

**THE IMPACT OF REGULATIONS ON
THE LIVELIHOODS OF PEOPLE LIVING IN POVERTY**

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Two illustrations

The two workers

When I was at school, we had a two-man maintenance team. The boss, a time-served carpenter, was a man of some bulk who wore a brown coat and strode out, authoritatively, from one job to another. He knew where he was going and what to do when he got there. A few steps behind him scurried his assistance, a thinner, smaller man altogether, carrying the tools. He gave the impression of being rather less well informed about their next destination or what would happen there. He just carried the tools and helped where he could.

Cities and their planning authorities are a little like this pair. The city strides out, growing ever larger, defying anyone to have authority over it. The infrastructure providers, planning and building controllers, and others whose task is to develop the city, scurry on behind, trying to bring the tools required for the city's growth. They have little control and appear to be unaware as to where it is all leading in any particular area.

Parenting

Managing cities is a little like bringing up children. When children are young, you can say, "Don't do that," and they tend to stop. This is probably, at least partly, influenced by the sanctions of punishment available to the parent if the activity does not stop forthwith. But when the children grow up more, a parent must allow freedom within some boundaries that are accepted by the children (e.g., no drugs). Over the details, the parent must be more negotiative, persuasive, indicative. S/he says, "If I were you, I wouldn't do that," or, "You might be better doing this." The parent can't expect blind obedience, s/he must try to influence, instead. The threat of punishment is not effective when the children are grown up. They can stand up to the parent, or leave. Any parent who makes a stand on some issue that appears to be unimportant to grown children may be indulged or allowed a Pyrrhic victory. But, in general, blustering attempts to establish power, or tantrums to gain control, will not work.

With cities, it might have been reasonable in the middle of the twentieth century to expect obedience to laws and regulations. Local authorities could at least appear to be in control of relatively small, slowly growing cities. At the beginning of the twenty-first century, however, cities are much too large for their beleaguered local authorities to be in control. Citizens are street wise, they know that planning authorities don't demolish illegal buildings. They know that they are capable of controlling their own environment with only occasional harassment from the authorities. There may be successful sorties with the bulldozer, police squad, or legal team to regain some localised control but, generally, the city is out of control over all but the most strategic of decisions. But, just as parents may hold on to boundaries beyond which behaviour is unacceptable as an ultimate control, city authorities can choose to establish areas in which no development can be allowed, or any other such prohibition. The *quid pro quo*, as with parenting, is plenty of opportunities for development elsewhere and a supportive environment within which it can occur.

Both of these illustrations address the mind-set that a planning authority is actually in control of development in a city and suggest that it may be completely erroneous, even though it may be widely held. Thus, the detailed control implied by the tenor of planning and building regulations may be no more than a mirage. Instead, a more

negotiating and enabling approach, within proscriptions, is probably much more appropriate.

The enabling process and appropriate regulatory frameworks

The key concept of the Global Strategy for Shelter, and its successor the Habitat Agenda, is that of enabling; of governments' stepping back from housing production and measures to control the price of outputs and, instead, working to enable the current and potential suppliers of housing to do what they do best. A major part of the enabling process is to set in place a regulatory context in which urban development can be sustainable and of the scale required for all to be adequately housed. This inevitably means a reduction of standards so that they are realistic.

Two groups who are currently supplying housing are “transformers” and home-based enterprise (HBE) operators and the lessons learned from them are the subject for this paper. Transformers are households who take a dwelling that is designed as a finished item and extend and alter it to fit their needs better. They supply housing goods – rooms, services, improvements to both. HBE operators use housing in ways that differ from the intention of the plan. In doing so, they tend to alter and extend it, they also tend to require and afford more than those without HBEs; they are actors in the housing process.

In previous work (Tipple, 2000), we argue that, by transforming, households are becoming housing suppliers and governments should contemplate whether they could or should enable transformations. In our current research, we are studying HBEs whose presence adds to household incomes and their ability to pay for housing while not generating much in the way of negative externalities. In this paper, we argue that regulatory frameworks have much to learn from them and that standards should be liberalised to cope with and benefit from them.

Who are the people living in poverty

Poverty can be defined in many terms. Many countries have a threshold below which people are said to be poor. It may be expressed as a monetary amount or, as in Bangladesh, as daily calorific intake. People living in poverty can also be identified through service provision or, rather, the lack of services to provide education, health, good housing, water, sanitation, etc. Poverty can also be qualitatively measured through concepts such as exclusion, vulnerability, powerlessness, isolation, humiliation, or deprivation (Jones 1999). However, Jones (1999) also reminds us that it is important to remember that there are considerable differences among those in poverty, many of which are used by them among themselves. Those with shoes, or containers for water, or a small business, may be much better off than others without.

Moser (1998) makes the case that people living in poverty are constantly managing their often meagre portfolio of assets to make the best of them. Through this process they assess whether to use money or time, when and where to buy and sell, how much to ask a particular customer for a particular service, etc. Such decisions may be made at very frequent intervals and strategies may change from hour to hour.

Some of the characteristics that arise from this that are relevant to us are general lack of monetary resources; lack of monetary capital in particular; relatively short time horizons; and willingness to “make do and mend”. Each of these is likely to be more evident in the poorer echelons of people living in poverty. Thus, a household with a

regular low income earner and a small business is likely to have longer time horizons and more capital than one whose members survive on casual hourly-paid work.

The issue of livelihoods

It is no longer appropriate to regard the city wearing sectoral blinkers, enlarging one's own professional concerns while blanking out those of other sectors. In the past, land use planners could disregard the macro-economic effects of their development decisions. Housing specialists could consider only housing issues and leave industry, education, and health to the good offices of their specialised professionals. The fact that many people could only afford housing if they could supplement their incomes by renting out rooms, or using space for a business, was of only secondary importance and rules could be introduced to prevent or hinder the very activities that could make the housing viable. In the past, there may not have been much comment when health officials attempted to increase food intake while the high cost of housing prevented households in poverty from eating their full daily requirements. Under the current livelihoods approach, however, such anomalies are unacceptable. Land use planning, housing, and other sectoral concerns must be dealt with as an interconnected whole that affects the livelihoods and life chances of people in a complex web of opportunities and constraints within a sensitive approach to the environment. If we are to assist and enable people in poverty to move out of that state, we must be vigilant for unnecessarily restrictive and often contradictory regulations and be aware of the signals that the current activities of residents send us for future provision.

Recent research in CARDO, into how low income households initiate extensions to their dwellings, and how they use space for home-based enterprises, demonstrates the difference between the intention of the policy-makers and designers and the needs of the occupants. It also shows that, while changes made by occupants are in breach of current regulations, they do not constitute unbridled chaos but merely a shifting of the boundaries of acceptability in a people-ward direction. They demonstrate the need to take account of many facets of life that occur in housing, not just reproduction and nurturing. They reflect Tuts (1996) when he indicates that, in the selection of appropriate standards for projects, many different standpoints should be used, including starting from what exists and how it should be upgraded.

We can note DFID's current policy which includes integrating poor housing areas into the economic and social fabric of the cities by improving the capacity of the residents to identify their economic needs. It also works towards improving the capacity of municipal and state authorities to respond to the needs of poor citizens. Furthermore, DFID's support to the CARDO HBE research project and to micro-finance initiatives especially directed at women's savings and credit groups, show its commitment to viable small businesses.

Regulations

Planning regulations in developing countries have mainly been imported from colonial powers or other industrialised countries.

There are significant costs attached to fulfilling regulations and obtaining full planning permission for developments. These are in the form of extra costs imposed in order to achieve the standard. These are likely to be a quite considerable proportion of building costs as the informal alternative is often much cheaper - one-sixth the cost in Ghana, (see UNCHS/ILO 1995). There are also the administrative charges that must be met. Payne (circular letter to team members, 2001) found these to be Rs.1,000

per square metre in Navi Mumbai when the lowest income workers earn about Rs.100 per day. There are additional bribes of Rs.100-150 per square metre and it takes 75 days off work to visit all the offices required.

Zoning

Zoning was developed in the early days of planning control in order to move undesirable types of development away from housing.

Development is classed as building, mining, or other operations in, on, over or under land, or a material change of use. "Material" here is a planning term introduced in the UK by the 1947 Town and Country Planning Act? **check**. It is controlled by the Uses Classes Order which, as its name suggests, groups uses into classes. A good example of such an order is "The Town and Country Planning (Uses Classes) Order 1972" of England and Wales (SI No. 1385) (1972). A change from one use to another within any class is not regarded as development. However, a change from a use in one class to a use in another is and requires planning permission.

Separation of uses is argued for on grounds that noise, traffic, pollution, and other nuisances (negative externalities) would reduce the amenity of an area. This is especially evident in the special industrial groups (Classes V to IX) listed in Appendix 1. Class V (Special Industrial Group A) includes working with alkali materials. Classes VI and VII (Special Industrial Groups B and C) deal with mineral-based processes such as smelting, galvanizing, chromium plating, burning of bricks, producing cement, and processing lime. Class VIII (Special Industrial Group D) encompasses processes involving oils, cellulose, bitumen, enamel, rubber, and many other organic materials. The real star is, however, Class IX (Special Industrial Group E) of noxious industries including "blood albumen maker", "breeder of maggots from putrescible animal matter", "chitterling or nettlings boiler", "fat melter or fat extractor", and "manufacture of manure from bones, fish, offal, blood, spent hops, beans or other putrescible animal and vegetable matter". It could easily be argued that none of these special industries should be allowed in residential areas, but it might also be evident that some do occur without great objection from residents, especially when they are small scale.

There is a potential let-out for HBEs in the Use Classes Order for England and Wales. As averred above, where a use that may be classified in a different class in the order is incidental to the main use, it is not precluded from occurring. Thus, if a fishmonger occasionally sells fish to cat owners it does not become a cats meat shop (a use excluded from the ordinary shop, Class I) or, if a clergyman holds occasional worship meetings in his house it does not become a place of worship (Class XIII). Thus, if HBEs can be regarded as ordinarily incidental to a residential use, they could be more easily allowed under a use classes order.

The discretionary basis of the imported planning regulations in their source countries may not have been transferred at the same time. Discretion over incidental uses, ancillary to the main use, can allow home-based enterprises, for example, if the planning authority wishes (Pearce 1987; Booth 1999). There are many countries, however, where the culture of administration does not reward discretionary action or individual judgement. In them, planning and building regulations are usually wielded with little or no discretion.

If all manufacturing processes, except those involving particularly noxious processes, are classed together (as they are in the UK under two catch all classes; Class III, light industries, and Class IV, general industries), many seemingly benign activities can be classed with more contentious ones. Thus, manufacturing badminton shuttlecocks (cutting and gluing feathers on to pre-cast bases with PVA adhesive) may be regarded as the same as steel fabrication even though the latter involves

power demand, noise, traffic, and danger, and the former does not. It seems fair to proscribe most or all of the uses listed in the UK Special Industrial Groups (Appendix 1)

There are several more or less hidden agendas in zoning. The most important is the maintenance of property values. Indeed, before planning control, some controls were imposed through clauses in property deeds. Thus, many old properties have a clause forbidding the sale of alcohol, keeping of pigs, or being turned into multiple dwellings or commercial premises. A lesser agenda must be that of simplifying the task of planning control. If delineated areas are classed in a blanket manner, it takes only a few moments to look at the map and see whether planning permission can be considered. As both applicant and planner have access to zoning maps, many applications can be nipped in the bud. Others can be dealt with quickly simply by invoking the use classes order.

This context finds HBEs anathema. Oddly enough, however (and this displays the hidden agenda of values), uses like doctor's surgery and the ability of a professional to use a room for an office have never been contentious. On the other hand, manufacturing something as benign as envelopes would be regarded as non-conforming.

Regulations generally favour long term benefits at the expense of short term activity. This is the reverse of the lifestyle necessary to survive in real poverty. At the extreme of short term living, street children in Latin America are found to have little concern about catching AIDS through prostitution. Why should they worry about something that may not kill them for a few years when priority the issue is tonight's meal (UNCHS 2000).

From the point of view of developing country planners, zoning is another western concept which has been adopted through colonial laws. However, it has been continued because it is supported by the local elites (remember, Ghana, for example, has been independent for 44 years). Indeed, many moves to reduce reliance on pre-war planning laws are resisted even though western countries have made great changes. In a major city such as Ibadan, Nigeria, for example, development control regulations are based on the 1932 Town and Country Planning Act of the UK.¹ There, an Environmental Task Force is currently enforcing regulations through the exceedingly blunt instrument of the demolition of illegal structures (Arimah and Adeagbo 2000). The powers to control development before it happens are clearly inappropriate and/or inadequately exercised.

Building regulations

Building regulations are often difficult to follow and to enforce. Following the text requires quite a high degree of professional expertise and, sometimes, reference documents. For example, materials often have to conform with an international standard, such as a British Standard, and assessing the implications of this requires specialised resources. Enforcing the rules takes political will and resources. In an example from Bali, Murni (2001) shows how poorly followed are the current regulations about cement mixes and foundation work in government low-income housing contracts. Her sample of the *Rumah Sederhana Dalung Indah* low cost government housing estate in Tegal Jaya, Bali, shows how cracks and rot started soon after completion. Part of the reason for cracked walls was that the Indonesian Concrete Regulations had not been followed. Damage to rafter tails and even roof

¹ Which is ancient history in the UK itself.

collapses were due partly to the contractor's ignoring regulations about coatings for exposed wood. In a personal example, I was part of a two man planning team in the City of Kitwe at a time when the informal sector was expanding the city by hundreds of dwellings a month but we were powerless to impose any sort of control. We could only influence those who applied for permission to build. The City Council's motto "Come, let us build us a city" was as unrealistic as it was for the Biblical Babel from which the quotation is taken.

The double burden of HBEs

The use of residential property for HBEs is extremely common with anything between 20 and 40 per cent of properties having one in many developing cities (Raj and Mitra 1990) and South Africa data from CARDO study). It is, as far as we can tell, almost always unapproved by planning authorities.

HBEs are expected to fulfil regulations appertaining to both housing and employment. Regulations pertaining to housing tend to concentrate on quality of construction, ventilation, day-lighting, fire prevention and escape, and space standards for different types of rooms. To fulfil these regulations is beyond the means of most of the population so most housing is informal. Non-compliance with the regulation, however, prevents borrowing from formal sector lenders and may require side payments to inspectors. Both of these will tend to mean that households direct less of their spending to housing than might be spent if they had chance to borrow. Thus, they live in poorer quality housing than they need to. It also tends to remove the possibility of compensation for lost property value if housing is demolished for redevelopment (Zhang 1997).

Employment regulations focus on safety at work, conditions of work, work breaks, pensions, unionisation, etc. It is tempting, when focusing on HBEs, to challenge their non-compliance with industrial and employment regulations as a cause for opposing them. However, we would contend that it is only fair to insist on employment regulations in HBEs if formal workplaces also routinely fulfil such regulations. As Hameed and Raemaekers (1999) point out, this is usually not the case; industrial cities in developing countries do not tend to perform well with respect to the 'brown agenda' of air, land and water pollution, hazardous wastes and industrial accidents (Williams, 1994; Hardoy, Mitlin and Satterthwaite 1992). Where environmental regulation of industry is weak and there is, thus, much localised pollution, the impact of industry on residents depends on the ability of the planning authorities to segregate industries from residential areas (Wood, 1989). Where this segregation is not achieved, the issues around pollution control, hazards, and traffic generation are brought close to homes. So fly-tipping, discharges containing heavy metals, organic matter, or chemicals, noxious gasses and smoke, become not only regionally damaging but also threatening to the home environment. However, it is clear that people perversely move to be close to even noxious industries, demonstrating that closeness to jobs is more highly regarded than safety from emissions (Hameed and Raemaekers 1999).

Undoubtedly, the wider problem needs to be dealt with. In a spirit of equity, however, it should not start through removing the ability of households living in poverty to earn a living at home, which might seem easy because they are vulnerable, rather than through insisting on clean-ups in formal industry, which is difficult because it is influential.

It is fairly obvious that non-compliance gives HBEs and other informal sector operators their competitive edge over formal sector operators who may be carrying a

heavy overhead arising from compliance with a myriad of regulations. It also brings HBEs into conflict with employment rights activists who can, fairly, point to poor working conditions, exploitative payment rates, and lack of pension, holiday and sickness payments.

There is a dilemma at the heart of any attempts to improve economic performance and social accountability in HBEs (ILO 1991). The ILO (1984) seeks on the one hand to facilitate the progressive integration of the informal sector into national economies. At the same time, it recognises that this integration may reduce the informal sector's ability to absorb labour and generate income. In addition, the Global Strategy for Shelter (UNCHS 1990) requires formal intervention to encourage the informal shelter sector through *inter alia* a radical reappraisal of laws and regulations governing land holding, planning and building, property leases, etc., with a view to amending, simplifying and streamlining those which present obstacles to growth and employment in the informal sector (UNCHS/ILO 1995).

The progressive "legalisation" of the informal sector is clearly an essential requirement for its integration into society. But it is more likely to take place in a positive environment where the obstacles to entering legality are reduced to a minimum, where the costs of being legal are not prohibitive, and where there are clear benefits to becoming legal. It would seem important, for example, to distinguish between regulations that are essential for public health and safety, for instance, and those that are less essential and place unnecessary obstacles to the operations of HBEs (UNCHS/ILO 1995).

It is highly likely, in any particular situation, that the difficulties of introducing some regulation, and of preventing excesses, will be greater in the HBEs than those in more public places. They are concealed within homes (sometimes with the intention of secrecy from the authorities), locationally scattered, unregistered, and often away from motorable roads. In the case of informal sector enterprises which hire labour, compliance with the full range of labour regulations, including those governing hours of work, weekly rest, holidays with pay, minimum wages and social security contributions, might absorb the very low profits made and put them out of business altogether. In addition, as a high proportion of workers in HBEs are single operators, they would have to carry the full cost of the improvements in conditions as well as enjoying the benefits (UNCHS/ILO 1995).

We currently have no way of knowing what the effects would be, nor of the amount of cost (in lost employment) which any particular benefit (in regulation of working conditions) might impose. Within the progressive spirit, however, fulfilling some standards could be encouraged as a first step towards regularisation of the informal sector. Three types of such standards would appear to deserve priority attention.

1. Basic human rights such as freedom of association, freedom from forced labour, and freedom from discrimination.
2. The most exploitative types of employment relationships in which many children find themselves trapped - often at a very early age - such as bonded labour; the employment of children in particularly hazardous occupations or industries; and the employment of very young children.
3. Occupational safety and health (ILO 1991).

In our study in Bolivia, India, Indonesia and South Africa, we have found few examples of changing regulations to assist HBEs. In Pretoria, South Africa, for example, there are regulations specifically to control the establishment of HBEs. There is a proscriptive approach adopted in Durban, South Africa, whereby there is a list of unacceptable HBEs. Others are normally tolerated.

The commentary on the attempts to cope with extensions in India (Appendix 1) shows some changes there. This is largely as a result of large-scale extension activity by households in an effort to impose some order.

As John Turner argued many years ago (Turner 1972), prescriptive standards tend to be over-restrictive. Development controllers fiercely defend standards that specify setbacks from all boundaries on the grounds that they allow access to fire fighters. However, they can remove large proportions of small plots from the potential building envelope. Instead, a performance standard such as, “fire appliances [of a certain specification] must be able to reach the rear of any dwelling”, would allow different solutions. For example, one side can be left clear but the other could be utilised.

Experience of people’s activity from transformations and HBEs

Construction quality

One of the major preoccupations of planners and building inspectors is to ensure that whatever is built is safe. Recent experiences with earthquake damage to mass housing has, if anything, increased this concern. In our CARDO transformations study (Tipple, 2000), we did not directly test the building quality. However, some characteristics of the newly built parts were evident.

- They tend to be in better physical condition than the ageing existing building, i.e., they have fewer cracks and leaks, and less rot.
- They tend to be of whatever construction technology was locally most in vogue, mostly reinforced concrete frame with masonry infill or load-bearing bricks or cement blocks.
- They are mostly constructed by small-scale contractors rather than as self-help projects.
- In Egypt, where the five storey constructions present the most serious structural problems, the extensions have survived a recent earthquake unscathed.

All these give some confidence that, even if *laissez-faire* were the order of the day, extension activity would not be routinely structurally dangerous.

Extensions on to public land

Perhaps the most contentious changes made by users of housing are the extensions of structures or uses onto public land adjoining the dwellings. These involve not only the built changes but also the occupation of land without the permission of the owner and the reduction of open space in public ownership and use (Tipple, 2000; Zhang 1997). They also directly alter the built environment as perceived by all passers-by whereas those within a walled curtilage may be all but invisible from the street. They are most common where plots are either non-existent or too small. They are particularly prevalent where there is opportunity for business use.

The Israeli government very effectively enabled transformations into public spaces through Project Renewal (Tipple, 2000) and it is likely to be possible in other places and circumstances. The first prerequisite is the marking of spaces within which development would be allowable. This should be generous enough to allow the

types of extensions that people want and limited enough to keep major routes clear. This was also accompanied by measures to improve the public spaces that remain.

Extensions within plots

When extension activity is confined to the space within the plot of the dwellings, there is no effect on the efficiency of public spaces, especially with respect to access or servicing. The issues that arise are plot coverage and building lines.

Many city authorities stipulate maximum percentages of plots that can be built upon. The reasons for these limits are mainly about circulation, ventilation and daylighting. However, they may also take account of aural privacy and may be involved in establishing or maintaining the neighbourhood character, especially in higher-status areas. Thus, coverage regulations may change from one type of residential area to another, with lower income areas being allowed greater coverage.

In Ibadan, Arimah and Adeagbo (2000) examined compliance with regulations on having only residential uses on the plot and on set backs and plot coverage. They found that it is most likely in high status areas (but even there only 15 per cent comply with plot coverage norms). In the low income areas, however, almost no-one complies. Building lines tend to limit development near the boundaries of plots. Front setbacks maintain open areas in front of dwellings and those at the sides and the rear tend to be about preventing the spread of fire and allowing access to fire appliances. The purpose of open space at the front of a dwelling seems not to be understood by many who espouse its sanctity. Building lines have been used for hundreds of years in UK and in recent centuries have mainly been concerned with maintaining neighbourhood design standards, allowing for street widening, and, later, for sight lines for road traffic. The UK Department of Transport's booklet "Roads in Urban Areas," was slavishly followed for designing residential areas by many ex-British colonial planning authorities in the 1970s.² It set down standards that strengthened the hold of building lines on the psyche of development control planners at a time when UK planners were developing a much softer approach expressed in "Residential Roads and Footpaths, and the Design Guides developed in Essex, Cheshire and elsewhere (refs?)."³

Changes of use

In the CARDO study, the overwhelming majority of HBEs in the four country case studies were found to be relatively benign. By far the most common HBE is the small shop selling daily household necessities for people who do not have a refrigerator or much storage space; fresh food, bottled drinks, snacks, soap, candles, rice, canned food, cigarettes (both in packets and single "sticks"), etc. There are also a range of more specialised shops: second-hand clothes, paraffin, fish, meat, vegetables, sweets, soft drinks, ice cream shops, small cafes and teashops, and beer bars. Many

² Including the one I worked for in Zambia.

³ Front building lines are so strongly espoused in many developing countries that, in recent conversations with development control planners in Ghana, Zimbabwe, South Africa, and India, I could elicit no satisfactory answer to the question "Why can someone erect a two metre high wall but not a room at the front of their plot?" No-one cited the street widening issue as they probably could not envisage a time when a 12 metre street could need widening!

make food for sale outside either in the street or at places of work or schools.⁴ Services are represented by repair shops for clothes, cars, cookers, and balls; personal services like day care crèche, sewing clothes and furnishings to order, hairdresser or barber, doctor or traditional healer, photographer, dentist and dressmaker; rental of videos and party equipment; and office services like band bookings, telephones, photocopying and assistance with legal documents. Production HBEs are often concerned with clothing manufacture, but we also had manufacturers, assemblers or finishers of knitwear, electronic components, shoes, golf-gloves, bags, jewellery, paper packages, shuttlecocks, and stone monuments; brick making, upholstery, welding and woodwork; a flour mill. There appears to be nothing in the special industrial classes listed in Appendix 1.

How far do these changes have negative impacts?

Encroachments, access and safety

When someone occupies, or builds on public space for his or her own uses, the common weal is reduced. It is not difficult to argue that such encroachments are unhelpful in general. However, there are cases in which the public open space is so poorly maintained that its privatisation seems a great improvement. A good example can be seen in the apartment estates of Cairo and Helwan, where the open spaces are bare sand, strewn with garbage and rocks, and a long way from their planned condition or use (Tipple, 2000). In addition, where there is no private space on to which households can extend because past developers did not provide plots around the dwellings, common fairness seems to dictate that allowances should be made for people to use some extra space for their domestic requirements. How this is mediated may be a community affair.

Externalities

The nature of HBEs and any other industrial activities amongst dwellings vary from benign to potentially very harmful. In a newspaper article appropriately headed "Hell from leather", Mahmud (2001) describes the harmful effects of leather tanning in the central neighbourhood of Hazaribagh in Dhaka, Bangladesh. With 277 tanneries in 25 Ha., the pollution problems are immense.⁵ Amid the noxious stench, residents suffer from jaundice, skin diseases, ulcers and cancer. However, this is the extreme end of a very long continuum.

In the CARDO study, a few HBEs use or generate dangerous or unpleasant substances; hairdressing chemicals, rancid food wastes, hydrogen chloride, paint, spray paint, paint thinners, varnish, wax, dyes, plastics for moulding, glues, and paraffin. Some generate smoke. There may be noise pollution from machines but few have any heavy machinery. Businesses operate stereo systems for music to attract customers.

⁴ The apex of the home-made food industry is probably Lijjat, in which the 40,000 sister-members make 19 million popadoms a day in their homes and market them in India, UK, USA and the Gulf states in a £44 million a year business.

⁵ The tanneries release 7.7m litres of liquid and 88 tonnes of solid toxic substances (e.g., sulphur dioxide and chromium) each day!

Waste generation and disposal are potential problems for HBEs. Our CARDO study suggests that inefficiencies in the municipal waste disposal systems will be exacerbated by the presence of HBEs. The waste materials generated by our samples are textile off-cuts and thread, leather off-cuts, sawdust and timber, rubber, bottles, beads, metal (wire and nails), wrappings, plastic bags, sacks, boxes, and waste food, dust and ashes, cut hair, used components and, sometimes, oil.

There are a few potentially noxious or hazardous wastes produced by single HBEs: cadmium, acid water, needles and soiled dressings, razor blades, electronic components, chemical powders and diluted hair-perming liquid, coal dust, dye, fish waste, and oil.

Waste products are generally disposed of in the same way as domestic wastes are in the area. Where collection systems are unorganised or ineffective, HBEs will exacerbate the problems. However, some also recycle wastes, reducing the overall problem. They may simply collect bottles, paper, plastic, metal, etc., and sell it on. Some use it as their raw material in making baby clothes, papier-mache masks, stuffing pillows, manufacturing local stoves, making footwear out of rubber offcuts, etc. Some wastes, especially wood and rattan off cuts, are used as fuel, waste food may be fed to birds or animals kept around the house.

However, in general, we agree with Napier et al (2000), writing about our South Africa sample. They believe that the impact of HBEs on solid waste generation is mainly that of concentrating waste production. More food is thrown away, more paper waste generated, etc., than would be from purely domestic uses. The burning of wood, cloth, etc., for heating in winter or for cooking adds pollution to the atmosphere but probably no more than would be produced by other fuel sources.

Machinery

Machinery use is an indicator of the likely noise nuisance generated by HBEs. As we shall see from the types of machinery that are present, noise levels are fairly low.

Our samples fall into two sets with respect to machine use. Over 40 per cent of the HBE samples in Bolivia and India have some form of machinery, however small. Machinery is much less common in the Indonesia sample and, especially, in the South Africa study area.

By far the most common are sewing machines, with some hemming and overlock machines. There are a few printing presses, some compressors, metal working, welding and cutting machines are used in metal fabricating workshops, carpenters may have some mechanised tools. An occasional HBE has a plastics moulding press or similar specialised machine. There are a few sound systems, and several items of hairdressing equipment. Photocopiers, gaming machines video machines, computers, and other hi-tech equipment is used in some HBEs. Refrigerators and freezers are present in some shops.

Traffic generation

Perhaps the most crucial traffic generation issue is the intensity of motorised vehicular journeys into the neighbourhood generated by the HBEs. In the CARDO sample, they are very few in India and between one fifth and two fifths of deliveries elsewhere. Public transport is an important mode in Bolivia and South Africa, either in buses (or minibuses) operating on set routes or by taxi to the door or street end. Walking and other non-motorised forms predominate in India and are important (40 per cent or so) in Indonesia; in both cases, streets inside the settlements are very narrow.

The balance of costs and benefits

Our research on transformations has shown that negative externalities are much less intrusive than planners fear while the positive benefits are considerable. They include:

- Increasing the housing supply at little or no cost to the authorities. This “leveraging of household funds for housing supply” is a dream come true for many housing financiers.
- Improving low-income people’s quality of life *in situ* and with their own active participation.
- Generating many jobs through construction activity and HBEs.
- Improving the income of many of the poorest residents, especially women, the infirm and the elderly.
- Increasing the social and economic sustainability of the neighbourhoods involved.

Enablement and the balance of advantage

In Tipple (2000) we demonstrated how transformations undoubtedly increase the supply of housing. In the current housing shortages, this could be reason enough to encourage them. We would argue that, if anyone is supplying housing, the Habitat Agenda asks planners to assist them. However, for others involved in the housing process, the argument that transformers are 'building slums' appears with any suggestion of allowing a free-for-all. This arose repeatedly in our CARDO dissemination workshops held in 1998 to 2000,⁶ almost exclusively from planners involved in development control.

Table 1. attempts briefly to summarise the advantages and disadvantages of encouraging or enabling transformations. It is compiled from the data in the transformations study. Though we have shown that physical conditions seem to be improving in our areas, there is no guarantee that this will be the case elsewhere. Therefore, we admit that there is unpredictability where control is relaxed and this is a valid argument for those opposing transformations.

⁶ See <http://www.apl.ncl.ac.uk/research/cardo/transformationspage.htm>

Table 1. The balance of advantages of transformations

Transformations as neighbourhood improvement	'There goes the neighbourhood!': transformations as 'creating slums'
<p>Transformation supplies housing through people who would not be expected to supply it (not particularly well-off consumers of government-built housing) on already built-up and (usually) serviced land.</p>	<p>Housing provided by transformers is usually uncontrolled, may be unplanned, and is unpredictable in its consequences for the physical and demographic conditions in the neighbourhood.</p>
<p>Transformation renews low quality housing at no cost to the government. The new housing is generally of at least as high standard as the existing housing in the neighbourhood. Very high plot coverage is only evident where plots are small.</p>	<p>There are some localised problems of very high floor space index and plot coverage creating environmental problems.</p>
<p>There are lower occupancy rates for the main households. Occupancy rates for subsequent households are not much higher than main households. The new population is more varied and so gives a wider age and income spread for the demand for neighbourhood facilities (shops, etc.) and public services (schools, etc.).</p>	<p>Transformation encourages increases in population leading to higher demand for utilities and public services. Service lines are likely to be compromised by the narrower and less regular spaces between buildings and encroachment onto road reserves and access lanes.</p>
<p>Transformations increase fixed capital stock. Transformations allow households to adjust their housing at their own pace and in their cost limits. This allows residents to express themselves through their built environment. Standards of finish are generally higher than existing structures. They can create new supply at the bottom of the market for renting or rent-free occupation much more cheaply than new-build projects.</p>	<p>Transformations look chaotic rather than disciplined, they do not follow current government-favoured designs, they change the look of the neighbourhood from that which was planned. Some of the new rooms are small and built to minimal standards of space and utility. They generate some rooms which do not conform to building regulations minima for dimensions, lighting, ventilation, etc.</p>
<p>Transformation allows economic activity in the houses (home-based enterprises) including renting rooms (passive), retailing and production (active). No evidence of devaluation of surrounding and non-transformed properties was found.</p>	<p>Non-conforming uses may create negative externalities (nuisance, traffic, danger) which can reduce the enjoyment of the residential area and lower market values.</p>

Source Tipple (2000: 133)

It would be foolish to argue that table 1. shows an unequivocal case in favour of transformation activity. This is the paradox with which we must wrestle if we are to garner the positive potentials while avoiding the negative effects of *laissez-faire*. The most important feature of transformations, however, is that they provide large amounts of new housing goods and in ways which are unlikely to occur on new sites or through wholesale renewal of the obsolete estates. We would contend that we have established that transformations are not of low enough quality to be regarded as unacceptable housing by and for the people who provided it or their tenants and family members. This is the crux of the issue (Tipple, 2000).

As we state in Tipple (2000: 134),

“On balance, we can find little support for the 'building slums' or 'there goes the neighbourhood' arguments and more support for the assertion that transformation is acting as an agent for upgrading. It is our belief from the evidence of this comparative study that the balance of advantage lies with allowing transformations rather with preventing them and that the advantages would increase by enabling transformations rather than merely tolerating them.”

Conclusions and recommendations

Impacts of regulations on livelihoods

As we have indicated above, regulations impact livelihoods in a negative manner by increasing overhead costs in the formal housing and employment sectors. On the positive side, however, they reduce the risk of catastrophe by, among others, insiting on building stability and minimising accidents in the workplace. However, they have little direct impact in the informal sector except to keep a high threshold for formal recognition or upgrading (Tuts 1996). This has the important effect of keeping large numbers of people out of the running for finance, assistance, etc., available for the formal sector. In turn, this reduces their ability to occupy improved housing or improve the viability of their business.

What norms have been operating?

The norms operating among transformers tend to be locally sanctioned and what is usual in the area. Many building contracts are informal and may consist of little more than a request to build two more rooms at some specified site on the plot. Thus, the technology used, and standards met, are the ones that the contractor is used to. There is little innovation; they are risk-averse.

In HBEs, a similar culture seems to operate. From the literature, it is evident that working conditions can be worse than those evident in the formal sector (where inspection is possible) with respect to poor posture, bad light and ventilation, or dangers. How far they differ from the non-home-based informal sector, though, is less clear. Many workers argue that they like to work in their home. Relatively few HBEs employ non-family members for whom poor working conditions may be more of an issue.

Living conditions accompanying HBEs appear to be just as unclearly positive or negative in comparison to similar non-HBE operating households. HBEs take up relatively little space (except in the tiny dwellings in India) and few do more than equalise the space their households have in comparison with their non-HBE neighbours. Many dwellings have been improved because of the HBE and, certainly HBEs help finance better dwellings for some households. Thus, whatever norms are operating, HBEs can make it more difficult or easier to fulfil them!

Who should be involved in regulation

In some cities, many different agencies are involved in physical planning. In Ibadan, for example, bodies involved include the Town Planning Division of the Department of Lands and Physical Planning, the Property and Town Development Corporation, and five local planning authorities for the city and six for the rural hinterland. There is almost no inter-agency co-ordination and regulations are enforced differently by the various agencies (Arimah and Adeagbo 2000).

The CARDO research suggests that it is reasonable to accept the fact that city authorities are only in control of selected developments and would benefit from some assistance in controlling others. In the spirit of subsidiarity⁷ that is sweeping international policy-making, I would propose the following split in involvement. Where a development has effects on the city as a whole or more than one neighbourhood, control of development should be the business of the local planning authority. Thus, development affecting major land uses, main and secondary roads, trunk and mains infrastructure, and generating super-local externalities, should remain with the existing planning authority. At the other end of the scale, extensions and changes of use that don't affect a major road or mains infrastructure, and is likely to generate no more than local externalities, could be dealt with at the local level. Where the threshold between the two systems is located is a potentially contentious issue. For efficiency and in the true spirit of subsidiarity and public participation, however, it should include more rather than less of the development activity generated by individual households.

The identity of the body responsible at neighbourhood level will vary from culture to culture. In cities where there are chiefs in council, community development committees, local ward committees, etc., they should be responsible for administering whatever regulations are thought fit. However, it is essential that their representatives are part of the process to formulate appropriate regulations or else they will have little loyalty to the system.

How far would self-regulation suffice?

Individual self-regulation will work for many cases but there should be some local body charged with overseeing the process to avoid exploitation of the weak by the powerful and arrogant.

What bottom-up revisions could work?

In the context of community control, regulations controlling development may benefit from reflecting local performance expectations and what is happening rather than what "should be". Standards should be based on preventing worst practices and encouraging good practices.

A version of "Permitted Development" as used in the UK would enable a majority of small changes and extensions to go ahead without any reference to any authority. Thus, the authority could deem extensions up to a certain size, within a certain area, and of a certain height, as allowed as long as, say, 75 per cent of the immediate neighbours agreed. Where there is disagreement, this would then be referred to the neighbourhood authority for a decision. This arrangement was proposed in Tipple (2000) with respect to transformations and the HBE research is generating a very similar finding.

⁷ This is the passing of decision making power down to the lowest appropriate level.

How general are the effects found from transformations and HBEs?

Transformations are seen in most developing countries, from Malaysia to Bahrain, from South Africa to Jordan, from Venezuela to Chile. In most of the literature, and particularly in Tiple (2000), their effects are seen to be to provide more living space for the main household, some space for extra households and HBEs, a variety of built form and layout, renewing of old housing stock, increased overall value but often reduced cost per unit area.

HBEs are also probably universal. They provide work places at very low cost and less interruption to the domestic milieu than would be expected. In both transformations and HBEs, however, there is one characteristic that causes real problems, very small plots. In our India HBE sample, mean plot sizes of less than 10 square metres means that HBEs occupy significant proportions of the dwelling (about 50 per cent of the area in net terms),⁸ and considerably increase crowding. In transformations, small and narrow plots impose a need for more living space but so constrain possibilities for extending that they are almost bound to affect ventilation and daylighting. Both point towards the long-term problems generated from short-term gains achieved with small plots. In HBEs, the very small plots in India lead to much reduced space for the households' domestic activities. This contrasts with the CARDO case studies where plots are more generously sized (Bolivia, Indonesia, South Africa), where HBE operating households tend to have as much space left over for domestic uses as non-HBE households have altogether.

Infrastructure loads are also issues in both. As populations increase and can be accommodated by transforming rather than moving elsewhere, demand for services on the site increases. HBEs tend to require more power and water, and to generate more wastes and traffic than domestic uses. Thus both phenomena require service lines to be of a sufficient scale to cope with medium to long term demand levels rather than what is required by the population moving in on day one. Infrastructure agencies should recognise that there are likely to be HBEs and treat a new area as if it were a commercial or light industrial area with respect to service provision.

How can HBEs be encouraged while protecting environments?

We have found that the environmental threats posed by most HBEs are not as serious as the drafters of regulations may have feared. Thus, enabling HBEs rather than harassing them can bring many potential economic and lifestyle benefits without serious danger to the environment. We are convinced, however, that there are uses that should not be allowed in homes or residential areas and there are those for which a level of safety should be a prerequisite to their being allowed. Noxious or highly polluting industries like leather tanning and processing of car batteries should be proscribed. There are arguments for being culture sensitive in this, however. Kate Gough's Ghana sample, collected as an associated study to the CARDO project, did not object to fish-smoking even though it generates strong smells, smoke, and many flies. Handlers of volatile substances, especially paraffin which is a convenience good for many low income households, must be required to use safe technology.⁹

There is a strong argument for involving local communities in deciding what is not allowable. Within the proscriptions selected for a particular region or neighbourhood, there should be an assumption that HBEs are legally allowed.

⁸ Net space uses a factor of 1 for exclusive HBE space and 0.5 for shared domestic and HBE space.

⁹ In our India sample, there is a paraffin seller who simply dips a scoop into an open-ended oil drum containing the highly volatile liquid! This needs to be improved.

What are the constraints to revising the regulations?

There are huge vested interests among groups with power in keeping to the *status quo* on regulations. My experience of discussing transformations and their enablement with development control planners in several countries (added to memories of my own attitudes when doing the same job) suggests a complex mix of feelings. There is undoubtedly a feeling of “How dare these people do this?” mingled with the assertion that the rules are there to be enforced. The fear of anarchy in development is expressed, in that such extensions may be only the “thin end of the wedge” leading to wholesale ignoring of the rules and loss of jobs and power by the local authority. These attitudes are entirely understandable. So often, because of the history of development regulation rather than promotion, the only power that a bureaucrat has is to stop something happening. Local governments have lost a great deal of their past influence and are only just beginning to make up some of the lost ground. It is not politically acceptable to recognise that much of the city’s development is entirely outside the control processes. Thus, when a process of development control liberalisation is undertaken, it is necessary to develop a process in which local planners can see themselves as, at least partial, beneficiaries rather than losers.

As Tuts (1996) points out, the issue of the relaxation of building and planning standards has been regarded as essential to improve housing affordability in Kenya. The planning regulations, infrastructure standards, sanitation rules, densities and ratios, the building code and building-materials standards were inherited from the British colonial power. These standards tend to be very rigid and demand prohibitively expensive construction, so accentuating the unaffordable nature of formal urban housing.

“It has been argued that, as they condemn the majority of the urban population into illegal status, the standards have relegated themselves to irrelevance and marginality” (Tuts 1996: 608).

The process of revising standards started in Kenya in the early 1980s with a comprehensive study of building and planning standards. A final report recommended changes to the existing Building Code and Public Health Act with a view to making them compatible with the needs of the urban majority (Tuts 1996). Then, in the early 1990s, a new impetus involving the Housing and Building Research Institute (HABRI), the Intermediate Technology Development Group (ITDG) and Shelter Forum led to the “Statutory Building Regulations Study” or “Code 92” (Kenya 1993; Tuts 1996). It moved towards performance standards accompanied by solutions that are deemed to satisfy the regulations. Its coverage focused on the main sets of standards for low-cost housing and proposed dissemination and implementation strategies.

According to Tuts (1996), the period 1980-1995 represented nearly 15 years of struggle, hope and despair; it has been time consuming and very expensive, mainly because of bureaucratic inertia and lack of political good-will. He questions “how operational the revised standards will be, and which mechanisms will be needed to promote their use” (Tuts 1996: 612).

“The revision of standards in Kenya has proven to be a time-consuming process, and frustrating to professionals and initiators of housing projects alike. While the enactment of the legislation will hopefully do away with a lot of complications and delays, this revision of standards should be seen as only one step in a continuous process of questioning standards.” (Tuts 1996: 621).

It is difficult to assess the impact of revised standards on shelter conditions. Tuts (1996) encourages professionals to adopt an ever-questioning attitude towards standards, rules and norms in order to stimulate innovative design solutions, This

interacting between freedom and limitations, can help to improve housing. Our experience from the recent CARDO research reinforces this especially with respect to the potential harm that slavish duty to imported standards embodying long-forgotten attitudes can do to the cause of housing and employment for all.

Appendix 1. Special Industrial Uses in the Town and Country Planning (Use Classes) Order 1972 for England and Wales

Class V. (*Special Industrial Group A*) – Use for any work which is registrable under the Alkali & Works Regulation Act 1906(a), as extended by the Alkali & Works Orders 1966 and 1971(b) and which is not included in any of Classes VI, VII, VIII or IX of this Schedule.

Class VI. (*Special Industrial Group B*) – Use for any of the following processes, except a process ancillary to the getting, dressing or treatment of minerals, which is carried on in or adjacent to a quarry or mine:-

- i) smelting, calcining, sintering or reduction of ores, minerals, concentrates or mattes;
- ii) converting, refining, re-heating, annealing, hardening, melting, carburising, forging or casting of metals or alloys, other than pressure die-casting;
- iii) recovery of metal from scrap or drosses or ashes;
- iv) galvanising;
- v) pickling or treatment of metal in acid;
- vi) chromium plating.

Class VII. (*Special Industrial Group C*) – Use for any of the following processes, except a process ancillary to the getting, dressing or treatment of minerals, which is carried on in or adjacent to a quarry or mine:-

- i) burning of bricks or pipes;
- ii) lime or dolomite burning;
- iii) production of zinc oxide, cement or alumina;
- iv) foaming, crushing, screening or heating of minerals or slag;
- v) processing by heat of pulverised fuel ash;
- vi) production of carbonate of lime and hydrated lime;
- vii) production of inorganic pigments by calcining, roasting or grinding.

Class VIII. (*Special Industrial Group D*) – Use for any of the following purposes:-

- i) distilling, refining or blending of oils (other than petroleum or petroleum products);
- ii) production of employment of cellulose and employment of other pressure sprayed metal finishes in vehicle repair workshops in connection with minor repairs, and the application of plastic powder by the use of fluidised bed and electrostatic spray techniques;
- iii) boiling of linseed oil and the running of gum;
- iv) processes involving the use of hot pitch or bitumen (except the use of bitumen in the manufacture of roofing felt at temperatures not exceeding 220°C and also the manufacture of coated roadstone);
- v) stoving of enamelled ware;
- vi) production of aliphatic esters of the lower fatty acids, butyric acid, caramel, hexamine, iodoform, naphthols, resin products (excluding plastic moulding or extrusion operations and production of plastic sheets, rods, tubes, filaments, fibres or optical components produced by casting, calendaring, moulding, shaping or extrusion), salicylic acid or sulphonated organic compounds;
- vii) production of rubber from scrap;
- viii) chemicals processes in which chlorphenols or chlorcresols are used as intermediates;
- ix) manufacture of acetylene from calcium carbide;
- x) manufacture, recovery or use of pyridine or picolines, any methyl or ethyl amine or acrylates.

Class IX. (*Special Industrial Group E*) – Use for carrying on any of the following industries, businesses or trades:-

- Animal charcoal manufacturer.
- Animal hair cleanser, adapter or treater.
- Blood albumen maker.
- Blood boiler.
- Bone boiler or steamer.
- Bone burner.
- Bone grinder.
- Breeder of maggots from putrescible animal matter.
- Candle maker.
- Catgut manufacturer.
- Chitterling or nettlings boiler.
- Dealer in rags or bones (including receiving, storing, sorting or manipulating rags in or likely to become in an offensive condition, or any bones, rabbit-skins, fat or putrescible animal products of a like nature).
- Fat melter or fat extractor.
- Fellmonger.
- Fish curer.
- Fish oil manufacturer.
- Fish skin dresser or scraper.
- Glue maker.
- Gut scraper or gut cleaner.
- Maker of feeding stuff for animals or poultry from any meat, fish, blood, bone, feathers, fat or animal offal, either in an offensive condition or subjected to any process causing noxious or injurious effluvia.
- Manufacture of manure from bones, fish, offal, blood, spent hops, beans or other putrescible animal or vegetable matter.
- Size maker.
- Skin drier.
- Soap boiler.
- Tallow melter or refiner.
- Tripe boiler or cleaner.

Appendix 2. Planning Regulations for HBEs in Pretoria, South Africa

Edited Version of a background report to the CARDO project by Anastasia Lungu and Mark Napier, 29 November 1998

The regulations governing home-based enterprises, like many other regulations in South Africa, reflect the history of separation that existed in the country for many years. The regulations are duplicated, representing those that were to be used explicitly in areas previously considered to be the whites only suburbs, and others to be used explicitly in the black townships, such as Mamelodi. There are currently efforts to streamline the city regulations into one set that apply to all areas within the city boundary. However, the two sets of regulations continue to apply in the absence of an updated set of regulations.

There are subtle differences between the two sets of regulations. The regulations that are used for home businesses in Mamelodi appear in *Act 4 of 1984 of the Township Establishment and Land Use Regulations for Black Communities Development*. Regulations applying to the previously white suburbs are mainly contained in *Schedule IX of the Department of Town Planning By-laws of Pretoria*. A further complexity was introduced in that many of the sites and services areas developed in the early 1990s by the Independent Development Trust and similar organisations (Extension 5 within the South African case study is one such case) were established under the Less Formal Township Establishment Act of 1991. This act allowed many exceptions to the existing township regulations.

Space

In relation to space, the regulations for the white suburbs are quite clear on how much space should be used for the home based enterprise and how much space should be used for the home. The regulations allow for a maximum of *30% only of the gross floor area* of the dwelling place to be used for a home business. However if the home business does not have the written consent of the City Council, then this total of 30% cannot exceed 60 square metres. Essentially the regulations restrict the size of any home business to less than 60 square metres unless permission is granted by the relevant authorities. The authorities require a plan of the house showing which portion of the dwelling place is to be used for the business and the total floor area of this portion.

However in the Act of 1984 for Black Communities there are no exact space measurements for the space that is allowed for a home business or what is residential. Part 8.2 simply states that :

the occupant of a residential building may practise the social and religious activities and their occupations, professions or trades including retail trade on the property on which such residential building is erected provided that: the dominant use of the property shall remain residential...

The Act of 1984 is clearly more flexible for the black communities than that of the former white suburbs with no maximum space for the home business.

Permitted Businesses in Residential Properties

Schedule IX of the regulations for home based enterprises further differs from the 1984 Act for Black Communities in that it is clearer and specifies in greater detail exactly what types of businesses are permitted and what type of industries are not permitted in a residential area. Part 8.2 of the 1984 Act gives a general description of the types of industries that are not permitted in residential properties. It states that

occupants may practise their occupations and professions, including the *retail trade*, provided that:

- § *the occupation, trade or profession or other activity shall not be noxious; and*
- § *that the occupation, trade or profession shall not interfere with the amenity of the neighbourhood; and in addition,*
- § *no disturbance or pollution through noise, smell, dust, radio-activity, gases or vibrations or other offensive condition, which result in inconvenience to the public is permitted.*

The regulations for the former white suburbs, on the other hand, differ in that they remove any doubts of what can be and cannot be defined as a home business. Depending on the way at the Act of 1984 is interpreted, a number of trades can be practised which are clearly not permitted in the regulations that apply in the suburbs. On the list of prohibited trades and enterprises for white suburban residential properties, in addition to those already listed above, are the following: *funeral undertaking; a visitors information bureau; a building society agency; a bank agency; a kennels; an escort agency; a tow-in service; an institution; a motor workshop; a car wash; a place of instruction for more than 6 people; a panel beater; a parcel delivery service; a radio control or telephone exchange; a travel agency; a shooting range; a blasting contractor; a butcher, a spray painter; a taxi business; a pet salon; a fish fryer; hiring and selling of vehicles; a place of amusement; manufacturing of concrete products; a packaging contractor; a place of refreshment; and a transport undertaking.*

Furthermore, if anybody wants to start a shop on a residential property they are required by the regulations first to get written consent from the relevant authorities. However, no reference to this is made in the 1984 Act for Black Communities. This in effect means that many of the small Spaza shops (selling canned food and cool drinks) would be illegal according to the regulations used in the suburbs, yet, with reference only to the 1984 Act, they are not directly referred to and, therefore, may be considered legal.

One special case is mentioned. Although the regulations reviewed prohibit anyone from having a place of instruction for more than 6 people, this does not include a creche. The regulations for a creche on a residential property (both in the townships and the suburbs) are that:

A creche be limited to a maximum of 12 preschool children who must be cared for without compulsory educational standards provided that;

- *the health safety regulations of the council are followed*
- *no activities must be held on weekdays after 17:30 or on Saturdays or public holidays*
- *an acoustically acceptable screen wall of at least 1.6m high shall be erected on the property boundary where the play area abuts the living room of an adjoining dwelling place to the satisfaction of the council.*

Storage of Goods in Homes

Both variations of Schedule IX have similar regulations concerning how the goods used in a home business must be stored.

The regulations require that the storage of goods of whatever nature reasonably essential for such home undertaking, must be within the area contemplated to be for the home business.

The principle is that the storage of goods should not in any way obstruct the activity of dwelling and should be restricted to that portion of the house that is meant for the

home business alone. Furthermore, the goods should be arranged inside the dwelling in such a way that they will not be visible from the outside.

When delivering goods, only vehicles with a mass not exceeding 3,500kg mass and a maximum length of 5500m, width of 1800m and height of 2100m may be used. Only one such vehicle may be parked regularly at the dwelling place out of sight from the street.

Application for a Home Business

The Pretoria Municipality makes available an information pamphlet to prospective home based enterprise operators. It is entitled: "*A Manual: Application for consent for a home undertaking*", and chiefly applies to people in the previously white suburbs. The regulations require that all the neighbours whom may be affected be informed of any plans to start a business, and that notices of the intention to start an enterprise are clearly displayed. The neighbours are then given 21 days in which to object to the relevant authorities, if they wish to do so.

Reasons for Differences and Future Prospects

Other than the few differences highlighted, the regulations for HBEs are fairly similar for both the townships and the suburbs. It is also likely, however, that further differences may lie in the way these regulations are implemented from one area to another, as one may find that certain authorities are stricter than others in implementing the regulations.

The question of why people living in townships appear to have had greater freedom to start home businesses than in the suburbs remains a point for discussion. It may reflect a pragmatic acknowledgement on the part of the local authorities in the 1980s that they could not hope to police the regulations in township areas as effectively as they might have liked to. Neighbour complaints against intrusive enterprises would also not have been as likely to receive as much attention from the authorities as they would have done in the better resourced white suburbs. The more relaxed regulations could also have been in response to the fact that township areas were so under-supplied with commercial facilities, as part of a tacit effort to address this historical lack of provision of economic infrastructure under apartheid. The initiative of the residents themselves shifted responsibility away from the local authorities.

In the move towards multi-use urban areas, the new South African local authorities could be expected to have a more positive and less oppressive attitude both to the application of zoning laws and to the initiation of economic activities in what were previously exclusively (black and white) residential areas. Metropolitan areas now even have departments that are responsible for the support of economic development in residential areas through advice centres and the like. A small business advice centre is planned for Mamelodi and, it is hoped, that home-based enterprises will fall within the domain of what they proactively support. There is some doubt whether this will be the case, however.

The city authorities are currently (2001) contemplating a unified set of by-laws that would apply to all socio-economic groups and all types of housing. This should go a long way to streamlining the regulation and administration of home-based enterprises in the divergent sections of the South African city. In the meantime, the old legislative framework still lives on, despite the removal of apartheid.

None of the HBE operators in our study reported having been affected by legislation controlling the setting up of businesses in the home. However, certain types of HBEs do attract attention from officials. Crèches are visited by social workers and nurses. One crèche owner in Phase 1 reported being affiliated to an organisation, Uritech, an

NGO that trains and supports crèche workers in low income neighbourhoods). After she received her certificate and set up her home-based crèche, Uritech representatives visit her on a regular basis to assess her standards of health and safety. They also provide free food and toys. If the crèche does not conform to the required standards, the certificate and all forms of support are withdrawn.

One HBE operator involved in the preparation and sale of food commented that the presence of rubbish close to the shack where he sells the food might attract the attention of the health inspector. However, we came across no reports of people with food-related HBEs having been visited by health inspectors.

Appendix 3. Attempts to relax regulations in India

The Delhi Development Authority, one of the largest developers of housing in the world, has taken several steps to revise attitudes towards the numerous extensions that have been built. One of the first reviews of the building by-laws was undertaken by the DDA in the early 1980s. In 1981, it amended the Development Plan for certain areas of south Delhi to permit some changes to the dwellings especially for commercial uses. The changes permitted included the following:

- Change in use in the ground floor only and on 25 percent of the total floor area;
- Only if the commercial establishment was managed by the residents of the dwelling;
- All kinds of commercial uses were permitted except those on a list which included retailing of building materials, firewood and other fuels, junk shop, repairing cars, motor bikes and cycles, flour milling, welding and metal fabricating, nursing homes, guest houses, warehousing and any kind of manufacturing;

A conversion fee per unit area was to be charged for the change in use. The area protected by the front setback of the plot had to be surrendered to the local authority so that it could be incorporated in the street parking, etc. (Dasgupta n.d.)

The Central Public Works Department (CPWD) has also been addressing the building regulations to permit minor changes in the existing structures subject to annual payments (CPWD 1992). Again, however, these changes were primarily alterations rather than extensions. They included covering-up of the balcony, fencing the front open space and putting in an entrance gate, making minor modifications in the kitchen, toilet/bathroom or store-room.

In 1994, DDA commissioned HSMI and HUDCO¹⁰ to study the existing situation of DDA's housing, in the context of what it regarded as "over-building"; additions and alterations carried out by the residents (HSMI/HUDCO, 1998). Up to 1993 the DDA had constructed roughly 75,000 dwelling units under its Janata Housing Scheme and had provided serviced plots of 21 square metres to over 210,000 EWS¹¹ households.

The report had two sets of recommendations - one concerning commercial activities in the residential area and the other on the norms and standards for low-income housing. The report acknowledged the need for mixed land-use so that shops and HBEs could become part of housing and cater to the needs of the settlement and beyond. However, it recommended that the commercial activities should only be towards the periphery of the settlement alongside major approach roads (Dasgupta n.d.).

Only 25-30 percent of the total permissible floor area of a dwelling should be for commercial purpose and only activities that are directly managed by the household should be allowed and these should be non-polluting and non-hazardous. There should be no more than five workers in the HBE. The plots on which HBEs were to be allowed should be more expensive (Dasgupta n.d.).

¹⁰ Human Settlements Management Institution and Housing and Urban Development Corporation.

¹¹ Economically Weaker Sector – those households whose incomes put them below the low income group (LIG).

While the concern for non-polluting, non-hazardous activities is reasonable, no list of permissible activities was provided. The reason for limiting the number of workers is not given but was probably a measure to limit the size of the operations and to minimise additional load on the municipal services. The report does not mention how control is likely to be achieved (Dasgupta n.d.).

The report is specific in its recommendations for transformation. It recommends fines and other punishments for any major alterations and additions that compromise daylighting, ventilation and other health and hygiene issues, structural stability and safety. It also opposes those that are likely to impede the adequate provision and maintenance of water, electricity and sewerage services. Minor additions or alterations should be allowed but these are only building a raised platform all around the dwelling, constructing sun-shades, and providing additional slabs for an internal loft or shelves. It missed the opportunity to be sufficiently bold to acknowledge the positive impacts of self-help transformation and encourage it to take place in a guided manner. Instead, it chose to be cautious and conservative, recommending more control and supervision than the authorities can deliver. The alterations that were permitted were insignificant and did not contribute towards increasing dwelling space.

During 1995, DDA set up a special committee - the S K Sharma Committee on Additions and Alterations in DDA Housing - to review and advise on *uncontrolled over-building* in its low-income housing estates. Most of its recommendations were similar to those already made in the draft HSMI/HUDCO report (Dasgupta n.d.).

The committee strongly discouraged large-scale transformation. Instead it advised that minor alterations and additions up to 25 percent of the permissible ground coverage or 50 square metres floor area (whichever was less) could be permitted. They could be used for non-residential or commercial purposes. In a plot meant for multi-family, multi-storey housing, it recommending permitting the use of one complete floor for commercial use. It stopped short, however, of any regularization of encroachments on public land or dwelling extensions on common areas. The committee felt that households left using self-help without strict control and guidelines would construct all kind of unsafe and unhygienic extensions. Any catastrophe occurring would bring a very bad name to the already stressed government regulatory system! (Dasgupta n.d.). In 1996, a DDA technical committee under its Commissioner (Housing) studied the recommendations contained in the S. K. Sharma report and developed measures for implementing those that it found reasonable in DDA provided housing. It listed twenty-six items that were approved as *condonable additions/alterations* in DDA flats. The major additions and alterations that were included in the list, and have been allowed since January 1997, are:

- converting the *mumty* (roof-top structure covering the stair-case) into a room;
- closing existing balconies with grills or glazing only;
- covering of an open terrace with a sloping roof;
- converting windows into almirahs or closets;
- construction of bathrooms and WCs in the rear courtyard;
- interchanging the position of the kitchen, bathroom and WC;
- providing an additional PVC water storage tank in the garage, in an open courtyard or a common passage;
- providing a loft or shelf in the room;
- providing a false ceiling in the room;

- constructing an open staircase to access the roof or terrace (where no staircase existed);
- removing non-load-bearing internal walls;
- removing the original structure and reconstructing it as a single-storey structure only;
- raising the heights of boundary walls in the front (upto 7 feet) and rear (upto 10 feet) courtyards (Dasgupta n.d.).

While these recommendations are an improvement on the S K Sharma Committee's, they still allow little or no new housing space. As the occurrence of housing transformation increased over time, yet another initiative was undertaken with the appointment of the V.K. Malhotra Committee on Housing Bye-laws for Delhi, 1997-98. The report, when initially tabled in the Legislative Assembly of Delhi, was too contentious to secure full political support. With the change in the local government of Delhi in early 1999, some of the recommendations were implemented on an experimental basis on large plots fronting main roads. To date, however, not all the recommendations have been approved and applied and none have affected the majority living in low income areas (Dasgupta n.d.).

The Malhotra report could have had profound implication on housing in Delhi. Perhaps the most critical one is its recognition of the potential of transformations in providing additional housing as well as the opportunity for the authorities to have a share in the profits of this process. By not recognizing the extensions, authorities cannot increase property taxation to reflect the improved accommodation (Dasgupta n.d.).

A major recommendation of the report that affects transformation activities is the legal provision of an additional floor on serviced plots. Prior to the Malhotra Committee, the maximum number of floors allowed in plotted development,¹² was two and half storeys, i.e., ground floor, first floor and *barsati* floor.¹³ The Committee, removed the limit on the *barsati* floor and, instead, linked it to the floor area ratio which was to increase by 20 percent and by taking the basement area out of the calculations (Dasgupta n.d.).

After DDA approved a list of twenty-six types of addition and alteration that were made by the households residing in its housing colonies as condonable, the flat-owners' decided to take up the issue of transformation and approach DDA to allow more extensions to be made to their dwellings. This was the first time that the households residing in DDA-built flats took up the case of transformation and approached the authority to permit self-help transformation (Dasgupta n.d.)

Residents in many DDA housing areas are organized into flat-owners' societies under an apex association which acts as an interface between the flat-owners and the DDA and other authorities. In 1998, the apex association asked DDA to allow them to undertake further extensions; in particular, full coverage of the back courtyard)(Dasgupta n.d.).

The committee considered the feasibility of regularising full coverage of courtyards, balconies, terraces and roof-terraces as these were very common. It recommended the following:

¹² Subject to the Floor Area Ratio (FAR) and maximum allowable building height.

¹³ A structure covering about one-third of the roof-top.

- the extension should not encroach onto public land;
- the structural stability of the building must be ensured;
- the natural lighting and ventilation of the habitable rooms must be maintained according to the Building Bye Laws;
- that there should be no infringements of other's rights; and
- the service components such as manholes, inspection chambers, rain water pipes, sanitary fittings, etc., are not disturbed but remain exposed for periodical inspection and maintenance (Dasgupta n.d.).

The Lieutenant Governor, Delhi had to give approval to this for it to pass into law. He sought a number of clarifications with respect to procedures and fees. He also sent copies of the Municipal Corporation Delhi to seek uniform implementation in the entire city.

A revised report resulted from this consultation, containing separate recommendations for regularising full coverage of balconies and terraces, courtyards and roof-terraces. However, in March, 2000, the Lieutenant Governor rejected the recommendations but gave no reason for this decision. Consequently, DDA has decided not to entertain any further requests on transformation policy and not to spend its own time and resources unless there was a clear interest on the part of the government to reconsider and start the review process again (Dasgupta n.d.).

Despite these long and eventually frustrated efforts of DDA to change policy on self-help extensions, the Govt. of India has taken contradictory action. The Ministry of Urban Development has prepared an action plan on illegal construction in DDA built flats. Households who have not regularised their extensions will have them demolished. In the case of severe violations, DDA should revoke the allocation of the flat, irrespective of how long the household has occupied it. This is a strict interpretation of the law that the leases do not provide for any changes in the dwellings without written approval (Times of India, Delhi edition, May 13, 2000; (Dasgupta n.d.).

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