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JOHN F.C. TURNER

The Reeducation of a Professional

FOR SOME MINOR MISDEMEANOR at the English public school I attended, a prefect made me read and precis a chapter of Lewis Mumford's *The Culture of Cities*. Mumford quoted his own teacher, Patrick Geddes, whose name stuck in my mind. Later, Geddes' work caused me to doubt the value of my professional schooling and, when I eventually escaped into the real world, his work also guided my deschooling and reeducation. Through his writings and notes, Geddes taught me to think in terms of the relationships between man and his environment—a habit of mind that is essentially incompatible with professional compartmentalization. He was a student under Sir Thomas Huxley, and though he continued his botanical studies after an illness which affected his eyesight and ended his work with microscopes, Geddes turned more and more to the study of cities.

Geddes' background and training in the natural sciences led him to a systematic interpretation of man and his environment, which I have used and tried to develop ever since I accidentally recovered some of his manuscript notes in a garden studio. These notes, mainly describing his "thinking machines" to his friend

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Henry Wilson, a former neighbor of my own family, fascinated me. They were evidently an attempt to establish the linkages between the sciences, a problem which I was especially preoccupied with as a young student of architecture in the optimistic years immediately after the end of the Second World War.

With Bruce Martin's help, Paffard Keating Clay and I unravelled Geddes' methodology, which, I later realized, anticipated modern general systems theory by over half a century.¹

These interests, which seriously interfered with my studies at the Architectural Association School in London, supply the background for the following account of my subsequent experiences in Peru, which were both the direct and indirect consequences of Geddes' theoretical work and of his practice in India.

I was invited to work in Peru by Eduardo Neira, a Peruvian architect who had studied urban and regional planning at the University of Liverpool,² and for whom Geddes was (and is) a prophet—one especially relevant to the contemporary Third World because of his profound understanding of the relationships between contexts, cultures, and urban form.

Geddes seemed much more relevant than Le Corbusier and the Congrès Internationaux d'Architecture Moderne (CIAM), the organization established to propagate the causes of modern architecture; but it was only after living and working in Peru that I began to articulate the dissatisfaction shared with so many contemporaries. We felt and knew that architecture cannot be practiced as if it were an independent variable—as though the architect had

¹ See Appendix 1 part 2, The Geddes diagrams: their contribution toward a synthetic form of thought by the author with W. P. Keating Clay in Patrick Geddes, *Cities in Evolution*, second edition edited by Jaqueline Tyrwhitt, Williams and Norgate, London, 1949.

² Geographer John P. Cole, social anthropologist José Matos Mar and architect-planner Eduardo Neira were all members of a small group of professionals who first drew attention to the real and potentially positive nature of the *barriadas* or urban squatter settlements of Peru. By 1955 Neira had set up a pilot technical assistance service to the squatters of Arequipa (the second city of Peru) in his capacity as an official of the Ministry of Public Works. My first job in Peru was obtained through Neira and was with the Oficina de Asistencia Técnica a las Urbanizaciones Populares de Arequipa (OATA).



no social or political responsibilities—yet neither could we accept the Marxist antithesis. It seemed as absurd to believe that social structure could be changed through architecture as it was to believe that architecture should be entirely subjected to the official interpretation of popular taste. Geddes' own work, in Scotland, in India, and elsewhere, led another way, even though we could not see the goal.

Geddes' method, clearly enough, was to involve himself as closely as he could with all the people concerned, especially with those who were suffering most from the consequences of urban dysfunctions and blight. The possibilities for a young and inexperienced professional to get as involved in such a thoroughly institutionalized country as the United Kingdom seemed remote.

Therefore, when Eduardo Neira offered me the chance of working in Peru, some years after our first meeting in Venice, I jumped at it. I felt that if I could get out from among the underbrush of technological innovations and intellectual formulations and into the much simpler situation described by Neira, I might be able to see my way. And this is what did happen. For me, as for many anthropologists who have had analogous motives for undertaking the study of primitive tribes, the connotations of words describing simpler and often harsher situations and conditions of life have changed. "Primitive," "backward," "underdeveloped," and the more recent euphemism "developing" do not change the essence of life or the nature of people, as the views we were brought up with imply. It is just that it is easier to see and understand ourselves when we are not surrounded and burdened by so many things.

Although houses and construction technologies are immensely different from place to place and time to time, the basic activity of housing is not. In the next chapter I present an interpretation of the structure of this basic activity as a universal invariable or constant. It is a necessarily abstract argument, however, and it is easier to follow if introduced with illustrations of the situations which gave rise to it and which the theory attempts to interpret.

Three episodes from my life in Peru are described here: the disastrous school project of Tiabaya; the absurd but, within its

own terms, largely successful aided self-help housing project in the squatter settlements of Arequipa; and a project that came close to applying the lessons learned from those first two experiences: the supervised housing credit experiment carried out in a squatter settlement extension of Lima called Huascarán.

In 1957 Tiabaya was a very beautiful village of small farmers and commuting factory workers set among intensively cultivated terraced fields—the *campiña* of Arequipa, an oasis surrounding the small Spanish colonial city just below the western *cordillera* of the Southern Andes some 700 miles south of Lima and Callao.

The council of the district of Tiabaya had received an authorization from the Ministry of Education in Lima for a new school building, together with a plan and some funds. A representative of the council then brought a formal petition for technical assistance to the Office of Technical Assistance to the Popular Urbanizations of Arequipa (OATA), where a young Peruvian architect, Luis Felipe Calle, and I were then employed. We had found little demand for OATA's services in the *urbanizaciones populares*, the appropriately named squatter settlements surrounding the city. We were therefore glad to respond to the council's request, and offered to do more than we were asked.

Luis Felipe and I were both appalled by the wretched sketch sent by the Ministry (which, in fairness, soon afterward greatly improved its architectural services).³ We persuaded the council that they could get far more for their money if we redesigned the school.

I was responsible for the design. It was economically and technically rational and I think it would have been aesthetically approved by both conservative and modern schools of design. Very

³ When historian and educator Jorge Basadre became Minister of Education in 1958 he assigned architect Carlos de Martis Bazo the task of reorganizing the design and construction of rural schools. One major achievement was their highly successful self-help school construction program designed and carried out by architect Patrick W. Crooke in the year 1960 (during which over 20 village schools were built, by the villagers, in widely scattered locations in the southern Andes between Cuzco and Arequipa—and at less than half the usual cost). This program is described in "Communal Building and the Architect," *The Architect's Yearbook*, No. 10 (London: Paul Elek, 1962).



properly concerned that the village should get the most for its money and that the school should provide the best possible environment for teaching and learning, I discarded the expensive and uncomfortable brick and concrete construction, along with the very poor plan, specified by the Ministry. In its place, I substituted an improved version employing local materials and construction techniques; thick and therefore thermal walls of stabilized earth with narrow windows and wide reveals to soften and diffuse the extremely strong daylight; a light trussed and acoustic roof of bamboo, treated against termites, which could economically span much wider, squarer, and consequently more flexible classrooms. Most of these materials and all of the labor could be provided at little cost by the village itself, which meant that the whole school could be built with the budget allocation intended to cover the costs of the first stage of the construction.

No village council could withstand this onslaught of economic and design logic; our plans were in the course of time accepted and authorized. But our own enthusiasm was not audibly echoed or even noticeably shared by the council members; we were subjected to an intensive cross-examination on all points, especially over the proposed soil cement walls, for which we promised a demonstration prior to its employment.

We recommended as general foreman the builder of one of the most beautiful homes I have ever seen, which was built of traditional local materials and construction.⁴ Jorge Vizcarra, whom I already knew through Eduardo Neira, was duly instructed and proceeded to carry out the soil cement block tests. They were not satisfactory: the volcanic soil had chemical peculiarities that interfered with curing and hardening. We agreed that brick should be substituted and that one classroom less be built at this stage, but, otherwise, no major changes were to be made in the design or construction.

On an unsolicited inspection shortly after work began, I found that foundation trenches had been excavated according to the

⁴ See "Village Artisan's Self-Built House," an illustrated article by the author in *Architectural Design*, London, Volume XXXIII, No. 8, August 1963, pp. 361-62.

layout I had prepared, but with a disconcerting change. Footings for the conventional modern concrete columns were being prepared. The embarrassed Vizcarra admitted that he had been ordered by the council to build an orthodox modern structure with concrete columns, brick panels, and a reinforced concrete slab roof. The plans had not been modified accordingly, however, so that the village, in all innocence, was committing itself to an enormously expensive structure. As the villagers had set about building the school, I made a quick calculation of the reinforced concrete beams needed to span the classroom width, made economically possible by the light roof I specified. This calculation showed that it would be impossible to finish even *one* classroom.

Some days after our chagrin at this discovery there was a disastrous earthquake which demolished the unfortunate village, literally burying our plans in the rubble, and with them a classic misunderstanding between professionals and their clients.

Before discussing the meaning and implications of this episode, I will describe a second.

The same earthquake of January 15, 1958, which destroyed or badly damaged about 10,000 homes in the Department of Arequipa, precipitated new funds for housing. OATA's budget had been just enough for our exiguous salaries and the office overhead. Except for surveying the settlements and drawing up our own improvement plans, which, at best, evoked a mild and polite interest overlaying the suspicions and distrust of the local leadership, there was little we could do. Without funds our technical assistance services were not in demand, and we had not learned how to stimulate that demand. Shortly after the earthquake, however, the situation changed.

In comparison with the damage, the earthquake relief funds allocated for housing were pitifully small. This obvious fact encouraged the young mayor of the city to accept OATA's suggestion of using the aided self-help method (as developed in Puerto Rico) in order to stretch the funds. We claimed that commercial contract unit costs could be reduced by 30 to 50 percent. We promised to build as many as 150 houses for the contract price



of 100. In fact 140 were built for the contractor-built cost of 100. In a strict account, including the *real* if unpaid administrative overhead, the theoretical difference would have been greatly reduced—a point I return to below.

Aided and mutual self-help housing methods have been and are being successfully used in the U.S. and elsewhere. It is not my intention to criticize the practice in this paper, and I refer the interested reader to Chapter 2. However, it is an inevitably complex administrative procedure, and, in this particular case, its use was unnecessary and paternalistic.

With the exception of an initial blunder (mentioned below), which was soon corrected, the OATA team faithfully followed the Puerto Rico aided and self-help housing manual. The manual demanded that groups of would-be participants be organized. In our case these were families who had previously rented inner-city tenements which had collapsed in the earthquake, and who also owned, or rather laid claim to, lots in the squatter settlements in the district of Miraflores. This is an area on the north side of the city in which there were, at that time, seven settlements, each with its own representative organization.

In collaboration with the local Patriotic Association of Fathers of Families Pro-Home Ownership, Alto de Selva Alegre, and others similarly named, we organized seven groups, one in each settlement, with an average membership of twenty families. All families had to have at least one able-bodied member willing to work one full day a week until all the houses of the group were finished. The houses were to be structurally identical, but many individual variations were possible, thanks to the well-thought-out design system developed by Federico Mevius, an architect who stayed with the project until it was completed some two years later. The participants were to be charged only the cost of the materials, and the repayments were scheduled so as to maintain a rotating fund.

In this particular case, administration was further complicated by the geographic dispersal of the individual lots, the variety of lot shapes, sizes, and slopes, and the fact that the properties were already owned, or rather effectively possessed. Convention-

ally aided and mutual self-help builders usually work on one block of identical lots which, even if assigned to individual participants before the houses are built, are not usually their inalienable property, at least not until the project is finished. In the Arequipa project, however, there was no way of recovering material and human contributions made to a subsequently delinquent participant. If one dropped out after his own home had been built, that was everybody else's loss.

In addition to the lack of control over participation and the logistical problems of delivering materials and getting the participants to work on many sites scattered over a 4-to-5-square-mile area, an unusually large number of interest groups were involved. OATA itself had become, by that time, the local branch of a special division of the Ministry of Public Health and Welfare, the Fondo Nacional de Salud y Bienestar Social (FNSBS), which paid overheads and salaries of the permanent staff. The foreman and assistants' salaries, contracted specialist labor, materials, and the maintenance of one of the two half-ton pick-up trucks were all paid for out of the Earthquake Relief Fund administered by the City Council. Then, of course, there were the seven local associations with defacto jurisdiction over the settlements we were working in. These did not always identify with the seven participant group committees, and some open clashes occurred. The participant groups themselves had many internal problems—though less than a pessimist would have anticipated—as a result of the many intense and, as it turned out, unnecessary sacrifices required by the system.

In addition to these sixteen organized interest groups—seventeen if the local OATA and central FNSBS offices are counted separately (they did have quite different sets of motives)—a further political complication cropped up. While the project was getting underway, a new semiautonomous regional organization came into existence in order to centralize all reconstruction and development efforts in the region. This contributed to internal political changes in the FNSBS and the loss of the support we had had from the original directors. Fortunately for our project, the City Council greatly resented the regional agency and resisted its



efforts both to cancel the self-help project and to disband the OATA. Having unwisely attempted to obtain President Prado's intervention, through the good offices of Ernest Weissmann (Director of the United Nations Center for Housing, Building, and Planning), I was among those dismissed.

It is rather embarrassing for me to contemplate the committee and group meeting man-hours dedicated to the project. To begin with, there were weekly evening meetings with each of the seven participant groups which went on for several months. These didn't leave much time for the OATA staff's family and social life. Then there were many meetings with the Mayor's special committee, created to supervise the disbursement of the earthquake relief funds for the project. Meetings with this committee became rather frequent as the likelihood of OATA's demise and the problem of staff funding increased. Considerable investments of administrative time were also made at the national level.

Many of these meetings were the result of the special circumstances of the project, including the fact that it was the first of its kind in Peru. Yet even under the ideal conditions assumed by the aided and mutual self-help manuals, many administrative operations were specified or recommended. (A manual based on considerable experience acquired in Colombia, for instance, calls for some 25 discrete and complex operations.)

The basic principle of aided and mutual self-help is the employment of the free labor of the participating families who thus earn "sweat equity." By working in groups, it is possible to divide, train, and specialize labor and maintain continuously working teams under expert supervision. This, of course, involves a very wide variety of tasks for the organizers and supervisors, ranging from technical design, to the social organization of groups, costing and supervision, time accounting, and the solution of the many personal and intragroup problems that inevitably arise during the construction period, which is ideally not more than six months, but generally more, and often much more, than a year.

The plausibility of this concept fades somewhat in the light of people's own unaided self-help efforts—the same low-income families for whom aided self-help projects are so well intended by the authorities and agencies concerned.

The OATA project was carried out in the middle of a sea of unaided self-help or owner-built houses. The great majority of the houses in the *urbanizaciones populares* of Arequipa, as in the peripheral *barriadas* of Lima, are substantial, if mostly incomplete, structures of brick (or the white volcanic rock *sillar* in Arequipa) reinforced with concrete piers. Contrary to the generalizations made by the mass media and an uninformed middle-class, these squatter settlements are no more slums than any building or development under construction. Most dwellings start as temporary shacks; therefore most new settlements are, temporarily, shanty towns. But, in Miraflores and other squatter suburbs where the settlers are fortunate enough to obtain de facto ownership, they quickly convert the initial encampment into a thriving construction site. However, it takes most "progressive development" settlements of this kind fifteen years or so before they take on the character of a more or less fully developed residential neighborhood.⁵

The physical types and quality of the houses built under the auspices of the OATA project were indistinguishable from those of their unaided neighbors. The only significant difference, and apparent advantage, in the OATA project was the difference in the length of construction time. A self-financing owner-builder of the same income level needed from seven to ten years to complete a unit similar to those built by the mutual-aid groups in eighteen months or two years. This, of course, represents an enormous advantage. The OATA project participants' patience in suffering inferior living conditions—eight and a half years in a high-rental tenement of very low standard or in a shack or incomplete build-

⁵ The "progressive development" of low-income settlements that occurs naturally and traditionally when the settlers have secure tenure (*de facto* if not *de jure*) is illustrated in Plates 15–17. Case histories of squatter settlement development are given in the author's article *Barriers and Channels for Housing Development in Modernizing Countries*, in the *Journal of the American Institute of Planners*, Vol. XXXIII no. 3, May, 1967, reprinted in William Mangin, ed., *Peasants in Cities*, Houghton Mifflin, 1970, and in David Lewis, ed., *The Growth of Cities*, Paul Elek, London, 1971. Also, see William Mangin with the author, *The Barriada Movement in Progressive Architecture*, New York, May 1968, reprinted in Paul Oliver, ed., as *Benavides & The Barriada Movement in Shelter & Society*, Barrie & Rockliff: The Cresset Press, London, and Praeger, New York, 1969.



ing is a cost that explains the OATA project participants' patience with the many conditions they were obliged to accept in order to receive the credit for the materials and specialized labor—the same items they would have had to pay for but over a longer period when going it alone.

Whether the aided and mutual self-help method, in the Miraflores or any other situation, is really economic or viable as a large-scale alternative is a question hotly debated by the protagonists and antagonists of such programs.

Antagonists claim that the administrative overheads are uneconomically high, and it has often been admitted that they run to 25 percent or even higher, about twice as much as in the relatively top-heavy direct construction of publicly sponsored housing projects. It is also argued that it could be extremely difficult or even impossible to recruit and train the dedicated and self-sacrificing professionals and para-professionals needed for extending programs of this kind. And it is also very commonly and persuasively argued that the cost of participation to the self-helper is as great or even greater than the subsidized sweat equity he earns.

Protagonists counter with arguments justified more by social desirability than administrative feasibility. The aided self-help advocate claims that the most important products are of literally incalculable value: that, in Nehru's words, "We are building families as well as homes." Supported by much recent research on the correlations between well-being and improved housing, the protagonists argue that merely physical improvements are of no value unless supported by social development of the kind built into the self-help programs. Yet before stating my own position in this debate, I must step back and review the lessons I learned, primarily from the Tiabaya school and Miraflores self-help housing projects.

The principal effect of these and other experiences in Peru was to change my attitude toward the people I set out to work for. I stopped trying to work *for* and started trying to work *with* people.

I realized that I knew far less than I originally assumed, and that the people I was supposedly qualified to order about knew far more. As Harms points out in Chapter 8, the same assump-

tions are not made by professionals or administrators when their clients are from their own or "superior" levels of society. Harms discusses the vital but commonly ignored difference between the user-client and the sponsor-client. When the specialist is paid by his user-client, and as long as the latter is not cowed by a professional mystique, there is dialogue and a learning situation. On the other hand, when the paying client is not the user but an institution supplying him with goods or services, the professional's opportunities for learning are drastically reduced—generally to the limited existential sphere of his peers which, of course, tends to reinforce his own views, which are often profoundly unrealistic.

As I came to realize the perverse nature of the premises on which professionalism and the institutionalization of services (and values) are based, I began to understand how and why the established system is so often counterproductive and so rarely enjoyable. In fact, to associate delightful feelings with institutionalized services or mass production seems foolish and almost indecent. Yet a common and heartening scene in villages and squatter settlements throughout Peru is the celebration of roofing a house, a ritual occasion that brings family and friends together. When the house becomes a commodity supplied through paternalistic agencies, there is no room for the enjoyment of the process itself. To the professional trapped by institutional frameworks, or isolated by his own secretiveness, all measures of value are invested in the material end product. To the extent that I and my colleagues were associated with institutionalized housing, we contributed to the human and material costs imposed on those least able to afford them.

The disaster which would have overtaken the well-intentioned Tiabaya school project—had it not been for the even greater earthquake disaster—would have been the direct result of power to *impose* decisions from above which must come from below if good use is to be made of local resources. The same can be said of the astonishing waste involved in the Miraflores project.

Each illustrates a different side of the issue, however, and these should be separately recognized. We, the authorities, overpowered the Tiabaya School Committee with words, and though more



respectful of our Miraflores clients' felt architectural needs, we overwhelmed them with our political power.

As I state in the opening paragraph of my theoretical paper, "Housing As a Verb," Chapter 7, these are two sides of the same basic existential issue of autonomy versus autocracy. Looking back on the Tiabaya school experience, I see it as a lesson in communication and the power of language. We architects were deaf and even blind to the now obvious differences between our own language and that of our clients. It was not so obvious then because we were meeting people already confused by the transition from a traditional, rural, semi-subsistence culture to a modern, urban, semi-industrial situation.

Neither Luis Felipe Calle nor I were more than superficially attuned to the historical context of our activities. Confronted with automatically respected professionals who recommended traditional rather than modern ways, the mayor, the teacher, and the other council members were doubly confused. Even worse, one of the professionals was a foreigner, an Englishman like those who had built the railway and introduced the first modern industries.

To the members of the council, the objective beauty and harmony of the architectural shell of the village symbolized their assumed backwardness and their relative poverty. Our enthusiasm for the superb Vizcarra houses must have been incomprehensible. To them, the respected Don Jorge was a quaint survivor of an older era of even greater hardship.

The school, on the other hand, was to be a symbol of progress. A modern institution for the emerging generation would have to have, of course, according to their logic, a modern dress. This much was clear enough to us, if only half understood. We did our best to convince the villagers that our design was supermodern, far more sophisticated than the contemporary conventions they really wanted. As already stated, our unanswerable economic arguments, together with our prestige as professionals, forced them to accept what, in effect, were our own decisions on the design and construction of their school.

That we were perhaps entirely right, technically, economically,

and even culturally speaking, is an academic matter. The reality of the village was quite different from what we saw and the language of the villagers different from our own. For them the school meant a way out of an old and hopeless situation into a new and visibly hopeful one. The probable fact that that hope was unfounded—speaking here with a pessimism neither I nor my colleague shared at that time—does not alter the conflict, even though it may profoundly change the interpretation of the root problem.

The reality we found ourselves up against was the will of the people on whom the execution of the project depended. Since the money to build with lay, quite properly, in their hands, we could not impose our specifications. The decisions we made were illusory, and their apparent acceptance of them was a lie. Quite consciously, I am sure, and after discussion among themselves, the council decided to use our plans and nothing more. They liked the plans, and fully appreciated the far better use made of the site; they certainly understood the material economies of a proposed construction system essentially similar to those employed in the village since its foundation 400 years before. But, whether they were convinced or not that the technical improvements were genuine, they knew for a certainty that they would get little support from the rest of the village for such a building. And of course our project depended on voluntary village labor.

The school committee members did not admit this—not to us anyway. Perhaps they were ashamed to do so, or more likely, they decided that it was less trouble to humor us and wait for us to go away, leaving them with the plans they wanted. They assumed, erroneously, that they could build the way they wanted according to the floor plans we provided. Unfortunately, they did not understand the dependency of those plans on the lightweight roof construction I had specified. If they wanted a heavy concrete roof, then they had to accept the narrow, corridorlike classrooms, such as those in the plan sent by the Ministry in the first place. In other words, they really were dependent on informed technical advice to an even greater extent than they realized.

This natural dependency of the layman on the specialist and the entirely reasonable division of labor it implies is entirely dif-



ferent from the artificial and imposed dependency on the secretive professional. In this case, illustrated by our relationship with the Tiabaya school committee, the mutually assumed inaccessibility of our knowledge deprived our clients of their freedom to hire and fire us as it suited them. Once in our hands, they were left to guess the risks they had to take by dropping our services—the very uncomfortable situation we all find ourselves in, for instance, as we become more dependent on the increasingly institutionalized medical profession.

When we started on the OATA aided and mutual self-help housing project, we were more sensitive to the “felt needs” factor. In fact, we were so sensitive to it that we started off on the wrong foot by insisting that the participants build only provisional dwellings from materials they could later use in their own ways and without any interference from our side. Rosa Bustamante and Blanca Galvez, our social workers and group organizers, quite rightly and wisely warned us against this unjustified lack of confidence in their building skills. Shortly after starting, we had to change over to the construction of permanent dwellings. After another false but fortunately tentative start with an attractive and economic brick vault roofing system (which conflicted with the demand for building second stories), Federico Mevius developed a highly successful and adaptable plan allowing for a wide variety of conditions and internal layouts without changing the quantity of materials or labor or, therefore, the costs and accounting system.

Even to sympathetic neighbors and certainly to the participants themselves, the project must have seemed rather silly, but I think most of them appreciated our effort to come to terms with their own situation. The fact that the staff worked so hard to overcome the problems they created for themselves through the administrative superstructure, and that they worked so closely with the participants, certainly won respect. In comparison with the conventional contract-built housing projects, which were invariably too expensive for families able to participate in our project, we scored a success which deserved its national renown.

The predominant issue raised by the Miraflores project is the

political rather than the conceptual one. The participants and the project staff understood one another well enough; in fact, we had a good personal understanding with most of them most of the time; yet the relationship was still one-sided, though in a different sense from that experienced in Tiabaya. Unlike the Tiabaya committee our Miraflores clients were not in control, even though they participated more directly and fully. OATA made all the key decisions about what houses should be built and how they should be built. It had the money, and so we called the tune.

The great and, retrospectively, the somewhat absurd mistake of the Miraflores project was the assumption that the professional staff knew *how* to get houses built better than the people themselves. Today this seems an even greater mistake than the assumption that the professional knows best *what* should be built.

It is still hard for me to understand why we thought that it was necessary to do so much for the people of Miraflores. As mentioned above, the seven *urbanizaciones populares*, with a total population of about 5,000 households at the time, consisted mainly of solidly built though mostly incomplete dwellings. To be sure, there were many cases of poor design and wasteful construction, but few structures were unsound or would have been unlivable when finished or semicomplete. The settlements were all planned by the squatter associations, with or without the assistance of the district municipality. Most of the twenty associations in the urban area of Arequipa had also built their own meeting halls and at least one school. Several had already installed electric light services and a few had started to install water supply systems. The associations, all active, were quite strongly supported for the most part by their local resident populations, as well as by many members and plot owners who were still living in the city. All or nearly all of the associations belonged to the aggressive *Asociación de Urbanizadores Populares de Arequipa* (AUPA), an organization which was generally opposed to OATA's existence and activities, but with whom Luis Felipe and I had made an uneasy peace shortly before the earthquake occurred. In other words, we were dealing with vigorous, capable, and organized working-class people.



Why, then, did we feel it was necessary to organize such people into groups to do what they were so obviously capable of doing individually? If they were going to be provided with credit for materials which they normally buy themselves and for skilled labor which they normally hire themselves, then why did we think we should do all this for them? Did we really think that the work would go faster or that they would save money by the addition of so many tasks and administrative complexities?

If we had been at all conscious of our assumption that we would be saving everyone time and effort by organizing the groups, by keeping elaborate time sheets, by buying and distributing materials, and by keeping an account of the dozens of different materials that go into each job as well as of the tools and the skilled labor supplied, then, I am sure, we would have spent at least a few hours analyzing this assumption. We would have taken the trouble to find out how the typical family actually builds, and we would have compared overhead costs. We didn't because it never occurred to us that our own organization could be more wasteful than theirs. We never anticipated the towering administrative superstructure we were setting up and could not imagine that it would be largely superfluous.

I and my colleagues still shared the liberal establishment notion that the great resource of the people is their labor, and that properly organized by the government—or, even better, by government and private institutions in concert—sweat equity could make great contributions to national development. Of course we were aware of the people's own organizations, but we were much more conscious of their negative motives. For us, AUPA at that time seemed no more than a clique of illegal speculators, who were far less interested in the welfare of the people they claimed to represent than in their own profit. This half-truth we subconsciously extended to all manifestations of autonomous organization.

In fact, the staff of OATA, including myself, held the liberal authoritarian view that all local autonomous organizations tended to be subversive—as, indeed, they are to systems concentrating power in an elite, however benevolent and successful they may be at redistributing wealth in the form of institutionalized

services. Fortunately for the genuine liberals, this view is untenable in situations where the institutionalization of basic services such as housing is materially impossible. Once confronted through professional contact with local realities and the people who live them, the creative specialist or open-minded professional is bound to change his or her attitude.

If we had fully realized this at that time, however, we would never have been able to make a politically acceptable proposal. If OATA had approached the mayor with a supervised credit scheme such as that squeezed under the administrative wire a few years later in Lima, it would not have been considered for one moment. Consequently, the OATA staff, and the staffs of several other local and national institutions which followed their lead, would never have experienced the confrontations with local realities or have been affected with the subversive knowledge that any sensitive person must soon acquire from the common but uncommonly capable people of the *barriadas*. A few years after the Arequipa experiment, enough of this new understanding had filtered up to the higher levels of public administration—mostly with the promotion of the infected professionals themselves—where genuinely radical alternatives could be tried.

By mid-1962, a very large low-income housing program, financed with a loan that I had in part helped to negotiate from the Interamerican Development Bank, was floundering. Luis Marcial, a brilliant young architect who was later tragically killed in an airplane crash, was the chief architect for the government institution administering the program. I had the job of assisting him with the development of self-help techniques on which the entire program was supposed to be based. By that time Luis and I had come to the conclusion—evident from the Miraflores experience several years before—that the only way to effectively simplify and generalize self-help was to transfer the bulk of the administrative load onto the program participants themselves. Although we had a few well-administered and effective self-help programs underway—notably the large program in the northern city of Piura directed by another extremely capable and then very young Peru-



vian architect, Victor Wyskowski—only a small proportion of the 30,000 unit national program was, in fact, being built through self-help. Only rarely was it possible to recruit teams of field personnel willing to work exceptionally long hours for exceptionally low pay and, at the same time, find suitably located land for which the demand did not immediately generate local social and political conflicts that made the organization of self-help groups virtually impossible.

The *barriada* of Huascarán contained an area that was large enough for some twenty single-family dwellings, which the settlement association had acquired and wished to distribute to member families who for lack of their own plots had been living doubled up with relatives in the settlement. When the association approached our agency for funds and technical assistance, Marcial and I suggested to the chief executive (Luis de los Heros, with whom we had negotiated the IDB loan) that the agency simply lend the plot recipients the cash and let them get on with it under a minimum of supervision. Although many of our colleagues and contemporaries were opposed to the idea, our elderly and very conservative friend agreed that we should go ahead.

The procedure was extremely simple. The local association allocated the plots to bona fide families who had no other urban properties and who contracted to build the minimum units specified within six months of receiving the first of five staged payments. The local recipients also undertook to repay the debt within a fifteen-year period on very easy, subsidized interest rate terms. If the property were to be transferred, the debt would also be transferred—we were not concerned who the eventual owners or users were. A new dwelling or dwellings would, in any case, be built at far less cost to the public than those built by commercial contractors in the direct construction projects. The total loans were small, just enough for the materials and skilled labor (bricklayer, roofer, electrician, and plumber), and less than half the amount given for similar units built by contract.

The first cost to the public agency, the construction cost, was substantially less than half. Not only were there no general contractor's profits and overheads to finance, but the agency's own

overheads were substantially reduced to about 4 percent from the usual 7 or 8 percent on direct construction projects and from the 15 to 25 percent on direct labor or aided self-help projects.

Longer-term savings in such cases, including financing and related administrative costs, are even greater for the borrower, the lender, and the promoter. Since the total construction cost is reduced by about two-thirds to the public and by half to the borrower, it follows that the long-term savings and the reduction of risks and losses are very large indeed, especially when inflation progressively increases the cost of subsidies paid for out of hard foreign currencies.

Our doubting colleagues and opponents within the agency had the same attitudes and assumptions that I had had a few years earlier while working in Arequipa. Perhaps unfairly, we forced our friends to admit that they had no confidence in the morality of the ordinary working-class people whom we were proposing to trust with cash payments, even though these would be made in four or five stages and only after the certified completion of the previous stage. We were strenuously warned that even the very best people succumb to temptation when the going gets hard. In a crisis, we were told, a family would blow its check for medicines or a journey to the relatives back home, or on gambling or on other even more depraved activities. Our colleagues were by no means opposed to the principle of loans for home building or improvement in squatter areas, however. On the contrary, they were going ahead with their own variant, in which building materials and specialized labor were to be provided by the agency instead of cash. In this way, it was confidently claimed, the people would be protected against themselves. Moreover, the agency was supposed to be able to provide better and cheaper materials through bulk buying negotiated by experts who, unlike the inexperienced borrowers themselves, would not be cheated by unscrupulous merchants.

It did not work out that way. The first bulk purchase made by the materials loan method was a very great quantity of brick which had been obtained at a 10 percent discount. Large purchases by public agencies are, of course, tied up in a certain



amount of red tape. In this case, along with other safeguards, three competitive bids had to be obtained through advertising. Three months passed before the first bricks were delivered to a self-helper. He and most of the other borrowers refused to accept the deliveries, claiming that the bricks were of too poor quality. And when the recipients refused to sign, the agency was stuck with its bargain.

Meanwhile, the Huascarán project participants had gotten their bricks with little or no delay. Another participant, a truck driver, took care of deliveries. One of them had a brother in a brick factory who negotiated such a good bargain with his employer that the project participants managed to get themselves a 5 percent better discount than the materials loan program.

If there were any complaints about the quality of the bricks, they were not directed at the agency. All the agency had to do was to get the money to the borrowers and see that the work they did with it met acceptable standards. If it did not, then the agency withheld the next payment until the builders brought previous work up to standard. The problem of collecting payments due was, of course, the same in either case. In Huascarán the accounting system was elementary and the accountants loved it. The materials loan system, on the other hand, was extremely cumbersome. Even with the rather simple construction techniques employed, between fifty and sixty different materials and components were used. The individual accounts were thus multiplied accordingly, and, on top of that, there were all the operations involved in buying, storing, and distributing the very considerable capital that had to be held by the agency from the time the purchases were made until they were received by the borrowers.

In other words, while the cash borrowers proceeded immediately to use their own network of suppliers and distributors, the materials borrowers were dependent on a hierarchic system set up by the agency. While the former were free to make any advantageous entry they could find in the local network system, the latter were stuck at the receiving end of an inflexible supply system—free merely to sign or refuse to sign the receipts.

It was only to be expected, therefore, that the materials borrower, frustrated by long waits for materials he could have bought for himself around the corner, often refused a delivery on one pretext or another. Paradoxically, it was the only *positive* action he could take.

No systematic evaluation has yet been made of these and other forms of self-help projects in Lima, or in Peru, or, as far as I know, in any one area where various methods have been tried. However, the rather unsystematic and superficial surveys that were made of the results of these and other projects carried out during this period in Peru showed that both methods were considerably more productive than conventional direct construction projects, or even orthodox aided mutual self-help projects. Both in Huascarán and in San Martín de Porres, where the materials loan method was first tried out, many borrowers invested far more than the amount demanded by the value of the loans. Very few invested less. Not one of the twenty Huascarán cash borrowers failed to invest more than the minimum one-story house required, and two years later, most of the houses had second floors. In a few cases the materials borrowers sold the materials delivered, and one used the cash to equip his wife's beauty parlor business. But who can say that this was not the best use that the borrowers could have made with the loan? If successful, the business would increase their income and enable them to spend much more on their house in the longer run.

This last question raises the quantitative and most obvious aspect of the basic issue that my colleagues and I were confronted with in the course of these experiences. The presumed authority with which we acted as officials and professionals seemed more and more absurd to those of us who became aware of the simple and overwhelming demographic and economic facts of the situation. The enormous population increase, largely concentrated in the cities through migration, and the tiny budgets of the government public works agencies proved to us how impossible it would be for a public authority to assume direct responsibility for housing the mass of the people.

Even in metropolitan Lima, with a per capita income and bud-



get of about three times the national average, there was less than U.S. \$100 per household per annum for all public services, including health services, education, sanitation, transportation, and policing. With the cities doubling every decade, at least 10 percent of the urban populations have to be finding or building themselves a home at any one time. Even if 10 percent of the public monies available were invested in housing projects (of the conventional varieties) not more than 4 percent of the "unhoused excess" population could be accommodated by the public sector (assuming an average unit cost of U.S. \$2,500).

The first impulse, of the architect and builder especially, is to reduce the costs by technological innovation. The 10 to 12 percent reductions in first costs that can be achieved by technical modifications of publicly sponsored housing projects is still far too little to make any significant change in the potential contribution of public agencies under these circumstances.⁹ These conventional innovations do not answer the question Ernest Weissmann put to me, which continued to bother me until the Huascarán experiment provided an answer. Though very encouraging and supportive when he visited our project in 1958, the then Director of the United Nations Center for Housing, Building, and Planning mentioned, with apparent casualness, that what we really need is not just to help people to build their own homes but to do it in ways that we can administer on a very large scale. The very high and humanly exacting administrative cost of the aided self-help method eliminates it as a general or large-scale solution. Even when the money is made available by a foreign agency, it has not been possible to find and train the army of dedicated field workers and local program administrators demanded.

⁹ See Part II, Industrialization: Myths & Realities, in *Industrialized Housing, the opportunity and the problem in developing areas*, by Ian Donald Turner and the author, Office of International Affairs, US Department of Housing & Urban Development, Washington, D.C., 1972. In this analysis we observe that the savings that can be obtained in theory range from 10 to 25 percent. In the contexts discussed in this chapter, however, the maximum possible savings in the construction costs would be at the lower end of this range—far less, anyway, than the savings commonly obtained by self-helpers using conventional, labor-intensive techniques.

In addition to the issue of whether it is feasible for the public sector to assume more-or-less direct authority over housing, there is the question of its desirability. This aspect of the central issue of authority is not directly quantifiable nor is it so obvious, except to those who have experienced both authoritarian and autonomous housing systems. It is obvious enough, however, to those who have known the vast human difference between the two, even though the physical operations and the material products may be quite similar.

To put it simply, building carried out by a large and hierarchically organized agency, whether public or commercial, provides little room for dialogue between people. All decisions are vertical and all operations are carried out by more-or-less unchallengeable order. When people are building for themselves, on the other hand, or when the builders are building for the users, there is plenty of room for genuine relationships between the people brought together by the activity and, therefore, for creativity, pride, and satisfaction from the work itself. Of course, there are plenty of grounds for conflict and hate as well as love, but these are the matrix of life which is denied by the impersonality of authoritarianism.

This discussion of the feasibility and desirability of centralized administration in housing raises the basic issue of authority. It therefore directly involves any actions having or needing authority, including, of course, those of the professional architect. Hans Harms discusses the issue in depth in Chapter 8. In fact, we came up against the problem together while we were working for the same agency in Lima, in 1961 and 1962.

Hans was mainly involved with the monitoring of a large housing project while I spent most of my time trying to develop viable self-help programs. Sometimes we would discuss our various frustrations while visiting in the squatter settlements, an invariably stimulating and heartening experience. The initiative, ingenuity, perseverance, and hope so evident in the housing action of such a large part of the population and in the face of so many difficulties is, perhaps, the most important lesson an architect or urban planner can get. This is especially the case if the professional shares



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responsibility for the artificial barriers placed in the way of people and for projects that drain money away from them and waste it on unsuitable and expensive designs which the intended users do not want or cannot afford.

The students and young professionals, some of them foreign volunteers,⁷ who managed to find situations in which they could work with people rather than for central agencies supposedly acting on the people's behalf, learned more than they ever could have in a formal school. Sometimes, the lessons were quite direct. An acquaintance and resident of a Lima *barriada*, Mrs. Romero of Tres Compuertas, once pointed out to me the logic of enclosing a plot with an expensive brick wall and even of finishing the street façade, before building a permanent room on the plot (which would cost much less). By doing that, she explained, the squatter protects his land, by far the most important part of his property; he creates a large private area, relatively secure from theft and with a greatly improved micro-climate; and, last but not least, he contributes to the creation of an urban street at an early stage of development—a great stimulus for all who live on it or use it.

Mr. and Mrs. Romero, whom I first met in 1960 when they were visiting and advising a *barriada* association in a small town about 150 miles to the north of Lima, were still living in a less than half-built house of their own when I last saw them shortly before I left Peru in 1965. They were two of the most dedicated professionals I have ever known.⁸

The certified professional makes a fool of himself, and often does a great deal of harm to other people, by assuming that he

⁷ For accounts of work done by young volunteers in these contexts see: Margaret Grenfell and the author, *Barriada Integration & Development in Architectural Design*, London, Vol. XXXIII, No. 8, August, 1963, pp. 337–8 (illustrated). Also by the author: *British Volunteers in Comas Barriada, Lima in Peruvian Times*, Lima, Vol. XXIV, No. 1202, Jan. 3, 1964, pp. 6–10 (illustrated).

⁸ At the time I knew them, Mr. Romero worked as a bricklayer and his wife as a part-time nurse. In their forties, they lived with Mrs. Romero's elderly mother in a partly-built house sited on a steep and rocky slope in one of the oldest *barriadas* of Lima. A great deal of the Romeros' time went into their consulting activities, as did, I suspect, much of the income they earned from it.

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knows more than the “uneducated” by virtue of his schooling. All that second- and third-hand information and intellectual exercising does for him, however, is to reduce his ability to listen and learn about situations significantly different from his own social and economic experience—with consequences which can be tragic when he has the power to impose his solutions on those who are not strong enough to resist.