the storage space and gladly gave it up for the more important living space. It was a decision in which he or she feels ownership and the resident moves in with a feeling of pride and accomplishment.

In 1990 Adriana Plotkin, graduate student of Arza Churchman at the Technion in Israel did a post occupancy evaluation of Nofim. Her master's thesis is on file at the Technion and was reported by Dr. Churchman at EDRA 22 (Churchman and Plotkin, 1991). The results show current residents satisfied with virtually every aspect of the design. Nofim has become a showcase for what Israelis term "sheltered housing" for the elderly.

#### EPILOGUE

While it took nearly six years from planning to completion of the project (ground breaking was in November 15, 1978; completion late in 1984), the purpose of the AACI remained steadfast. The first architect proved unsatisfactory so a second team was hired to finish the design. The design of some units is provided in Figures 2 and 3. Some of the original proponents of the project have left Israel. New ones have joined. The original founder of the project, Mrs. Margolin died before its completion. Some residents had waited so long for the building to be finished they moved in before water or electricity were hooked up. There was a pending lawsuit with the contractor over the completion date which went two years past the contract, but this was finally dropped. The contractor threatened never to finish.

When the building was completed the AACI members decided to call it **Nofim** which means "beautiful view" in Hebrew. The site is on a hill overlooking the valley and village of Ein Karem in the Kiryat Yovel district of Jerusalem.

Residents who move in to Nofim today are unaware of the complex history of the project and see it as a very "posh" environment, much more

costly now than many private apartments.

Meanwhile, the original subscribers, while always finding a detail to complain about, are fully aware that they made a wise investment and that the environment has no equal.

#### **Summary of Innovative Aspects**

- Clients controlled the design process
- Clients decided on the use of social science data
- Behavior setting framework provided both quantitative and qualitative data for design decisions, a result not found in other methods
- The committee system enabled the clients to deal with difficult issues that often bog down different methods

#### **REFERENCES**

- Barker, R. **Ecological Psychology**. Stanford University Press, 1968.
- Bechtel, R. **Enclosing Behavior**. Dowden, Hutchinson and Ross, 1977a.
- Bechtel, R. **The Housing Behavior of Forty Two Elderly Israeli**. Report presented to BTI, September, 1977b.
- Churchman, A. and Plotkin, A. Post Occupancy Evaluation of Nofim: An Israeli Experiment In Housing For The Elderly. Paper delivered at EDRA 22, Oaxtepec, Mexico March 13, 1991.
- Schoggen, P. **Behavior Settings**. Stanford University Press, 1969.