MICROBRIGADAS IN CUBA
A COLLECTIVE FORM OF SELF-HELP HOUSING

Kosta Mathéy[1], West Germany

A B S T R A C T

The Microbrigada movement in Cuba shows an innovative and efficient approach in relieving the housing problem of a country in the developing world. It can be characterized as a form of collective self-help, whereby a certain number of workers from a factory or from an office are set free from their regular duties in order to build houses for themselves and their colleagues. After a boom period in the 1970's, when over 80,000 dwellings had been built by the microbrigadas, there was a decline of the movement after 1979, as the formation of state brigades and the introduction of industrialized building methods were thought to be a more efficient means to produce mass housing. However, this expectation did not materialize for a number of reasons, which lead to a review of the current housing policy, and the merits of the microbrigadas were reconsidered. After a speech of Fidel Castro in mid 1986, when he suggested the revival of the movement, more and more workers joined Microbrigadas, which today have a labour force stronger than any time before. Also new variations of the Microbrigada concept have evolved, like the Microbrigadas Puras or the Microbrigadas Sociales" with a strong community base. It looks as if microbrigada movement will remain an important feature within the Cuban housing policy for many years to come.

In spite of the obvious success of the movement the model of the microbrigadas is designed to suit the Cuban social context and cannot be easily transferred into another society, particularly where other basic needs, like health care, education, and food represent mayor problems and housing is attributed a lower priority. However, certain isolated aspects of the microbrigada movement might proof attractive even in advanced capitalist societies, like the one of swapping your regular job for a different occupation during a year or two.

[1]University (GHK) of Kassel and TRIALOG - Vereinigung zur wissenschaftlichen Erforschung des Planens und Bauens in Entwicklungsländern e.V., West Germany

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THE SOCIAL CONTEXT

Even today, almost 30 years after the revolution, Cuba has a serious housing deficit, although the situation is probably less severe than in other Latin American countries. There are no extended slum areas which were a typical feature before the revolution, and nobody is evicted without having accepted any alternative accommodation offered to him. Nevertheless, problems of overcrowding and poor maintenance of existing dwellings are common. Despite an ambitious mass housing programme, the revolutionary government in the early years concentrated most of its efforts on agricultural and industrial development, and certain social services such as health care and education. Housing as a very costly and not explicitly productive investment was not given a high priority. Fidel Castro himself once said that a developing country must choose between economic development or housing construction since it cannot cope with both tasks at the same time.

Housing policies in Cuba have undergone various shifts, in emphasis, and the earlier period in particular has been well documented (see, for example, Hamberg 1986 and forthcoming). The most important single feature in the first decade, however, was the construction of dwellings *outside* the bigger cities: it was considered a priority task to improve the living conditions of the rural population[1]. In any case, within the capital, Havana, the large number of people emigrating from Cuba had left behind a stock of good dwellings, which were redistributed among the inhabitants of slums designated for clearance. In addition, with recourse to various economic and legislative measures, particularly stimulating development in other parts of the country, Cuba succeeded in reducing migration into Havana to such an extent that the population growth rate of the capital remained below the national average[2].

MASS HOUSING VERSUS SELF-HELP CONSTRUCTION

In Cuba Housing production is organized along three predominant lines, which are state built houses, individual self-help, and collective self-help construction. Although all three forms coexist for many years, they were only given a comprehensive legal framework in the general housing law of December 1984, which replaced a greater number of earlier laws ruling over parts of subject, and was revised again in parts in December 1988. The total output of houses produced is being laid down, to a certain extent, in the five year economic plans, but since housing provision relies largely on voluntary initiatives by the users these figures can obviously not fixed definitely nor enforced by central government[3].

Housing built by the state represents nearly half of all dwellings completed[4], and the majority of these units consist of prefabricated blocks of flats erected by the Ministry of Construction (MICONS). Following the logic of that production method (large and repetitious concrete panels, parallel orientation of long linear buildings with an uniform number of floors, etc.) this type of mass housing has been

increasingly criticized - also by Fidel Castro himself - for its monotonous appearance, and for its cultural incompatibility particularly in smaller towns and rural areas (Ortega 1986:37; Segre 1984:357). However, more recently some experimental housing projects have been proposed and built which attempt to increase the flexibility of the prefabricated building systems and to improve their aesthetic appearance. One of these projects is part of the VAN-VAN redevelopment scheme in Santiago de Cuba.

Housing produced with the direct participation of the population - or self-help housing as we would call it - can be distinguished in two different forms: individual and collective self-help. Individual self-help ("construcción por esfurzo propio") has always been a major element in Cuban housing production, although for a long period it was not given particular attention within the official programs and policies (see table 1).

Table 1: Average Annual Housing Production 1959-85

Period	Total	per 1000 inh.	self-built	per 1000 inh.
1959-70	34,700	4.5	26,400	3.4
1971-75	42,400	4.7	26,200	2.9
1976-80	49,200	5.1	32,800	3.4
1981-85	68,500	6,9	41,500	4.2

Source: Hamberg (forthcoming)

In addition to spontaneous, and sometimes illegal, house building efforts by individuals there also existed isolated state-assisted self-help programs since the early days of the revolution. These programmes were conceived as temporary measures to overcome the problem of urban slums and, later, to replace the primitive "bohios" (traditional thatch huts) with durable houses built to modern standards. However, self-help was never given large scale professional attention before the national architects' conference in 1984. By that time the results of the 1981 housing census had become available: the figures revealed that between 1976 and 1980 only 164,000 dwellings had been created officially either directly through the state or through the Microbrigadas, although the net increase of the housing stock accounted to 246,000 units (Hamberg 1986:603). Thus, the striking difference between both figures obviously represented "informal" constructions, most of them built by their occupants in self-help efforts. The census further revealed that, apart from the unexpectedly high percentage of self-built constructions, a large part of these houses exposed serious structural problems - a reflection of the missing access to good standard building materials, and of the lack of professional expertise accessible to these people. In response to this limitation 1984 housing law foresaw particular provisions in support of self-help housing, namely credit, technical assistance and official outlets for standard quality building materials.

Collective forms of self-help housing include agricultural co-operatives, where house building is one among several other cooperative activities, and - in line with the 1984 housing law - regular housing cooperatives. This latter form implied several individual self-builders forming a team which would build their houses together for the period of construction only, by which they could share their own capacities and any external support, too. An additional benefit was seen in the better use of building

sites, and a saving of the cost to provide urban services in comparison with individual self-building, because preference was given to multifamily blocks of flats. However, in practice very few housing-cooperatives were formed, and from 1986 onwards all political support was directed towards the renewed emerging Microbrigadas, which were considered a much superior form of collective self-help[5]. Eventually within the new housing law of 1988 the previous section dealing with housing cooperatives has been replaced with provisions for different forms of Microbrigadas have developed over the last few years, and which have become the most dynamic element of Cuban housing provision today, both in terms of new building and for the maintenance and renovation of the existing housing stock. Because the Microbrigadas represent a unique feature in Latin America, or elsewhere in the Third World, the remainder of this paper will deal with them in greater detail.

THE EMERGENCE OF THE MICROBRIGADA MOVEMENT AS A NEW FORM OF HOUSING PRODUCTION.

The idea of the Microbrigadas was first put forward in public by Fidel Castro during one of his long and famous speeches in the year 1970[6]: The workers within an office, a factory or any other productive unit should be given the possibility to build houses for themselves and for their colleagues. For this purpose some of them were to be released from their normal work duties and integrated into building brigades, while their colleagues, who stayed behind, guarantee to maintain the previous level of productivity in the unit. The Microbrigadistas (= the members of a Microbrigada) continue to receive their regular salary from their permanent employer, and therefore their income may exceed the level obtainable by unskilled workers within the building industry. Any houses completed by a Microbrigada team were then to be distributed amongst all workers of the original work place according to need and work merits, and there was no automatic priority given to the members of a Microbrigada[7].

Only a few months after the initial public presentation of the idea, the first construction sites were handed over to Microbrigadas on an experimental basis. The model was found to be feasible and good, and more and more Microbrigadas joined in. By the year 1978, more than 1,100 teams had been formed by some 30,000 brigadistas, having completed 82,000 dwellings[8]. The movement was strongest in the capital Havana, since here the house building activity of the state sector - the established channel for the production of mass housing - was intentionally kept minimal in order to let the historically underserviced provinces catch up with the standards. Complete satellite cities around the capital were built by the Microbrigadas: typical examples are Altahabana, Reparto Electrico, San Augustin, Cotorro and Alamar[9] - the latter designed to house some 150,000 people.

At that time almost all the houses built by Microbrigadas were 4 or 5 floors walk-up flats following a standard design[10]. To reduce urban monotony the facades were gaily painted or green areas were cultivated between the blocks. However, what contributed more than everything else to maintain a high social status of these settlements was the fact that the inhabitants were not social outcasts, as tends to be the fate of architecturally similar developments in Europe today, but honourable workers selected into these dwellings for their outstanding work and social merits.

Despite the recognized achievements of the Microbrigadas the movement almost came to a standstill by the late 1970s. There were more than one single and evident reason for this halt, and it is evident

that the ongoing institutionalization and restructuring of the national economy played a major influence. More in particular it was argued that the predominantly artisan building technology applied by the Microbrigadas was not very efficient, and that both the quality of the product and the productivity of the process could be raised by relying more on industrialized systems - which in turn would require a skilled labour force and not the laymen of Microbrigadas. A minor problem associated with the Microbrigadas was the fact that many brigadistas - as explained before - were better paid than regular construction workers working on the same site. Another criticism concerns the selective distribution mechanism of the Microbrigada-houses, because it excluded some of the people with the greatest housing need, namely people without regular employment. Also the work centres themselves became increasingly reluctant to release their workers to join a Microbrigada once the earlier production problems which had frequently caused overstaffing had been overcome on the large. Last but not least a new Economic and Management system, which had been introduced in the second half of the Sixties requested the self-financing of these enterprises and called for a more economical and product oriented use of the employed labour force[11].

It was planned that the gap which the dissolved Microbrigadas left behind would be filled by additional, and more efficient, state brigades, which also incorporated some previous Microbrigadistas who preferred to remain in the building trade instead of returning to their home base; but from now on they were paid directly by the Ministry of Construction.

THE MICROBRIGADAS IN THE PROCESS OF "RECTIFICATION"

The expected increase in the output of houses built directly by the state did not materialize for various reasons. It seemed that the possible productivity gains through industrialization had been overestimated, an experience also shared by most European countries. In addition to this structural limitation, the newly formed state brigades were not primarily used for housing construction, but for non-residential projects which were granted a higher political priority. Apart from that construction work is hard and not particular attractive, with the consequence of temporary labour shortages and a high fluctuation rate in the trade.

At the same time as the state sector housing output (which includes the Microbrigadas) dropped the housing demand increased because the children born in the 1960s baby boom reached marrying age in the 1980s. The increasing housing deficit built up considerable popular pressure in response to which the politicians attributed a much higher priority to housing issues than in the past. The housing law of 1984, which was mentioned earlier, marked the first official recognition that it was unrealistic to expect that all the dwellings needed within the next years could be provided by the state building sector alone. Now self-help practices obtained explicit recognition and support, along with other novelties like the privatization of almost all the houses previously rented from the state[12]It should also be noted that privatization in this context does not imply less security of tenure for less affluent people which tends to be the case in capitalist countries. In the Cuban case the ownership can only be transferred to the previous occupants (if there are any), past rent payment are discounted from the purchase price, and long term loans are available at very low interest rates and without any reservations., and - following from that - the right of the occupants to sell their dwelling freely on the market if they wanted to move.

This policy change - surprising to many - was one of the first manifestations of a political reorientation in Cuba in the mid- 1980s which has become known under the term "rectification de los errores" (to correct past mistakes). The reform can partly be characterized as a political de-dogmatization in those areas where a gap between state ideology and lived experience had become evident, and by the toleration of certain market mechanisms in order to regulate the distribution of non-essential products and to absorb purchase power which was not met by a sufficiently large supply in goods on offer, provided that the practice of this opportunity will not jeopardize the intended basic political and social development. (One early example would be the private farmers' markets where producers could sell privately grown fruit and vegetables at unregulated prices. Once the unscrupulous speculation by middlemen had become a common practice, the scheme was modified, and the state took over the role of the wholesaler on a non-profit basis, but still operating a parallel economy!). But "rectificación" also meant attacking vanishing idealism, condemning ascending corruption among officials, and fostering new and more enthusiasm, imagination and voluntary work which had helped to keep the revolution going in its first decade.

In the "rectification" process many political decisions of the 1970s were revised - and the previous phasing out of the Microbrigadas was one of the affected measures. Fidel Castro himself proposed revitalizing the Microbrigadas in another speech in June 1986. He said that it would be absurd to let the Microbrigada movement die considering its past merits, and he added that the Microbrigadas would be particularly useful for those factories or other productive units which suffered temporary work stoppages for one reason or another. He also stressed the idea, that the "Micros" should not just build housing for their own work centres' benefit, but also for the general need (Granma of 9 June 1986). Less than 4 months after Castro's speech, some 75 new Microbrigadas with altogether 2,400 workers had been formed in Havana, and most of them had started to work on site by the end of the year. Another four months later, the number of brigades had even risen to 285, consisting of 6,926 workers, including 781 women. At the end of the year 1987, more than 500 dwellings had been completed, and some 13,000 more were under construction.

By November 1988, the number of Microbrigadistas had risen to almost 38,000 (in 10,000 brigades), exceeding their number at any time before in the 1970s. 3,000 dwellings had already been finished within less than two years, and another 25,000 were under construction. The target for the coming years is even more ambitious: 15,000 to be terminated in 1989, 20,000 for the year 1990 and thereafter. These figures would even be more impressive if non-residential constructions and houses built by the more recent "social Microbrigadas", which will be described below, were included.

Although the old Microbrigada concept of the 1970s was taken up, it was not copied point by point. In Havana, which once again was the principal arena of the program, the explicit goal was to start 'a radical transformation of the capital', a statement hinting at the new urban and architectural emphasis to be followed. Similarly as in Europe, the euphoria for large housing development in the urban periphery had declined. The need for urban repair and conservation, particularly of historic neighbourhoods, had been recognized, and resulted in various reconstruction and infill projects. It is obvious that industrialized building systems, the domain of the Ministry of Construction in Cuba, are neither a sensible nor economical solution for these tasks. The Microbrigadas, on the other hand, have an obvious advantage in doing such a labour-intensive job with their typically artisan approach. Of course, urban renewal is only one of several areas where Microbrigadas are active today: in the less densely populated peripheral areas of the city they continue to build standard designed blocks of flats, or they finish off high

rise buildings of which the basic structure has previously been erected by the ministry's own construction teams.

Since the Microbrigada projects require a close coordination with the local administration, and imply a social responsibility towards the already resident population in the neighbourhood, a new organizational setup was chosen: now the Microbrigadas are not integrated any more into the hierarchy of the Ministry of Construction, but have their own and independent institutional setup, subdivided in divisions according to the geographic structure of local government units, the "Poder Popular". The decentralized form of organization also permits a more flexible architectural approach[13], the use of local materials and the recycling of salvaged building components, a closer cooperation with the neighbourhood, and - last but not least - a more intensive backing for the individual Microbrigadas through joint technical assistance, supervision, education and catering services.

The biggest difference of today's microbrigadas compared to the previous practice, is their explicit social responsibility: only 60% (50% before 1989) of all the dwellings they produce go to the brigadistas and their colleagues in the unit's work place, the remainder is offered to the "Poder Popular" (local government) for distribution among those members of the community who need a house but are not connected with any Microbrigada (their working place may have too few employees, or the applicants may be unemployed, old, or disabled people). In addition to housing, the Microbrigadas simultaneously provide urgently needed buildings for community facilities. For example, until the end of 1988 they had completed 64 "circulos infantiles" (child care centres), 12 schools for the handicapped, 4 polyclinics, 600 buildings for neighbourhood doctor's homes and offices, 4 hospital extensions, 3 schools, and a bakery. To handle even bigger projects, like the Zoo, the Botanical Garden, the Aquarium, the 18 pavilions to house the EXPOCUBA (a scientific-technical exhibition which was opened in January 1989 for the celebration of the 30th anniversary of the revolution, after less than 20 months of construction time), or all new buildings to accommodate the 1991 Pan-American Games, several Microbrigadas are grouped together into "contingentes", where they cooperate with regular state building enterprises. These figures demonstrate the preponderance of the Microbrigadas particularly in that type of construction which is most visible in the public mind (and excluding, for example, industries or traffic construction), and that it will most likely remain one of the main elements of Cuban housing and construction policy for many years to come[14].

ORGANIZATIONAL PRINCIPLES

Each Microbrigada consists of not less than 33 workers, a "historic" number which has been established at the offset of the movement, and has never been changed since. Out of these 33 Microbrigadistas, which have been selected by vote among a larger number of volunteers in a union meeting, normally 14 will exclusively work in "social" infrastructure projects as explained above, unless the complete brigade prefers to stay together and build first the houses, and the community facilities thereafter. In the evenings and at weekends because relatives and colleagues often join and help. The weekly work time in a Microbrigada is 60 hours, compared to the 44 in a regular job. This extra labour, in combination with better work morale (i.e., less absenteeism) is reported to result in a productivity level higher than that of a regular building brigade in the Ministry of Construction[15]. In addition, the productivity of the Microbrigadas is improved further by the technical assistance offered by the brigadistas' original work centers: for example, any trucks or machinery not in use by the employer over the weekends may be borrowed by the "micros" for free, or certain products and services provided by the

centers are not billed to the full amount. Also the Microbrigadas themselves economize by reconditioning broken machines or trucks already abandoned by other firms.

Due to the fast growth of the Microbrigada movement in 1987, coupled with the still increasing number of building permits for individual self-help housing in the smaller towns, the demand for building materials exceeds the available supply and represents the greatest obstacle to an expansion of the Microbrigada movement at present. Therefore 38 new building materials factories are now being set up, out of which 10 will be exclusively operated by Microbrigadas[16].

An interesting aspect is the participation of women within the Microbrigada movement. Their share was 12% initially in 1987, which had increased to 22% in 1988; and there were even two Microbrigadas consisting almost completely of female workers[17]. This may be a low figure when compared with other professions in Cuba, in spite of non-sexist legislation and 25 years of education for an egalitarian society, but compared by international standards in this trade, the figure is the highest in the world, followed by Czechoslovakia (19%), Hungary (18%), Haiti (16%), Japan (13%), Trinidad and Tobago (12%), Australia (11%), and India (10%) (ILO, 1984). At various visits to Microbrigadas I had the impression that the women there primarily had the role of helping hands, and the canteen was always under their control. It has also been reported that they specialize in interior finishing jobs (tiles, painting) and operating the lift: occupations that require care but not much physical strength[18].

FINANCE AND STANDARDS

The building site and all building materials are provided to the Microbrigada by the state, and the salaries of the workers are either paid by the worker’s work centre (or refunded by the state since 1986) or paid directly by the state through the Microbrigada where the workers do not belong to a work centre. In the 1970s the houses then belonged to the state that let it to the tenants. The self-help labour input by the Microbrigada was rewarded by a rent reduction from normally 10% of the family income to only 6%. According to the privatization policy contained in the housing law of 1984 the houses are sold to the occupants with a credit repayable over 20 years at 2-3% interest[19]. The purchase price is subsidized and not related to the actual cost of building a dwelling (said to be some 25% higher), but is calculated according to a standard formula taking into account the property's amenities, it's size and location. Any flats built by a Microbrigada are subject to a 10% discount compared to regular state brigade built houses. This means that the price is not related any more to the income of the user, but different incomes are reflected by the variations in the repayment period of the credit, and representing a monthly cost of up to 25% of income. However, the cost of housing does not affect access to housing in Cuba: a survey of 180 households done by the author in 1988 revealed that in no case the selection of the dwelling in which the interviewed persons lived had been influenced by its cost.

Initially, the space standards for houses to be built by the Microbrigadas were the same as for all other houses, amounting to 12 - 16 m^2 per person. However, for self-build houses this figure is slightly higher, a regulation which now is also applied to the case of the Microbrigadas - provided that the standard design of the house permits to do so. Where the design is "non-typical" (=non-standard), like in an infill or renovation project in an older neighbourhood, up to 20 m^2 may be allowed per person anyway; an additional reason explaining most applicant's preference for this type of dwelling. Although it rather seems the exception than the rule, I spoke to different Microbrigadas where the par-

ticipants have convinced the architect to modify aspects of the initial design, usually resulting in more privacy or greater balconies.

"PURE" MICROBRIGADAS

Following the enthusiastic response by the population to the revival of Microbrigada movement in 1987, additional arrangements departing from the initial setup have been introduced. One of these options has become known under the name "MICROBRIGADA PURA", which may not be very important in quantitative terms, but is interesting because it puts an even stronger emphasis on the philosophy of voluntary work - always considered a crucial element in socialist development. The "pure" Microbrigadas only operate during free time (evenings and weekends), and its members continue to work during the day in their regular jobs, for which they are paid. Such an arrangement is typical for certain very specialized professions, which cannot be released from their regular duties because their occupation is considered of key importance for the advancement of the society, or other cases where it is not feasible to substitute the workers. Examples are physicians, or the employees of the Academy of Science, who operate a "Pure Microbrigada" in Old Havana.

In other words: whereas in the conventional Microbrigadas the voluntary effort is shared among all workers of a productive unit (because the productivity level must be maintained with less people working), the "extra labour" accrues to the individual worker alone in the "Microbrigada Pura", and results in a working day exceeding the 10 hours of a regular Microbrigada. In respect to the types of houses built, and the amount of the "social" share of the output there is no difference compared to conventional Microbrigadas, but when it comes to the distribution of houses, the "pure" have the guarantee to get allocated a flat after termination of the house(s)[20].

THE SOCIAL MICROBRIGADAS

A significant widening of the Microbrigada concept can be found in the case of the "SOCIAL MICROBRIGADAS", which were introduced in different parts of the capital, including "Centro Habana" and "Marianao" at the end of 1987[21]. In this case, the workers do not belong any more to the same productive unit, but their unifying characteristic is that they all live in the same neighbourhood - the one in which the Microbrigada is operating. As another novelty, the main task for this type of a Microbrigada is the repair or renovation of the existing housing stock and urban infrastructure, whereas new constructions remain an exception[22].
Previously, the maintenance of the housing stock was the responsibility of municipal repair enterprises ("empresas"), which were directed by the Poder Popular. However, the poor performance of these units was notorious for a number of reasons[23], and demanded for more efficient solutions. In "Centro Habana", where one of the first "Social Microbrigada" was started on an experimental basis, the formal repair enterprise was dissolved, and its previous workers were incorporated into the new brigade. In addition, unemployed people from within the neighbourhood were offered a paying job: youth and young adults, housewives, and the elderly. The unemployed youngsters (about an equal share male and female) have the possibility to learn a building trade as a part of the job (two or three hours training per day) while they are receiving a regular income as untrained workers, the same as the housewives: 148 Pesos per month. Old-age pensioners, who have worked in the building trades before, function as teachers to the young, and receive their pre-retirement salaries (typically between 203 and 233

Pesos) in addition to their pension. Apart from the paid members, the Social Microbrigadas also incorporate voluntary workers, who are either neighbours joining the unit in their free time, or individuals given paid leave by their regular work center[24].

Also in the case of the "Microbrigadas Sociales" the idea of voluntary labour, is - at least nominally - maintained: the regularly paid workers receive a salary for 55 of the 60 hours work per week, the remaining 5 hours are considered their "social" contribution. Unlike the regular Microbrigadas, their 'social' counterparts are not obliged to build an extra 50% to be allocated to the "general need" since they represent the "general need" themselves, and because the bulk of the work is renovation of the existing stock, which is already occupied. The underlying assumption is that eventually the entire neighbourhood will be renovated house by house, and the members of the Social Microbrigada will benefit from the works as much as the rest of the neighbours. Because of the specific local conditions, the size of the brigade is not fixed, but varies considerably. This and similar decisions are left to be decided by the neighbourhood of a "circumscription" (election district or ward) - and their elected representative simultaneously acts as the organizer of the Social Microbrigada.

Thus the Social Microbrigada has several functions at a time: apart from addressing the housing problem and maintaining the urban fabric, they also provide an answer to the social problems arising from an apparent lack of attractive employment opportunities for youth, including returning servicemen who have been in Angola. A guaranteed own income[25], improved housing opportunities, and the social control of the neighbourhood are an incentive to accept the inconveniences of hard physical work and regular working hours. As a supplementary benefit it has also been pointed out that the residents may take greater care of the houses they live in, and that they will be better equipped to carry out future maintenance jobs by themselves, once they have participated in renovating or rebuilding a house.

SIGNIFICANCE OF THE CONCEPT

Both the initial introduction and the revival of the Microbrigada concept testify a flexible and imaginative approach to face the acute housing problem in a specific social and economic situation. In both instances there was a sector labour shortage affecting the construction industry, with simultaneous overstaffing in other economic sectors (or even open unemployment in the contemporary case of the social Microbrigadas). Some people have argued that the Microbrigadas represent an unscientific approach to solving the housing problem[26], and that the same manpower could work with a better preparation and less losses if they had been trained for the job and worked in a less spontaneous manner. However this view does not acknowledge the important political, and ideological, impact of the Microbrigadas: First, by stressing the "emergency situation" much more enthusiasm and cooperation can be mobilized from the workers, and the social control by fellow workers and neighbours will be more effective and less harassing than other forms of performance control. Last not least, the recent social Microbrigadas can - for a few years - absorb (and keep off the streets) a substantial number of those young unemployed which represent the peak of the 1960s baby boom and for which as a temporary problem it would not be opportune to invest enormous sums in new universities and other capital intensive workplaces.

Economically speaking, the more artisan form of production typical for Microbrigadas effectively allows providing a large number of workplaces and to increase the production in the construction sector immediately, because there is very little fixed capital (installed machinery) required. It is debatable,

whether home work units of the conventional Microbrigadas can really maintain their previous level of production while some of the staff is released to work in a Microbrigada, but - as Fidel Castro pointed out - the solution can increase the GNP in periods where there is not enough work for the employed labour force in a work centre. Again politically speaking the "Microbrigada solution" is also a much more popular alternative to laying off staff in periods of structural or conjuncture work stoppages - which would be the unavoidable answer in a capitalist economy.

However as a long term solution it might be difficult, if not impossible, to maintain the high level of enthusiasm and voluntary labour which make up the present success to the movement. At least two future developments are perceptible: One possibility could be that the current steam vanishes and the Microbrigadas will be abolished again once they become an economic burden rather than a premium. Another vision would be that the introduction of wide spread participation of the population in the provision of housing cannot be reversed easily, but expands further (i.e. by incorporating the users much more in the decision making process concerning matters of design and standards) and enlarges the platform of grass roots democracy in Cuba.

Assuming that the Microbrigadas were a good idea for Cuba the question arises whether the concept would also be conceivable in other countries displaying similar problems. After all, in most Third World states the housing crisis is much worse than in Cuba; and innovative ideas are needed to find a solution. However, if the concept is transferable at all, certain fundamental differences come to mind, which would have to be taken into account, and which I will only mention briefly in this context.

Among critical Marxists self-help housing policies for a long time have been accused for incorporating an element of double exploitation, mainly by extending the working day necessary for the labourer's reproduction and demanding unpaid "surplus labour" during "free time". Also the Microbrigada movement involves extra working time (or effort), which is particularly evident in the case of the "pure" Microbrigadas. For this effort - shared between the brigadistas and their colleagues staying behind in the work place - the term "plus trabajo" (extra work) has been introduced in Cuba. Roberto Segre explains:

"In Cuba, a direct relationship between the production centre and the worker's need for housing is created. The solution lays in" ... "the special effort made in the work place and the availability of manpower that this frees up for construction. In the production centre it is called plus-work, and it reflects the workers understanding of the problems inherent in the economic development of a country and the importance of their direct participation in the solution of these problems. This has absolutely nothing to do with the exploitation of workers typical of an underdeveloped capitalist country. There, the worker, after selling eight hours of his labour power, must still take on the construction of his own home. This is a hidden form of appropriation by capitalist entrepreneurs, in that the building loans and materials purchases necessary to carry out the dwelling work are themselves sources of substantial profits." (Segre 1984:354)

Towards the end of the first phase of Microbrigada appearance the "plus trabajo" element had been erased to a certain extent, and Fidel Castro stressed its importance when he advocated for the revival of the movement[27]. In any case, the amount of voluntary labour invested by the Microbrigadistas and their work colleagues is most remarkable, particularly when one considers that a large proportion of this time is not invested in order to improve the Microbrigadista's personal living conditions. Instead the benefit goes to the colleagues belonging to the same work place, and the community in general. In

fact, there are many Microbrigadistas who do not request to be rehoused. For me, personally, it is difficult to imagine a comparable idealism[28] in a capitalist society. The difference may be that in Cuba this extra work which the Microbrigadistas invest, is not transformed into "surplus value" to be appropriated by a capitalist class, instead the output takes the form of a physical product which can be seen by everybody, and of which the benefit accrues fully to the local community. Hence the concentration on "visible" products, as mentioned above. But also in other "socialist" Third World states it would be difficult to find a comparably high level of social conscience among such a large proportion of the population (at least in the few countries which I have visited). However, few other countries in the Third Word have had more than a generation to build a new society, - the time span is an important factor when it comes to foster the confidence into the solidarity of the collective.

One crucial aspect of the original Microbrigada program is the linkage between work place and the place of residence. In capitalist countries this linkage in the form of "tied accommodation" has been exploited by the employers as a tool to discipline the labour force. In Cuba, however, such a risk does not exist since both the job and the flat are practically guaranteed[29]. Thus the positive and comfortable implications of the linkage can be taken advantage of, primarily by reduction of the journey to work (in Havana commuting times of up to an hour and more each way are common, but the Microbrigada sites are usually located in the vicinity of the original work place today).

The biggest obstacle to implementing the Microbrigada concept in a country with a different social order would be the pressure of competition in capitalist and mixed economies, which forces even the most benevolent employer to exploit his contracted labour force to the extreme. Releasing part of the salaried staff to produce a good that cannot be sold, but will be consumed by the workers directly, would probably ruin the enterprise. Even when one assumes that there are enterprises for which the model is economically sustainable the workers themselves would probably prefer cash rather than houses to improve their situation, given the average Third World context with deficits in almost all basic needs for the poor, so that they can individually spend it according to their own needs and priorities.

The few situations where the Microbrigada concept might be imported successfully include cases of companies with seasonally changing labour requirements, which could build up a more steady employment pattern[30]. Attractive (and economically affordable) even for more affluent societies in the north remains the idea to temporarily swap one's habitual work place with one in a different occupation (like construction or farming), without having to worry about a loss of income, or giving up the option to return to one's previous job when wanted.

For the model of the Social Microbrigadas, which are not linked to a common work centre from where their members receive an income, the adaptation within a different social context could be more realistic. Particularly in the upgrading of slums[31], which is a prime task in most Third World cities, the Cuban experience could teach an important lesson. However, a precondition would be that the authorities accept the responsibility to pay an adequate salary to those participants of such a program who do have any other income, and to depart from the illusion that "full cost recovery" - a dogma particularly put forward by the World Bank - can be reached in all programs. Another more fundamental problem of transplanting the concept would be that in most other places in the Third World, a sector housing project may only achieve a short term improvement, unless other basic needs (food, health, education)- already guaranteed in the Cuban society - are simultaneously provided through an integrated program.

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NOTES

1. This is particularly true for the period 1965-1970, when urban housing construction was more or less limited to slum clearance.

2. Before the revolution, 50-60% of all rural-urban migration had accrued to Havana, whereas between 1960 and 1981 this figure was only 12%. The statistical result of nearly 0% relative growth can be explained by outmigration in the 1960's and the exodus of more than 100,000 Cubans in 1980.

3.Direct control over the output is - by definition - possible in the state sector. However since all building materials are produced by the state, and because the demand for materials exceeds supply, there is an indirect influence on the output the private and cooperative sector too. Another way to control the private building activity happens through the rate in which building sites are released.

4.44% in 1988 (according to a presentation by Salvador Gomila, vice president of the Instituto Nacional de la Vivienda at a conference in Kassel, West Germany, in APril 1988.

5. Several authors have expressed doubts about the self-help character of the microbrigada system. Castex (1986:56), for example, denies the self-help character on the grounds that the Microbrigadistas are technically and socially separated from the means of construction, and only work as laborers on job in which almost all inputs are controlled by the state. However, I can not follow this argument for two reasons:

Firstly, the ownership of the means of production merely indicates the mode of production (feudalism, capitalism, socialism...etc.), but not the form of production (subsistence, artisanal, manufactured or industrialized forms). It is obvious, that the subsistence form of production is almost a synonym for self-help. However, organized as a collective, the other forms are conceivable as well.

Secondly, even acknowledging that the 'microbrigada form of production' is not entirely and directly managed by the beneficiaries, in which respect it does not differ from conventional self-help schemes in capitalist countries, there can be no doubt that the brigadistas, as a group, are both producers and consumers, of the houses they build. This is an important aspect of 'self-help'. Different from most projects in capitalist countries, no other social group or class is extracting surplus value from them. In other words, the context in Cuba is different from other Latin American states, and we should avoid an eurocentristic or north american position by judging self-help only by the effects it has in the capitalist countries. A different view is presented by the Cuban Architect Roberto Segre (84:354 ff) in relation to the microbrigadas: In Latin America, it is the unusual self-help initiative that has a collective or communitarian character." and: "The availability of resources in the traditional self-help model depends entirely on individual income or on cooperative loans made to small communities. Self-help posits an economic system tied more to private initiative than to state aid, and one which severely distorts the distribution of national resources...." but: "The socialist spirit of the revolution, the disappearance of the private ownership of the means of production, and the search for community define the ideological underpinnings of the new habitat. Its essential components express the collective character of the built environment."

6. 26th of July 1970. In the following month, the workers of the cement factory "José Merceron", in Santiago de Cuba, organized the first Microbrigada. Later, in another speech to the National Conference of Basic Industries, in December 1970, Castro expanded further on the envisaged working modalities he proposed for the Microbrigadas.

7. In the countryside, Microbrigadas have been mentioned which were formed among friends or neighbors, and not by workers employed in the same productive unit (Ortega 86:32).

8. In 1971 already 444 Microbrigadas had been formed by 12,715 workers. In 1972 the number had risen to 1,073 brigades and 28,178 workers; and 1975 there were 1,150 microbrigadas and more than 30,000 workers. In that year the demand for building materials by the microbrigadistas exceeded the available supply. (Ortega 86:22 and 36; Segre 84:356)

9. In Alamar the people were also involved to a certain extent in the 'urban' administration, and not only in executing the works. The population had already reached 30,000 (= 7,700 flats) in 1978, and social infra-

structure provision started to get better. Local factory jobs were created particularly for female workers. (Ortega 86:23)

10. The preferred building methods were standard solutions using bricks and blocks (type E-14), or the semi-industrialized system SP-72. Other systems were used to a lesser extent and included the "Gran Panel IV" or the "IMS" (Ortega 86:22, 36 and 37).

11. Some people believe that the most important reason for the introduction of the microbrigadas was the absorption of overcapacities in the labor force within many factories. Also today this potential is put forward again in favor of the microbrigadas: "hay fábricas y otros centros de trabajo donde por diferentes razones hay interruptos y que si esos interruptos integraron microbrigadas se podrían construir miles de apartamentos y el resto se les entrege a esos sectores necesitados" (report on Fidel Castro's talk in "Granma" of June 9th, 1986)

12. The privatization only affected about one fifth of the housing stock, since the remainder already was in private ownership of their occupants. Therefore privatization of housing in the Cuban context must be interpreted as a step towards greater equality. (Comment by D.Hamberg)

13. Many microbrigada zones now have their own design offices, like in Old Havana. To cope with the boom they also use designs prepared by architecture students, or by other architects working or living in the neighborhood.

14. Nevertheless it seems that the microbrigadas have always been considered a temporary feature in Cuban housing policies. Segre (84:355, reprint of an assay of 1978) says: "In Cuba, social mobilization toward construction of this sort is considered an intermediate stage that will tend to disappear with the advances in industrialization and the utilization of prefabricated systems." Or, in relation to self-help in general, Ortega (86:47) takes the same position: "... pero a la vez el desarrollo lógico de la base material del socialismo permitirá incrementar progressivamente los volúmenes de viviendas construidas industrialmente por el Estado lo que redundará en un proceso natural de reducción de viviendas ejecutados mediante el esfuerzo propio." However, both authors seem to be much preoccupied with rising productivity through industrialization, an approach of which the limitations have already been experienced in Cuba and abroad. On the other hand there is no reason why the Cuban state should not be able to increase housing production with conventional technologies, if it decides to do so.

15. Information by Máximo Andion, but I never saw any figures. There is a problem in calculating productivity levels: In capitalist countries a purely financial relation is common, comparing input of funds and output. In such a calculation, labor intensive processes, like microbrigada construction, tend to show low productivity. In socialist economies there is a problem of entering the labor cost into the calculation, since a considerable part of it is paid in the form of the social wage. In the microbrigadas, voluntary labor is not paid at all, so this way of calculating productivity is not possible. (Thanks to Yves Cabannes for reminding me of this problem).

16. The other new building materials factories will be supplemented by microbrigadistas in addition to the permanent labor force.

17. One microbrigada with 25 women and 8 men was formed in Guanabacoa in 1986, and a more recent brigade with a similar proportion is operating in Puerto Carera. However, these two microbrigadas should not be mistaken as a feminist experiment: they rather reflect the largely female composition of the labor force in the factory from where these microbrigadas originate (dress making in one of the two cases).

18. This observation is less true for the new 'Social Microbrigadas' described below, where several women had achieved leading roles.
Jill Hamberg adds: 'In addition, there are many women architects. According to 1981 census, of some 6,000 people with university degrees in "construction" (including civil engineering), 1,700 were women. In architecture, and housing design in particular, my guess is that it approaches 40%-50%.'

19. Housing loans are considered "personal loans", not mortgages. For instance, when you exchange houses you normally take your "old" debt with you - it is not tied to ownership of the house itself. On the

payments to the bank for the privatized existing stock there was no interest, but the bank does take a small handling fee. In the case of "new" housing, the interest is 3%, or 2% for houses built by microbrigadas. (Comment by Gill Hamberg)

20. This does not mean that all the houses built will be distributed among the microbrigadistas: there is always a 50% share of the houses going to the state, and distributed by Poder Popular.

21. In fact, there were two isolated experiences very similar to the MICROBRIGADA SOCIAL concept, which were started by the initiative of the local Poder Popular in La Guinera/Arroyo Naranja (now transformed into a 'Social Microbrigada'), and in Las Güásimas (1983-87) a municipality in the province of "La Habana". It is believed that these very successful experiences were taken up as a model for the Social Microbrigadas in 1987.

22. In the case of informal settlements, or 'barrios insalubres', where the dwellings are not only build illegally, but are also of very poor quality, new multifamily houses are replacing the old shacks in situ. Examples are the barrio "La Guinera" in La Habana, or the settlement "Van Van" in Santiago de Cuba. Also in Old Habana new Social Microbrigadas are producing new houses in an initial phase, because this job is thought to be more suitable for training purposes.

23. There used to be a high fluctuation of the staff in those 'empresas', which, again, resulted in a high percentage of inexperienced and unmotivated workers. The more experienced workers were tempted to move on to the Ministry of Construction (MICONS) where they could more easily benefit from a bonus scheme for high productivity - an opportunity not available in the labor intensive repair and renovation jobs. Since very few of these workers lived close to the neighborhood, there was even less reason for those workers to stay with the 'empresa'.(Information by Andrés Fernándes, Vice Director Tecnico of the Dirección Tecnico, Dirección Provincial de la Vivienda - Centro Habana).

24. In the case of 'la Guinera', the most famous 'microbrigada social', there are 147 women -including 'housewives' and adolescent women - and 130 men permanently employed. In Centro Havana, out of 968 microbrigadistas there are 168 adult women, and 665 are juveniles (both sexes), of which 85 are receiving a professional training. The trainers are 15 old age pensioners. This permanent staff is topped up by another 1000 volunteers, resulting in an overall labor force ten times as strong as the 'empresa' before the introduction of the Social Microbrigada.

25. In Cuba, this aspect is less important than in market economies because of the subsidized price system for basic food and free social services, which does not make it necessary necessity for all family members of working age to earn an income.

26.Roberto Segre in a personal conversation in March 1988

27. "En este sentido dijo que de forma absurda ha ido muriendo el movimiento de la microbrigada, e incluso, ha habido gente que la ignoran y la combatan, deformando el principio del plustrabajo con el que fueron concebidas". (Granma June 9th, 1986)

28. Some observers would disagree with this interpretation, and take the enormous housing shortage and the material benefits for an explanation for the extra labor invested: Castex (86:57), for example, interprets the (first) microbrigada movement as a material stimulation for the workers to put in voluntary labor. In return, they enjoy a double privilege: first they gain an easier access to new housing, and secondly, they pay 40% less for rents than they would do in comparable state build housing. I am inclined to agree with the first argument explaining some of the microbrigadista's enthusiasm, and would be interested to learn about the percentage of brigadistas who were eventually accommodated in the houses they had helped to build; but I doubt that the saving in rent - representing only 4% of the family income - would act as an significantly important incentive for the workers to put in voluntary work for one year or more.

29. However, separate from the microbrigadas, there exist forms of tied housing ("vivienda vinculada") in Cuba microbrigadas, which is usually is usually built by the Ministry of Construction brigades or brigades from the Ministries of Agriculture, Sugar or Basic Industry. In this case the workers pay 50% the normal payments as renters, and have the right to buy the house after 10 years of occupancy. An other kind is

housing permanently owned by the work place as part of its capital assets, like in the case of the doctor's surgeries. This housing is "rented" for little or nothing, but is lost if the person changes jobs. (information by Gill Hamberg)

30. A precondition would be, of course, a legislation guaranteeing greater job security, and discouraging a 'hire-and-fire' policy.

31. Although Cuba is often referred to as a country without slums, there are some isolated clusters of unauthorized and substandard, self-build houses in La Habana and Santiago de Cuba. However, these 'barrios insalubres' (there are 62 in the capital - or 2.5% of the city population[+]), which are mostly inhabited by rural migrants, do not offer the same desperate picture as squatter settlements do in other Latin American countries, because all the social services and education, are available, and there is no hunger or poverty. With reference to these neighborhoods Fidel Castro said: "En el barrio insalubre 'El Romerillo' se van a organizar 14 microbrigadas sociales que se desarrolla sobre la base del principio de vinculación de las masas a los proyectos constructivos. Es la solución para terminar con los barrios insalubres".

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