Participatory Design Methods in Glasgow

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The need to produce housing and other urban developments that support user satisfaction is self evident. However, difficulties may arise in situations where the commissioning client is not the end user, when there may be a discrepancy between building solutions and user requirements. This discrepancy seemed considerable in public housing in Britain in the 1960s and 70s, and whilst current provision of housing appears to match users' expectations more closely, it may still exist. User participation in design attempts to address this problem at an early stage and broadly speaking requires a methodology that enables end users to contribute to design decisions.

From an examination of much of the publicity associated with Glasgow's successful bid to become City of Architecture 1999, one might take for granted that public participation in housing design in the city is an accepted practice. At the 1995 RIAS Convention in Glasgow a number of speakers described projects where involvement of users seemed to be a fundamental aspect of the design processes. At the same convention, projects in Glasgow were also favourably compared with approaches in Scandinavia, where the history of social housing has provided many examples of good participatory practice[1].

Glasgow's reputation for being at the forefront of user participation in design is grounded, in part at least, in the community activism of the 1960s and 70s, engendered by public dissatisfaction with the urban forms and housing provisions of that period. As tenants demanded more control over their environments, various initiatives were developed that were later described as community architecture, or technical aid. The result of this was a number of projects and schemes that developed techniques for enabling user participation in design processes.

Such work, both in Glasgow and elsewhere, produced a body of evidence that suggested that use of effective design participation produced solutions with which users were more satisfied[2]. In general terms, tenants who participated in design were likely to have a stronger commitment to their housing and it produced solutions with which users are more satisfied[3, 4].

However, attempts to achieve participatory design revealed a number of difficulties. One of the main problems encountered was that the traditional forms of design communication, technical drawings, were not easily understood by lay people. Because of this, much practical and academic work focused

on the development of participatory design methods – specific ways of working and communicating with users. Techniques that were explored and developed include: questionnaires and surveys[5, 6], design and public meetings[7], site visits[8], educational information[9], scale models[10], full scale modelling[11], games and simulations[12], and self-build[13].

The last two decades have seen changes in funding and organisation of housing provision in Scotland, in particular the development of Housing Associations. As a result of the perceived benefits of user participation, many Associations have identified it as a necessary objective to ensure satisfaction within their client groups[14].

However, whilst past participatory projects were seen as being generally successful, problems may be apparent when trying to integrate participatory design methods into contemporary design practice. Such methods require a deviation away from conventional communication techniques, and so have consequent time and cost implications. Given the current economic framework of housing provision and architectural procurement, it is therefore not clear how well they are actually being implemented.

The purpose of this paper is to identify participatory methodologies in housing design in Glasgow, comparing these with the rest of Scotland. This analysis is based on recent research that studied the use of participatory design methods in Housing Associations in Scotland, carried out by the Mackintosh Environmental Architecture Research Unit, for Scottish Homes. It is intended that this information will present a model for comparison with participatory practices in Scandinavian countries.

User participation context and culture

Glasgow's traditional housing form is the stone tenement, typically a four storey building with stair access to individual dwellings through a common 'close' and it is these dwellings that give the city its unique physical and social fabric. They were mainly constructed around the turn of the century and within this form, there were wide differences. They varied from the spacious and well-appointed flats of the City's West End, to single end, one apartment flats often housing whole families, with a shared outside toilet. In such flats, problems of deterioration, maintenance, sanitation and overcrowding gave rise to slum conditions in many areas.

The response to this has been a constant move to replace and improve this housing, and throughout the century various strategies have been implemented. In the post war years, the development of the welfare state in Britain led to the provision of social housing through local authorities, with central government funding. It was at this period that the largest housing developments took place. Large-scale slum clearance programs were undertaken with new housing being built in estates on the periphery of the city[15]. However, in the 1960s and 70s problems began to arise as political pressure grew to produce large numbers of units. With increasing financial restrictions, quality was inevitably affected and attempts to address these problems by use of new forms of industrialised construction were not successful. Such problems were intensified after the fuel crisis of the mid 1970s when increasing fuel prices, combined with the relatively poor thermal standards set in Britain, led to problems of fuel poverty and dampness. Combined with inadequate repairs and maintenance programs, and major deficiencies in tenants' consultation, the net result was a housing crisis as bad as the slums that had been cleared. By 1985 Glasgow – the largest city in Scotland – had a housing stock of 300,000, of which over a third was deficient[16].

Throughout the 1970s and 1980s tenants dissatisfactions with their housing conditions were voiced ever more loudly. The problems experienced by tenants and the lack of suitable responses gave rise to a distrust of professional procurement methods and engendered a demand by users to be more involved in these processes. This included not only participation in design but also in management, maintenance, and planning.

There were a number of case studies both in Glasgow and elsewhere, where users, residents and tenants became closely involved with designers. There were examples of this approach, (which pre-dated many of the public criticisms of housing) such as the housing at Byker in Newcastle by Ralph Erskine in 1969. However, perhaps one of the most well known examples that helped to define the movement during the 1980s was that of the Weller Streets Co-operative in Merseyside, a 61 unit family housing scheme, completed in 1982. Participatory design was a significant feature of the approach by the co-operative[17] and their architects[18]. A number of other schemes followed and were well reported in the architectural and general press[19]. The key element

in all these schemes was that architects participated with users in the design processes to create projects that had widespread community support and user satisfaction.

Glasgow was at the forefront of these processes and produced a number of schemes that incorporated detailed aspects of user participation. Perhaps the first example was in Govan where in the early 1970's Jim Johnson set up a research unit, ASSIST, to help improve blocks in the Taransey Street area[20]. This was one of the first projects that explored the potential of refurbishment of tenement blocks, and revealed an alternative to demolition and new-build, and also recognised the potential of the tenement.

Throughout the next two decades there were a number of other examples of such projects[21]. These shifts in emphasis were also linked to changes in housing policy. The abandonment of slum clearance programs in the late 1960s led to the Council attempting rehabilitation of existing property throughout the 1970s. However, dissatisfactions with council approaches, and limitations on budgets and strategies resulted in many of these being unsuccessful. As a result Glasgow District Council became active in encouraging Housing Associations as a vehicle for local tenants and users to become involved in the processes of design, management and maintenance. This provided new organisational structures where professional staff employed by the Association are accountable to an elected management committee of local people.

As well as refurbishing the older tenemental properties, Associations were also set up to address the considerable problems in the social housing of the post war peripheral estates. These estates also contained forms of tenemental property although with newer forms of construction. A large proportion of this was sub-standard due to a variety of constructional and thermal defects. These problems were exacerbated by letting policies that concentrated poorer households in these areas and the lack of social amenities in these outlying estates.

Early examples were Calvay Co-operative in Easterhouse and Castlemilk East in Castlemilk and by the mid 1980s there were over 30 Associations in Glasgow. A key aspect of the design work of these groups was the close involvement of tenants in design processes, and this involvement explored a number of techniques for achieving user participation in design. An example of this was the Dalmarnock B project for the Scottish Special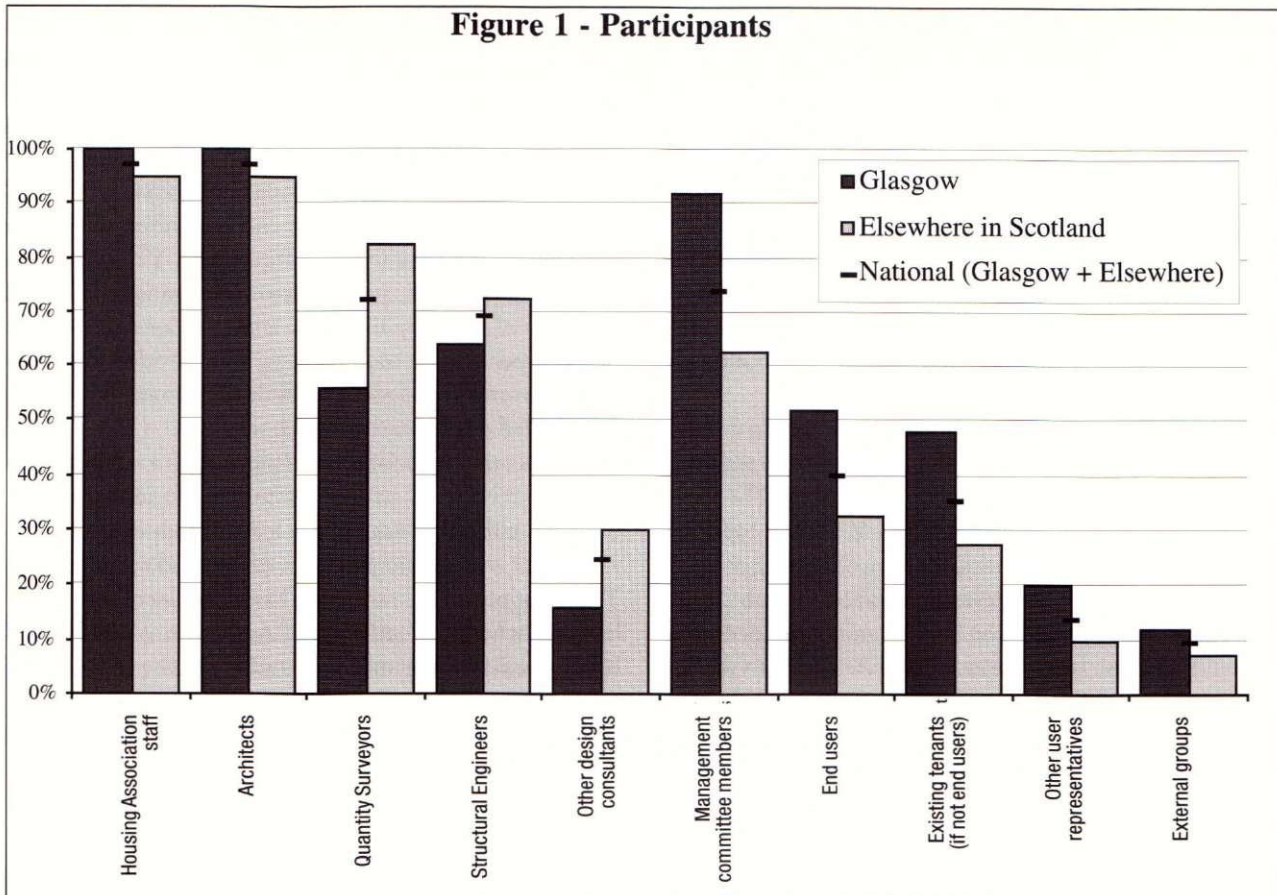 Housing Association that was described in detail in the Architects Journal . This project to produce new tenemental properties utilised detailed and well-recorded participation by future building users in the design processes.

The rise in popularity of Housing Associations reached a significant point in the late 1980's when the provisions for housing procurement underwent a radical change. Central government altered the arrangements for funding of housing through the Housing (Scotland) Act 1988. This legislation aimed to revitalise the private sector in housing but also had the effect of reducing finance available to local authorities. Instead, spending on social housing was provided through a new government funded agency, Scottish Homes, that directly grant-aided developments by Associations.

The fact that Associations were formed as a result of community activism by people attempting to improve their housing and environment has led to them being closely associated with participation in design and management. This is supported by a structure based on Association membership, where the activities of Associations are directed by an elected management committee. In the case of community based and co-operative Housing Associations, members are drawn from the geographical area served by the Association and in co-operatives only tenants can be members. As well as a perceived desire for participation by Association members, its use has also been encouraged by groups such as the SFHA and SHARE and is identified in performance standards for Housing Associations[23].

Through the late 1980s and early 90s a great deal of refurbishment and new-build housing has been produced by Housing Associations, and this has been repeated in other areas throughout Scotland. However, the Housing Association movement has changed over this time, as has the political and economic framework within which they operate. Although able to draw on the developments of participation by particular architectural practices and technical aid centres during the 80's, Housing Associations have increasingly used mainstream architectural practices to meet their demand. Although the high profile of participation meant that many were both able and willing to adopt this approach, there have always been concerns that for some it was a token gesture nearer to consultation than genuine participation[24]. Recent cost constraints and tight timescales may have affected the provision of participation in design. Architects have also had to provide this service

Figure 1 - Participants

Legend: ■ Glasgow / □ Elsewhere in Scotland / — National (Glasgow + Elsewhere)

Categories (x-axis): Housing Association staff, Architects, Quantity Surveyors, Structural Engineers, Other design consultants, Management committee members, End users, Existing tenants (if not end users), Other user representatives, External groups

within a tight economic framework which, with the rapid contraction of the building industry and the concomitant increase in competition, has become tighter.

Most exponents of participation recognise that it is time-consuming and cannot be undertaken without a genuine commitment to its ideals. The concern therefore is that within these pressures, the provision of participation in design may suffer. The benefits of participation will only apply where real participation is undertaken by effective communication methods. Unless this occurs there is a danger that expectations will be raised, but will be unfulfilled.

In addressing the future of urban renewal and development in Glasgow, proper and effective involvement of end users is crucial to the production of architecture that meets users needs, and with which users are satisfied. The question that arises therefore, is whether Glasgow is a model for user participation in design. Is the provision of partici-

pation better than elsewhere in Scotland, and even if it is, is it good enough?

Survey results

Information on the use of participatory design methods was gathered through a survey sent to all Scottish Homes funded Housing Associations in Scotland. A postal survey was used as the most effective method of eliciting information from a wide group of respondents. Questions were grouped thematically to ensure comprehension and asked about the Association, types of work, use of participatory design methods, formal procedures, use of consultants and levels of user control.

Twenty-five questionnaires were sent out as a pilot study, to test response rates and questionnaire design. Some minor amendments were made in response to the pilot study, and to comments invited from related bodies such as the Scottish Federation of Housing Associations.

Finally, 165 questionnaires were sent out, with 75 replies. Of these, 11 are discounted as unusable either because the Association no longer exists, all the tenancies have been transferred to another Association or the respondent indicated the survey did not apply. This leaves a response rate of 64 out of 165, or 39%, well within a statistical margin for this type of work. Possible reasons for non-response given in telephone follow-ups indicated that Associations were primarily involved in management or that they did not undertake any significant design work. Responses indicated a wide geographical spread of Associations. Figures provided in the tables below refer to those responses received and national data refers to data for Scotland as a whole.

Participants

The first stage was to look at who is involved in participation. The survey asked Associations to identify the main participants in design activity and the results are shown in Figure 1.

It can be seen that the two groups with the highest involvement are architects and Association staff. Consultant members of the design team also feature heavily, including quantity surveyors, structural engineers, and other design consultants, including mechanical and electrical engineers, landscape architects, university/academic consultants, district council officials and project co-ordinators.

Examination of users and users' representatives indicates that management committee members form by far the largest group, being involved in participation in an average of three-quarters of Associations nationally. End users and existing tenants are less involved. Other users' representatives were used in a small number of Associations, and included partner organisations, special needs groups, umbrella organisations, care managers, social workers and occupational therapists.

Comparing the situation in Glasgow with elsewhere, the main participants remain unchanged, that is, architects and Association staff. However, involvement of other design consultants is reduced, whilst the involvement of management committee members, users and user representatives is significantly higher.

Although this indicates a higher degree of user involvement in Glasgow, the ratio between participants remains similar, with management committees having by far the greatest involvement, and end users having the least.

This high involvement of management committee members reflects the management committee model of user representation used by the majority of Associations. Of more concern is the lower use of end users – given that this is the group supposed to be benefiting from participation. As well as the reliance on management committees, other possible explanations are the amount of new-build, where there are no existing tenants and end users cannot be easily identified, apathy of users, time and cost involved, Associations concerns about loss of control and lack of time available in design stages.

However, taking into account either management committees, end users, existing tenants or other users' representatives, the survey indicated that a high proportion of schemes did include some form of representation of users within the design process.

Methods

Having established who is involved in participation, the next question asked respondents to indicate what participatory methods were employed. A list of methods was compiled from a variety of sources including both research and practice. Figure 2 shows the percentage use of methods at any stage of design.

The overall picture reveals that nationally the most widely used methods were design meetings and orthographic drawings, that are normal plans, sections and elevations. Whilst this might be expected as drawings are the common form of design communication, criticisms have been levelled at their use within participation[25]. The problem identified is that lay people may have difficulty understanding and reading technical drawings, and it is for this reason that alternative methods have been developed.

A number of other methods were fairly apparent, used in over half of Associations and included perspectives and other 3D drawings, visits to other projects, group interviews/discussions, perspectives, and design options.

Comparing Glasgow with elsewhere it is apparent that there is a much higher use of all participatory methods in Glasgow Associations, with both 2D and 3D drawings, group and individual interviews and discussions, site visits, questionnaires and public meetings having a much higher usage.

However, although use of methods is higher, the distribution of methods is similar, and there is a low use of dedi-

Figure 2 - Percentage use of participatory methods
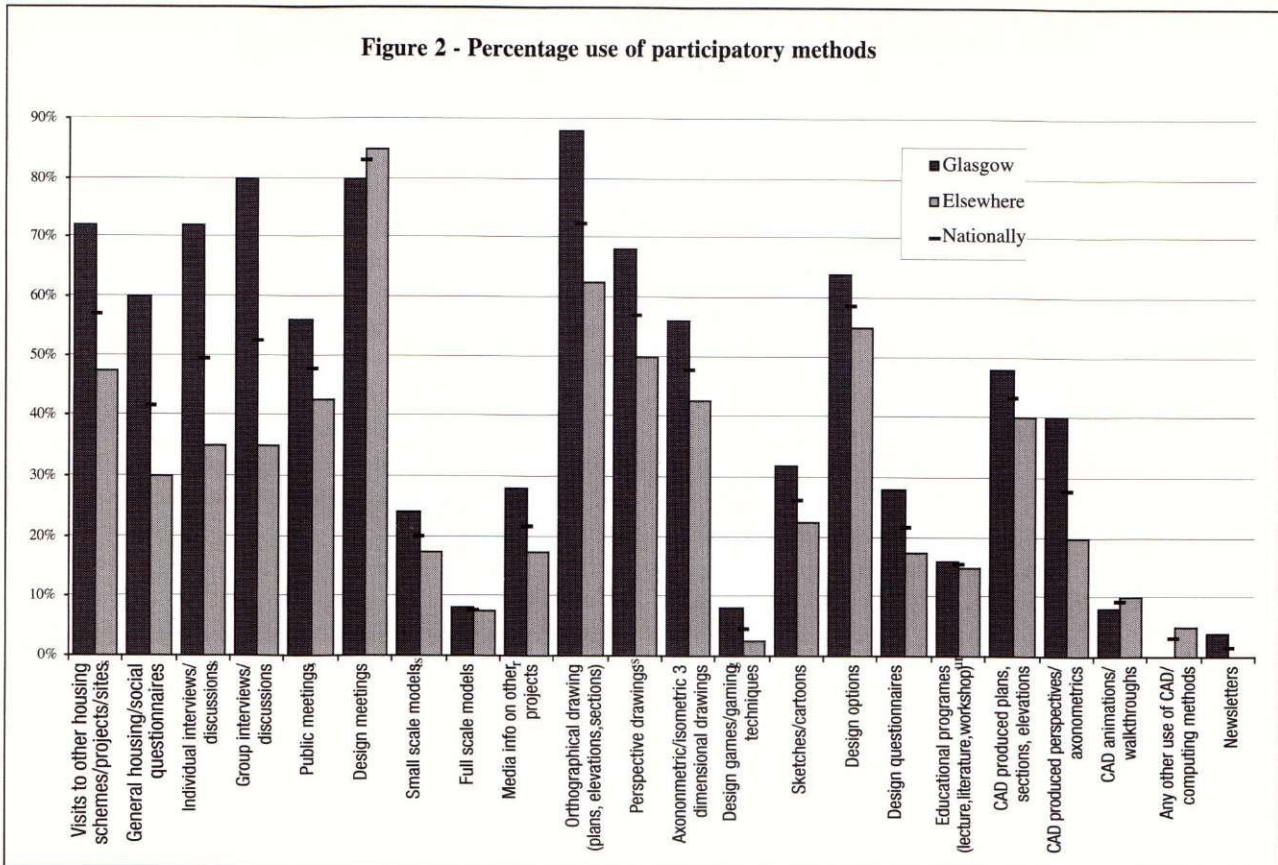
cated techniques such as modelling, design games and simulations, and educational programmes. Use of CAD for participation is discussed more fully elsewhere [26], but generally reflects the use of CAD as a 2D drawing production tool. However, use of CAD to produce 3D images was much higher in Glasgow, and points to its potential as a participatory method.

Figure 2 indicates any use of a method at any stage. Figure 3 shows a further analysis that shows the frequency of method use during design stages. Whilst this analysis discriminates against methods that would only be used at one stage, for example, site visits use once during a briefing process, it does illustrate that certain methods such as drawings, meetings and discussions are more regularly used throughout all design stages. It also illustrates that when taking into account frequency of use, Glasgow only indicates significantly higher usage in drawings and discussions.
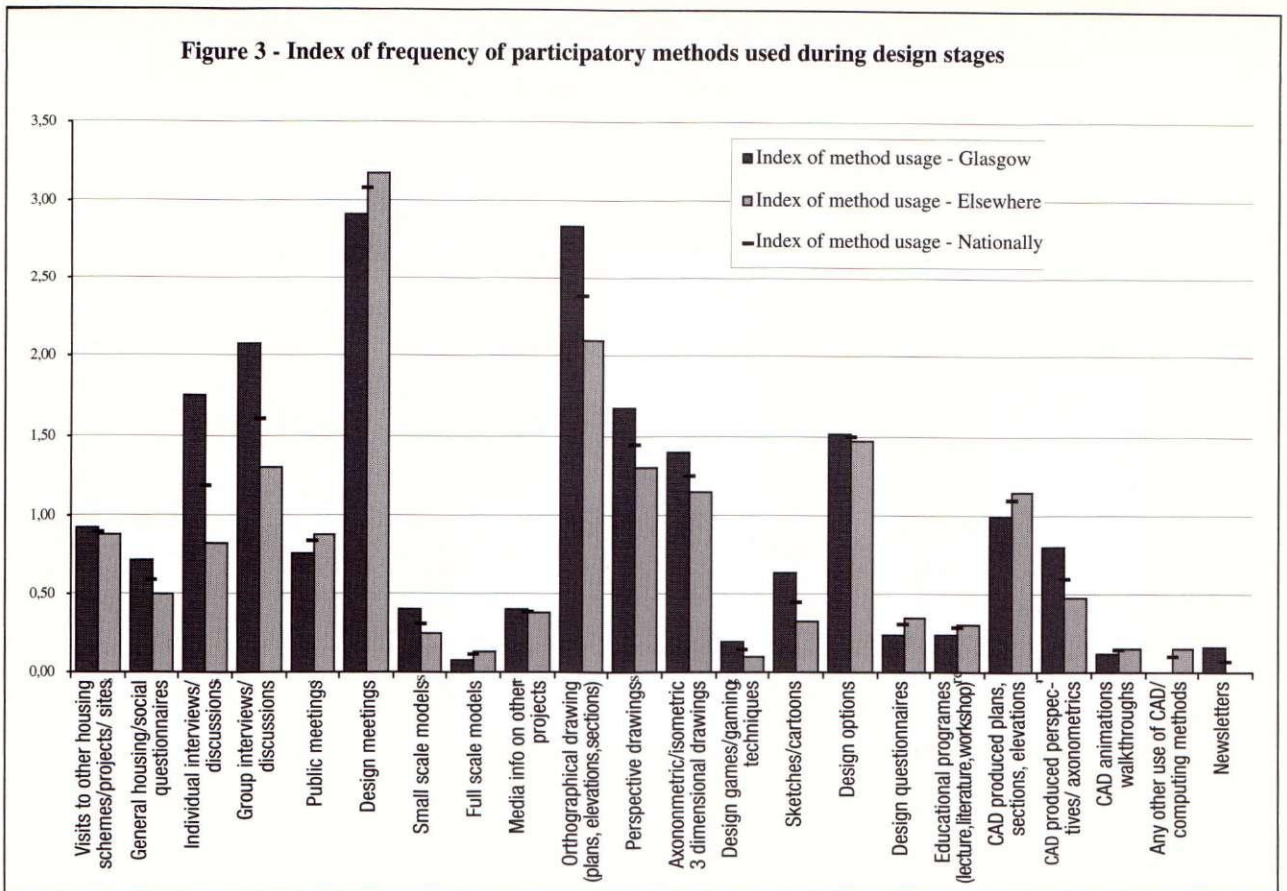
From this we can conclude that the most likely communication techniques to be used for participation are drawings presented at a meeting. Although other methods may be used, the lower frequency of methods suggests that these are used in one-off situations rather than throughout the design process. Although Glasgow appears to fare better, taking into account frequency of use, usage is only slightly higher in some methods, and is similar or lower in others.

Procedures

To obtain a picture of how the use of participation was provided for and organised, the survey asked questions about procedures for participation, choice and use of consultants. The results are shown in Figure 4.

Whilst the number of Glasgow Associations that had formal procedures for design participation was much higher than elsewhere, it was only just over half of Associations.

Figure 3 - Index of frequency of participatory methods used during design stages

Figure 3 - Index of frequency of participatory methods used during design stages

Legend:
- ■ Index of method usage - Glasgow
- ▫ Index of method usage - Elsewhere
- — Index of method usage - Nationally

Given the importance attached to participation in ensuring the success of projects, these figures were surprisingly low.

There are several possible reasons for this. It may be difficult for Associations who undertake few projects to develop strategies for themselves, and there does not appear to be any national strategy for Associations to adopt. It may also be difficult to develop procedures when different projects require different techniques and approaches. However, given that these points would apply everywhere, the greater number of Associations with formal procedures in Glasgow may point to a greater expectation for participation in the city, perhaps related to the higher number of larger and more active Associations. Nevertheless, although the situation is improved in Glasgow, nearly half the Associations appear to be approaching user participation on an *ad hoc* basis.

A further question was whether Associations would specifically employ consultants with participatory experience or skills. Here there is a marked difference between responses from Glasgow and elsewhere, with two-thirds of Glasgow Associations making this choice, double the rate for elsewhere. Again, this seems to suggest that higher importance is attached to participation in Glasgow. Although the reasons for choice of architects are complex and not related to single issues, the number of Associations not choosing to employ architects on the basis of participatory experience must be of concern.

Finally Associations were asked if they made a specific allowance in fees for participation. Again, despite the importance placed on participation and the fact that it does not feature in standard conditions of engagement, thus requiring additional time and effort, very few respondents indicated that a specific allowance was made in consultants fees for participation, and it was surprising to find that no Glasgow Associations made such an allowance.

Figure 4 - Procedures
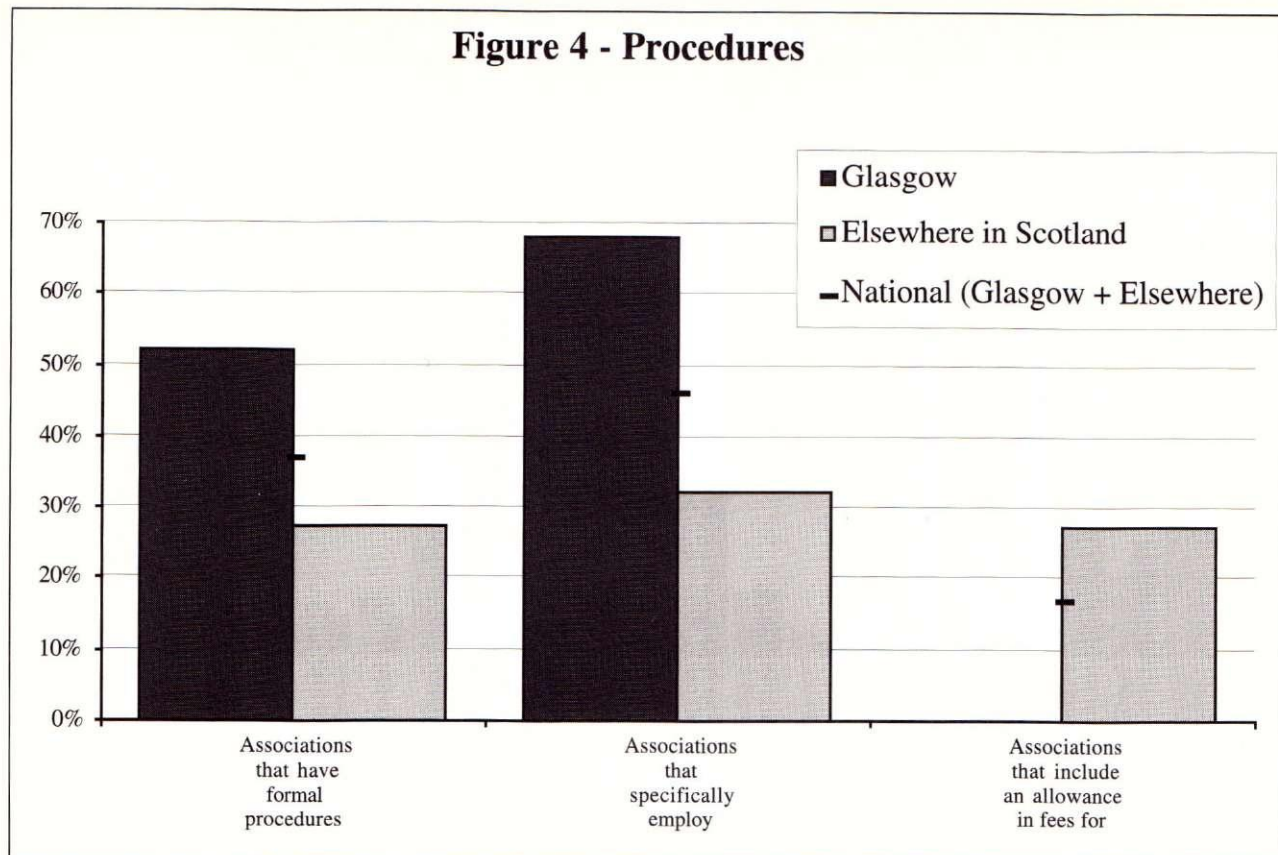
These figures would seem to reflect current provisions for appointment of consultants requiring the use of fee tendering and perhaps go some way to explaining the relatively low use of dedicated participatory design methods. Interviews with Associations and architects indicated that Associations expected architects to provide some form of participation and architects knew it was expected of them. It was suggested that, because architects knew it was a requirement, they would make an allowance for participation in fees. However, there was a strong indication that with increased competitiveness, this was becoming very difficult to achieve. As a result, only techniques that require very little additional work are being used, regardless of their effectiveness.

The fact that no Glasgow Associations made any allowance in fees, yet seemed to achieve more participation may be due to the culture of participation in Glasgow, where architects and Associations assume that it will be part of procedures and it may also indicate the amount of compe-

tition for Housing Association work in the city. However, whilst Associations may appear to be getting good value for money in a participatory sense, these figures suggest that although methods are being used, this use may be superficial and thus might not provide end users with any real degree of control.

Control

To gain an overall picture of the effectiveness of participation, Associations were asked to rate the amount of control that participants had over design decisions on a scale between 1 and 5. Here 1 indicates participants having full control over all design decisions and 5 indicates no control over design decisions. The results are shown in Figure 5 and show levels of control for users, management committees and Association staff.

Looking at levels of control, Association staff appear to have the most control, and end users the least. This is obviously

Figure 5 - Levels of control over design decisions
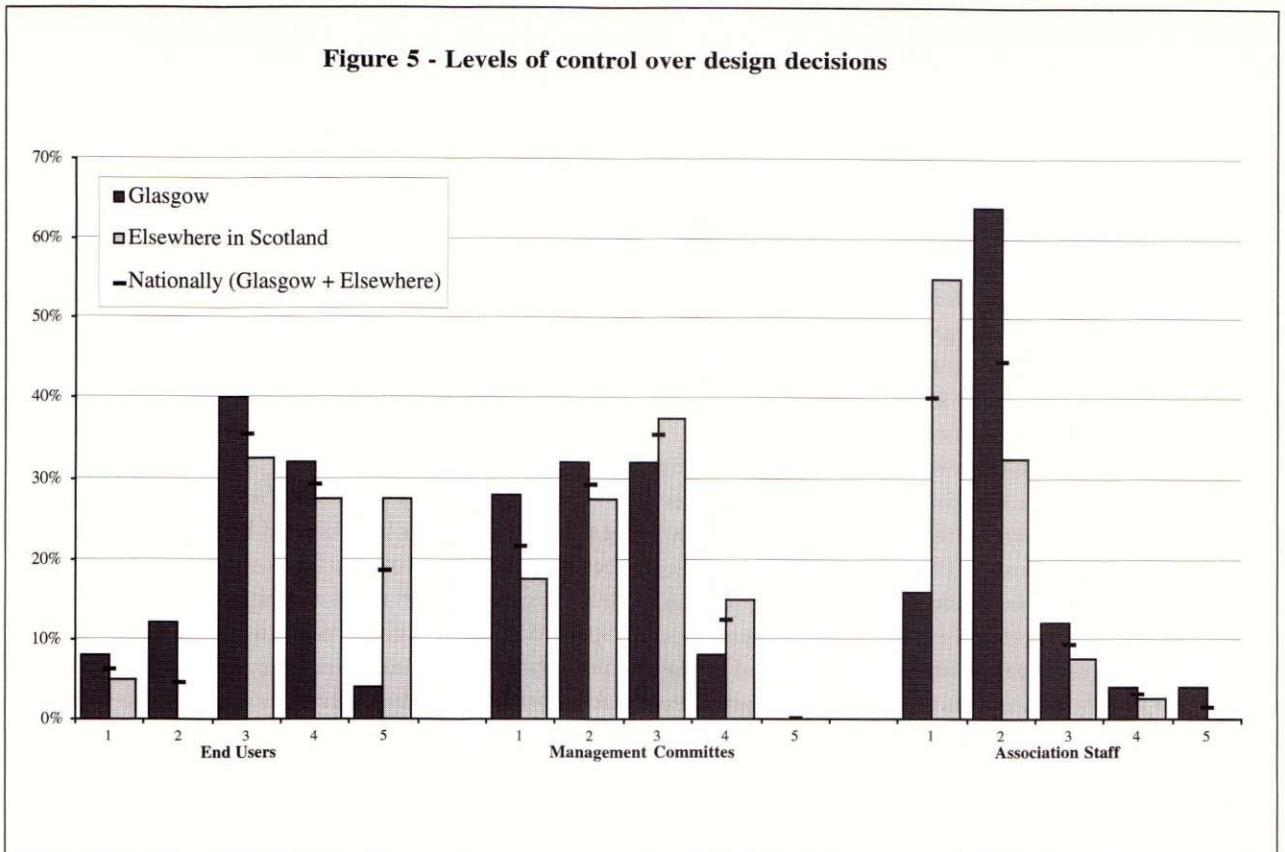
at odds with the fundamental principles of participation and indicates that Association staff have more influence. However, of equal significance was that management committees do appear to have good degrees of control, although less than Association staff. It was rare for Association staff or management committees to have no control, but common for end users.

As might be expected, given the greater involvement of users and high use of participatory methods, levels of user control in Glasgow were higher than elsewhere, as was management committee control, but only by a relatively small margin. The general proportions remained similar, with Association staff still having the greatest levels of control. There is a significant drop in the number of Association staff having full control which may be accounted for by increased amounts of control for management committees.

Although Glasgow serves to demonstrate a possible relationship between improved participatory design and user

control, the levels at which these occur are not sufficient to guarantee user participation and user control,. This in turn suggests that current strategies and uses of methods are not providing effective user participation in design.

These figures may give an overall picture of the effectiveness of participatory strategies in Glasgow. Whilst there is some degree of user or user representative control, this is at relatively low levels. What is also significant is that although degrees of Association control are higher than those of users, these do not indicate complete control. What this may suggest is that there is a sharing of control between management committees and Association staff, but it may also indicate that ultimate control may lie elsewhere.

Conclusions

The overall picture provided by this study indicates that there is not widespread use of effective participatory design methods involving end users in design. There are more

examples of forms of user representation and consultation, and there would appear to be a few pockets of more dedicated and enthusiastic use, where either commitment to, or demand for participation is high.

Drawings presented at meetings, and discussions of proposals are the norm, even though these are not necessarily the most effective. Although mainly plans, sections and elevations, these may include perspectives, and may also provide for different options to be presented. The low use of dedicated participatory design methods would suggest that, either there is no requirement for user participation, or there is not time/money to support these methods, or that they are not well enough understood.

Within this picture, Glasgow seems to fare better than elsewhere, having higher involvement of end users, better use of participatory design methods, but only slightly improved levels of user control. Therefore, Glasgow may be able to justify its profile in relation to user participation in design, but this is in relative terms only. The suggestion is that provision of participation in Glasgow is created by the expectation of Associations, but this is not supported by sufficient procedures, knowledge or resources to undertake effective methods, resulting in low levels of user control.

Lack of effective participation by end users will inevitably be detrimental to the urban development of Glasgow. In order to reap the benefits of participation and to produce innovative buildings that people are satisfied with and care for, effective participatory design methods must be employed.

Management committees presently appear to carry much of the responsibility for user participation in design, representing the interests of end users and putting in a vast amount of un-rewarded work. Committees are able to gain experience over several projects and can also be assisted by training and education. Having experienced and knowledgeable management committees can reduce many of the difficulties of communication that might otherwise be experienced.

However, to achieve user participation, end users must be involved and the reliance on the management committee model raises a number of questions. Clearly, dealing with a committee is much easier than involving end users, so is this model used because it is convenient and because use of volunteer committees is cheap, and are committees able to be truly representative of end users?

From discussions with Housing Associations and practitioners it is clear where the real decision making power lies at present. The severe budget restraints on housing provision and fee levels have resulted in tenants, users and staff being forced to choose from a very limited palette of options. There seems to be little scope for users to take any real degree of control over effective decisions, and much participatory design seems to address peripheral issues rather than addressing fundamental needs.

There is a danger that we may be repeating the mistakes of the past. Problems were created by the need to produce the largest number of units at least cost and it is this approach that marginalised user needs and expectations. The popular view is that many failures in housing and urban development occurred because users were not asked. In fact, just asking people what they want does not solve the problem – for such complex and important issues there needs to be a more detailed level of communication and education on both sides. A crucial aspect of user participation, is that it provides a medium for architects to communicate their ideas and visions to their users. This re-establishes a more traditional architect/client relationship and gives scope for architects to enthuse clients with innovative proposals, rather than just producing the lowest common denominator.

It is therefore imperative that Glasgow should seek ways of enabling its citizens to contribute to, participate in, and learn from the design processes that form its built environment. The need for real, effective participation, rather than superficial consultation exercises, is fundamental to this process. This applies not only to housing, but to all forms of urban development. Such a strategy will not only help to avoid repeating mistakes of the past, but also provides a vision of a socially sustainable future.

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