Chapter 4

MARKET INDUCED PROCESSES

This chapter identifies the handloom product range and changes in it due to preference shifts. Two specific limitations in the existing literature, relating to nature and effect of competition, are addressed. Regarding the first we argue that direct price-competition between handloom and mill sectors was not as important a feature of the textile market as is often supposed because there was significant product differentiation between the two. However, preference shifts created indirect or threatened competition which explain tendencies in product diversification better. Secondly, changes in product range often involved changes in technology and organisation. In the text we call them ‘dynamic’ adjustments. In the handloom literature this correlation remains obscure whereas they in fact constituted a basic element in the transition.

1 Static and Dynamic Adjustments in Product Structure

Detailed lists of handloom products, such as were being prepared from time to time since the London ‘Great Exhibition’ in 1857, testify to the impossibility of perceiving competition between handloom and mill cloth from their product range. At the level of garments the two fields rarely overlapped and the areas of overlapping cannot be clearly identified. This difficulty is real, and not terminological. As FFC later
acknowledged, the range of price-competition was relatively restricted and, by and large, the craftsman survived not by selling the same products cheaper but by making different products.

This indeed is a long familiar notion. But it allows of two sorts of usages. In one, diversifications intended to avoid price-competition were neutral in effect on organisation and technology, as when a simple shift in fineness of yarn woven is concerned. Example would be Vera Anstey's thesis: competition with Lancashire cloth being restricted to medium counts of cotton, handlooms could diversify into lower and upper counts. Recent variants, such as Baker on Madras, have emphasised the shift to coarse. The argument is based on the inability of powerlooms to weave yarns below a certain range. The second hypothesis, implicit in the twentieth century surveys, draws a connection between changes in products and changes in technoeconomic setup. Examples were, shift from cotton to noncotton yarns, from plain to decorated fabrics, from one decorative technology to another, and so on. Henceforth we refer these two types as static and dynamic adjustments. The rest of this section discusses the context for static adjustments.

Static adjustment would include changes that result from a simple extinction of certain product classes hitherto made. In this sense the most visible changes in the nineteenth century were of this sort: survival of coarse weaving as medium counts were taken over by the mills, disappearance of many luxuries as
older aristocracy declined, etc. Coarse weaving, moreover, was spatially specific. Weaving of below-10s was more common in villages and in centres of short distance trade. Major coarse weaving regions were Punjab, UP and Bihar. UP also participated in the khaddar movement to a greater degree than the rest. Coarse weavers were frequently cultivators or labourers as well because weaving itself did not need much skill or specialisation. To the consumer cheapness and not appearance mattered, so that coarse weaving household could survive by sheer self-exploitation. Dispersed location of the market, mainly cultivators themselves, needed the household form of production and guaranteed it relative inaccessibility. Use of handspun yarn reinforced the household because such yarns were spun within the latter. Handspun also explains survival of coarse weaving in close proximity to the cotton tracts.

Survival of coarse weaving thus reflected partly the stability of the household within the rural structure and partly the relative remoteness of this structure. Survival of household was further ensured by the fact that large producers could not possibly emerge in coarse weaving. There were limits to economies of scale. The very simplicity of technology devalued craftsmanship. Short confines of trade made it possible for the village 'shopkeeper' to dominate production. There were also social constraints on mobility. Where fine and coarse weaving coexisted caste guaranteed differentiation of skills and erected barriers to entry into fine weaving. In large parts of south and central India the status of the coarse weaver, expressly kept out
of the upper-tier weaving castes, was equal to that of a village servant or an agricultural labourer. He was permitted to combine labour with weaving but not to diversify into fine weaving. These constraints ensured that, responding to similar pressures, only the fine weaver could become a master weaver while the coarse weaver could be a cooly working under him.

If the hypothesised shift to coarse is valid for the nineteenth century, more recent sources suggest a certain decline in its extent. The data on fineness of yarn of Chapter 2 already bear this out. Stagnation in rural weaving and increasing urbanisation (Chapter 5) suggest the same. Regional differences, however, continued, decided by local specificities of demand and relative accessibility. Decline was more visible in the hinterlands of the port enclaves, later regions where mills were located, Bombay, Ahmedabad, Bengal, Bihar, Orissa. Eastern India was the largest market for imported greys. At the same time Punjab handspun was stable, perhaps even expanding in the canal irrigated areas. In parts of Central Province, coastal Andhra and Mysore no serious decay could be discerned. Demand for handspun was stubborn in the north where thick and durable garments were preferred as warm clothing.

In contrast to coarse, finer and decorative weaving, the basic component of dynamic adjustments, occurred mainly in the towns and entered long distance trade. Craftsmanship and complex technological base ensured their survival and enlarged options. Towns such as Benares, Madura or Surat were mainly known for the
costly items, the ‘luxuries’, they made, exported and themselves consumed. With the decline of aristocracy many of the products disappeared but the producing centres did not. For skills could be switched and technologies reapplied.

To identify these skills a more systematic study of market-segmentation is needed than has been possible with the coarse-fine distinction.

2 The Basic Handloom Product-classes

Handloom specialisations can be identified by using three criteria: (1) garment, (2) decoration and decorative technology and (3) material. In this chapter this three-fold classification is followed closely.

Garment Specialisation By and large handlooms were engaged in finished garments with borders while the cotton mills and imports supplied (a) piecegoods and (b) garments without prominent borders. This distinction to a large extent remains in force even now. Piecegoods included shirtings and suitings, material for stitched garments. Garments without prominent borders were dhoties and chadars, chiefly men’s wear. The handloom specialities were saris, turbans, daryais, dupattas, angavastrams, ceremonial dresses such as wide-bordered dhoties, etc. Many in the latter class were women’s wear in which as a rule ‘borders and headings are of very great importance... and exert a much greater influence on price’. Precisely this
sensitivity made small scale weaving advantageous and mill production of bordered cloth, even if technologically feasible, uneconomical.

**Design Specialisation** Three types of decorative technologies were in usage: dyeing/printing, weaving on loom, and embroidery. Of these, printing-dyeing rendered itself to economies of scale and could be more easily brought within the folds of mill weaving. Within the handloom system all three could be performed with flexibility. Loom-woven designs were integrated into handlooms whereas printing or embroidery existed as separate industries performed by specialists. Hand-printing and embroidery were highly labour-intensive and therefore expensive. The typical prints and embroidery (wall-hangings, shawls, ceremonial dresses such as the kingkhabas) were usually nonwearing apparels meant for the courts, the temples, the urban classes whereas typical loomwoven designs were garments (bordered saris) and commanded a mass market.

The three technologies implied different organisational possibilities. In embroidery and printing the decorative side of the industry was detached from weaving, consequently weaving was dependent on the former. The weaver catering to a printer or embroiderer was himself making an intermediate product and, for that reason, often dependent on the merchant who combined the processes. In loomwoven designs, by contrast, the weaver made a finished garment, himself decided the shape of the final product, retained control over craftsmanship and, to that extent, was free
from domination of outsiders. In most craft towns weaving remained dispersed whereas printing or wire drawing (for embroidery) was concentrated in large karkhanas. Merchants selling the most expensive material, e.g., gotawalas of Benares, controlled the karkhanas, and the industry. Weaving was thus subject to outsider control. These constraints made it difficult for large producers to emerge in weaving wherever the latter existed as subsidiary to printing or embroidery. By reverse analogy loomwoven designs facilitated transition to large scale weaving.

These advantages of loomwoven concentrated in the south. Handloom designs here were to a greater extent loomwoven whereas in the north, eastern UP, Rajasthan, Punjab and Gujarat, Persian influence had established prints and embroidery as the main decorative traditions. Besides, product-structure in the north was more heterogeneous than in the south. Nonwearing apparels, blankets, carpets, hangings, constituted a sizeable segment. Fineness varied greatly. Muslins, still woven extensively in UP and central India, coexisted with coarse handspun. All three decorative technologies were simultaneously in usage. And within prints differences in style were enormous. The two closely situated locations in Oudh, Lucknow and Farrukhabad, stood for distinct traditions. In garments there was little similarity between, say, Bengal and eastern UP. By contrast product structure in the major southern towns rarely extended beyond bordered saris, dhoties and turbans. The southern products, in other words, entered a less segmented market.
In the long run hand-printing and embroidery seem to have suffered a certain decline. Descriptions in the mid-thirties do not reiterate what Mukharji wrote of printing in the 1880s, an industry 'widely practiced in the small villages of remote districts' practically all over the Gangetic plains. Hardly a few of the many printing-centres listed by Birdwood appear in later sources. Somewhat similar fate awaited the better classes of embroidery. The products originally turned out at Lucknow and Benares, saddle cloths, cushion covers, elephant hangings, coats, caps, etc, attracted few customers at the end of the nineteenth century. The craftsmen adapted by diversifying into new products, upholstery, slippers, etc, many catering to a growing demand from European residents. But these remained adjustments at the fringe. For the period considered here loomwoven designs seem to have commanded the largest segment within bordered cloth.

**Material Specialisation**

Consistent with an old hypothesis referred above, handlooms did have, about the early thirties, a polarised fineness structure oriented to coarser and finer counts of cotton yarn while the mills dominated the medium (Table1).

<table>
<thead>
<tr>
<th>Counts</th>
<th>1931-32</th>
<th>1940</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mill Hloom</td>
<td>Mill Hloom</td>
<td>Mill Hloom Powerloom</td>
</tr>
<tr>
<td>≤ 20s</td>
<td>39.1</td>
<td>65.0</td>
<td>57.7</td>
</tr>
<tr>
<td>21 - 30s</td>
<td>47.5</td>
<td>8.4</td>
<td>25.7</td>
</tr>
<tr>
<td>31 - 40s</td>
<td>8.0</td>
<td>10.0</td>
<td>11.6</td>
</tr>
<tr>
<td>40s+</td>
<td>5.4</td>
<td>8.6</td>
<td>5.0</td>
</tr>
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**Notes** Data from Hardy, FFC and Mazumdar
However, by 1940 this pattern had weakened as both sectors diversified into hitherto less familiar territory, mills to fine and coarse and handlooms to medium. Two more things deserve notice when 1970 is included: (a) greater weightage of fine cotton in general, and (b) small powerlooms specialise in fine, seemingly at the expense of handlooms.

The inducement for mills was the newly-imposed tariffs on imported yarn, usually of finer grades. The resultant intensification of competition might have encouraged handlooms to diversify too. Competition was further intensified by two other circumstances, the mills' breaking into the garment specialisation, and entry of pure weaving mills and small powerlooms in fine cotton. According to FFC, millmade saris introduced a certain break in the pattern of market-sharing after the mid-twenties. The report does not supply details on fineness and appearance of the products. In quantity the diversification might have been reflected in the rising percentage of 'chadars and dhoties', which would include saris, in mill output, from 27 per cent in 1919-21 (average) to 35 in 1929-31. But the proportion stabilised there. Direct reference to this tendency, moreover, discounted its significance for handlooms, the products were rarely similar and consumers retained a 'prejudice against mill cloth'.

The pure weaving mills were probably a more dangerous rival. The composite mills were constrained in easily switching product lines by their captive spinning capacity and the quality
of raw cotton available. The pure weaving mills were not subject to this. These mills were mainly based in Ahmedabad with loomage ranging between 200 and 400 though many units in Surat and Baroda worked with fewer looms. They wove finer counts only and might have competed directly with handlooms. The larger of them were products of a diversification from above. The proprietors included leading yarn merchants of Bombay (the Podars) and one of the mills was set up within the premises of a composite mill. Their entry may have been a reflection of the inflexibility of the composite mills and of depression and labour unrest which affected Bombay mill weaving badly.

If the above suggests stiffer competition for handlooms in cotton, Chapter 2 has already indicated the response, diversification towards noncotton. The entry of small powerlooms led to a certain segmentation within noncotton the precise boundaries of which remain obscure even now. A 1948 Bombay survey suggests the following pattern: (a) both hand and powerlooms were making mainly saris in the interior and mainly piecegoods in the coast, (b) but on the whole handlooms were somewhat more involved in saris and powerlooms in piecegoods, though not to the extent of the mills. The nature of use of noncotton also differed, handlooms used them more in borders of cotton cloth while powerlooms were quickly taking over pure synthetics.

3 Sources of Instability: Preference Shifts

The longterm specialisation pattern was highly unstable
not only because mills and powerlooms could experiment new product lines or tariffs intervene but also because preferences were changing and decorative technology in at least one branch, dyeing, was in a certain flux, searching for its best use. The first seems to have favoured standardisation while the second necessitated quality control and more stringent application of existing techniques. Both induced mass production in handlooms.

The role of preferences has not been sufficiently acknowledged in studies on textile market. Indeed in the mid-nineteenth century the Indian market was far more sensitive to the evident product differences between handloom and imported cloths than to relative prices, a fact that caused anxiety to Lancashire interests, was the inspiration for a famous monograph by Watson and culminated in a series of exhibitions in England. Watson accused Lancashire designers of an incapacity to appreciate 'oriental tastes and habits'. 'Among the people of India', he continued, 'modes of ornamentation are so peculiar and so characteristic, that it will often be found that nothing beyond a difference in this respect separates one group from another'. His advice was to concentrate on the 'plainer stuffs' where cheapness would matter more. These areas, to be sure, did not allow powerloom cloth more than a foothold in the market. If things became easier over time it was due partly to changes in preference and partly to the developments within dyeing and printing.

Garment Preferences One of the most stable long term changes has
been the tendency away from single-piece dresses, dhoties, saris, turbans, cholies, lungies, etc, to stitched cloths. In the mid-nineteenth century stitched garments were practically restricted to the Muslims or to formal attire in north India. Over time, in men's wear, dhoties began to be replaced by drill shorts while turbans all over India, especially of Central Provinces, Hyderabad and Deccan, angavastrams in the south and chadars in the east fell into disuse, replaced by shirts and coats. The dhoties in usage contained an ever-decreasing proportion of the heavy-bordered varieties as, for instance, were still being made in Salem and Kanchipuram, Serampur, Farasdanga and Umrer.

The preconditions for this change remain obscure. It might have been more noticeable with peoples who had also experienced a social transition. Thurston singled out the 'jungle tribesman' working in the planters' estates. No longer does he 'rest content with a simple country-made cloth around his loins, but appears, on high days and holidays, clad in turban or cap and woven coat of English cut'. Entry into civilisation made him also sensitive to authority in an abstract way, he preferred cloth with labels and the more attractive the label the better. The most striking changes, Havell noticed too, were taking place within 'low-caste fabrics'. On the whole the process was slow enough to be taken for granted.

Several consequences of this shift can be distinguished. Firstly, it required an intermediate product, piecegoods, to be made. Secondly, it seems to have devalued durability as a desired
quality. Single-piece garments used up more cloth than stitched for each corresponding unit, accordingly in this class maintenance determined the choice between hand and powerloom cloth. In durability considered in abstraction handlooms were ahead by virtue of the sizing methods used and, with handspun yarn, of the intrinsic strength of the material.

Perhaps more significantly, this also meant that the market was less sensitive to the specific sorts of craftsmanship in which handlooms had a comparative advantage. Single-piece garments were rectangular in shape with borders of uniform length, rendering them amenable to linear border-designs, which had the characteristics of symmetry, repetition of a distinct and dominant theme, and strict separation between border and field. Stitched cloths did not dispense with designs but had them irregularly over the entire surface, without a defining theme and without the border-field separation. The randomness involved in the latter favoured standardisation while each bordered cloth remained a rigidly defined category by virtue of the border itself.

All these consequences directly or indirectly favoured mill weaving. The design shift might also have induced preference for printed designs to loomwoven, at which handlooms were more adept. Borders were ideally woven on looms for loomwovens, by the very nature of the technology, were both more emphatic and, being integrated into the rhythm of weaving, mathematically regular. Irregular designs, on the other hand, did not need such care and
could be printed or simply replaced by bright dyes. Dyeing was a technique in which handlooms had suffered a certain deskilling, to which we now turn.

**Dyes and Design Preferences** The discovery of coal tar dyes in the 1860s was a major advance in textile technology with consequences as swift and as pervasive as those of the mule in spinning. In many parts of the world mineral dyes simply increased the use of colours, but in India, probably the principal exponent of plant-based dyes prior to the shift, they both displaced and restructured older crafts.

In the eighteenth century printing in India was 'technically far in advance of anything produced in Europe'\(^4\). The secret was in mordanting, the mordant media being available in abundance throughout India. Europe was yet to discover fast dyes and depended, in decoration, mainly on embroidery. The initial advantage had matured into several distinct methods, block-printing, painting, resist-dyeing of which the best known variant was tie-dyeing. Geographical factors, mainly distribution of raw material, combined with the nature of patronage to produce spatial division of skill reinforcing specificity of styles.

The basic colours were really very few\(^5\), determined largely by the raw materials available. Dyeing was also relatively costly being the end product of a chain of connected processes some of which, as in silk making, were land based. Cultivation of the plant, preparation of the dye, mordanting and
the actual dyeing were extremely labour-intensive. To take dyeing itself, the production of a mixed shade out of three basic colours involved three separate processes, successive immersion and boiling off, instead of just one. But with all its constraints, the vegetable-based dyes retained a distinctness, widely acknowledged but difficult to explain. Admirers commented on the freshness of the colours of masulipatam chintzes, their being 'brighter after washing than before', harmony in 'the most prismatic colours' achieved in Kota and Alwar muslins. The most frequently cited feature seems to have been the absence of 'pure' shades, uniformly replaced by compound tints and a subdued appearance which derived from the darker tints of the mordants.

The introduction of mineral dyes, in the form of dyed fabrics or yarn or the colours themselves, on the one hand displaced locally dyed/printed cloths and, on the other, made redundant the processes and substances used in local dyeing. Of the two the latter is of more importance to us as it entailed dynamic adjustments. Moreover the extent of a displacement in printing remains uncertain. The industry probably relocated itself in a few towns. In Burhanpur and Ellichpur of central India a large and ancient handloom weaving, dependent on a printing tradition, declined. Other instances of decline, masulipatam chintz or Punjab prints, were more complex, usually involving a perceptible degeneration in quality. In Mysore decline had evidently to do with impoverishment of the aristocracy.
Parallelly local dyeing was assimilating foreign material and recipes wherever coloured cloth was being made. This heralded the disappearance of the hereditary dyers, at least in cotton. Availability of a vast range of basic shades and the possibility of making mixed shades by adding colours instead of adding processes were advantages so great as to make the function of a dyer practically obsolete. Dyeing was thus almost entirely brought within weaving. By the first decade of this century, cotton was dyed mainly by the weavers themselves although printers survived in many places.

That the assimilation was far from perfect emerges vividly from contemporary accounts. Already the Lancashire prints had prepared the grounds for a drastic relaxation of preferences, both in design and in colour. The resultant 'passion for bright, raw and fleeting colours of the imported aniline dyes' was condemned by the aesthetically oriented craft historians of the time. According to them colour, like costumes, reflected articulation of preferences of 'the poorer classes' who formerly could not afford coloured cloth, but who now 'freely indulge in that luxury' without, however, having learnt 'how to wear [colours] wisely and well'. But the effect went far beyond a mere 'poisoning' of tastes and involved a degeneration in the very technology of dyeing:

The weaver simply did not know the permitted formulations and did not care for them. Facing a very malleable market he resorted to random applications of the technique. Fast dyeing,
precisely what distinguished the original tradition, was quickly reduced to a rarity. Frequently dyes damaged the fabric. In appearance the results were unconventional, often ahead of what the market could accept. They were also invariably inferior to imported coloured cloths or dyed yarn of 'combinations in which European dyers know how to turn the tar products to good account'. Carpets of Mirzapur and Warangal, silks of Tanjore and Hyderabad, prints of Punjab and Gujarat, dyed cotton of Benares, Madras handkerchiefs, were but few examples in which decline in weaving could be directly attributed to the 'miserable aniline dyes'.

Why were the weavers' experiments just as unsuccessful as they were widespread? Marsden, the dyeing adviser to Madras, suggested a reason, the weaver 'has learnt how to use the imported materials, but in a majority of cases it is only through the medium of a "recipe" and not with any understanding of the nature of the materials or of the process'. The recipes were then 'improved upon' to obtain 'secret' processes which only impaired the properties of the dye. Unsuccessful experiments in turn encouraged search for new secrets even more jealously guarded. This indeed was a pattern recurring in a number of decorative crafts (woodwork, metal engraving, chemicals, embroidery) responding to the introduction of a different standard. There was involved here an inability to conceptualise and absorb technical data otherwise learnt through practice of tools. Plain bad work was endemic and the opposition between real and sham secrets common, characteristics of a craft blindly experimenting.
The latter were features of loomwoven designs as well. A certain relaxation of preferences was noticed. The demand for heavy borders with metal threads seems to have declined, lighter borders and greater variety of colours such as could be provided by dyed cotton yarn were preferred. This reduced product difference and exposed handlooms to competition from prints. Bad work accompanied, as with dyed and printed cloth, relaxation of preferences. Various forms of adulteration were added to 'lack of uniformity in texture, inexactness regarding dimension, lack of finish'.

Two sorts of response to this degeneration in productive forces followed: insistence on standardisation and quality control, and on innovation in craftsmanship, as one Bengal report put it, 'the days of amateurish traditional fabrics are definitely gone .. handloom weaving has become the artist's job'. Demand for standardisation and stringent application of technology were reinforced by intensified competition from other handlooms, as market came to be regionally integrated, selectively from imports and, somewhat later, from small powerlooms.

Material Preferences The handloom-powerloom market was also reorienting towards noncotton yarns, mainly art silks. Both cotton-noncotton price ratio and silk-art silk ratio were rising in the thirties (Chapter 2). But there is no consensus on precisely what art silks were a substitute of. Fine cotton consumers were induced by prices to 'start buying more expensive
things' while those who could not afford silk found in synthetics an alternative. The generalised demand for something in between fine cotton and silk also revived mixed weaving to some extent. Partly tariffs and partly product-differentiation guaranteed that the benefits would not go entirely to the east Asian imports. The result, handlooms diversifying into noncotton, has been discussed already in Chapter 2.

4 Dynamic Adjustments

Garments Early instances of adjustment to changing garment preferences are available from the silk towns. Benares weavers introduced 'kashi silk', cheap plain sheets of silk-substitutes suitable for stitched garments. Surat also seems to have diversified into piecegoods. On a larger scale noncotton piecegoods were being made somewhat later in Ahmedabad, Bombay and Punjab. Handloom factories, guilds and small powerlooms developed in these locations earlier than anywhere else, but the connection between better organisation and the products made is not always apparent.

It is more explicit in the case of cotton. Here piecegoods was usually correlated with mass production. Thus the missionary-promoted factories of Malabar were pioneers in cotton piecegoods. In certain towns of Tamil Nadu and southern Andhra it was accompanied by putting out on wage contract. The master weavers 'have taken care to maintain quality and are able to sell in competition with mills'. Havell described one early factory
making piecegoods and Chatterton observed the connection in Madras\textsuperscript{32}.

**Responses to the Dyeing Revolution** The organisational consequences of mineral dyeing had several aspects. In the rare cases where printers and dyers had survived as a class, they did so more in silk than in cotton, the first effect was probably greater inequality. Polarisation between wage earners and employers, prevailing tendency in weaving, had its counterpart in silk dyeing and block printing\textsuperscript{33}. What distinguished the 'cooly' dyer from his employer was not only dispossession of physical capital but unequal access to knowledge\textsuperscript{34}. Selectively master dyers diversified into weaving where the latter existed as subsidiary to a dominant dyeing tradition. Thus we find in Hyderabad a not-inconsiderable extent (about 9 per cent of loomage) of Rangrez and Nilgur ownership of handloom factories.

Parallely master weavers invested in dyehouses, singled out as 'the direction in which developments can best be looked for'\textsuperscript{35}. This represented a detachment, once more, of the dyeing function from the weaver household who had proved his inefficiency in handling synthetic dyes and, depending on its spread, would have contributed to dissolution of the household itself. The best example of weavers investing in dyehouses was Madura where the Saurashtras owned much of the industry, concentrated in large 'colour factories'. Madura was noted for the relative facility with which information on processes and dyestuffs were exchanged. The switch to mineral dyes was more
successful in Madura, famous for its accumulated skills in handling the chay-root red dye. The discoverer of the best reproduction of chay-root shade with alizarine was a Saurashtra trained in Japan. The 'spurious' red cloth of Madura drove out competitors such as were being made in Kumbakonam, resulting in a decline and deconcentration of loomage there. Quality Control and Mass Production State policy in most provinces quickly adopted standardisation as an objective. Initially direct intervention such as reservation for handloom cloth by design was also contemplated. But this was obviously unrealistic where the designs themselves were changing rapidly. FFC cited several cases in which cooperatives had been entrusted with or formed with the specific purpose of standardisation. Caste guilds were reconstituted with the same end. A Koshti association in Nagpur 'affixed a stamp on the fabrics' guaranteeing fastness of dyes, the guarantee was widely respected. Selectively, resources of the mills were used in finishing (calendering) handloom cloth.

The inducement could also come from the marketing end or merchants. In Tamil Nadu, 'nowhere does the wholesale merchant place huge orders...with small weavers; and the tiny weaving establishments cannot meet his demand. Unless the workers are organised in rural factories their products cannot be standardised or marketed on scientific lines'. Similarly where production was already on a large scale, as in many southern towns, changes were mainly occurring in marketing, 'sole agency,
commission sale, sale on consignment basis, mail-order house and canvassing agency are some methods of recent developments' in the south39.

Unequal advances in standardisation intensified intra-handloom competition and, in turn, induced mass production. In the thirties Madras and UP handlooms were making inroads into the Bengal market and products of the factories of Bombay and Tamil Nadu towns posing a serious challenge to Hyderabad weavers. In Hyderabad, the case of 'foreign' saris, chiefly a famous brand called Ilkal, driving out locally made Ilkals attracted considerable interest in the second ITBS, and was attributed to 'the standard quality and uniform size' of the former whereas 'our workmen always try to deteriorate the quality by all questionable means'. Stricter control on quality of the Deccan products went with flexibility and innovativeness, and with advances in dyeing. The state's reaction was largely confined to rhetorics, the local weavers must be 'awakened from their torpor .. made to realise the seriousness, trained and taught', etc. Within the industry a more basic adjustment seems to have been under way. In at least three districts of Hyderabad factories and contract workers were themselves making Ilkal saris under the direction of merchants from Ilkal40.

Possibility of quality control and innovation sharpened the difference between town and village weavers. Thus in Bengal, advances in design technology, use of jacquards, hiring of professional designers by large producers of the Dacca and
Santipur concentrations were noticeably in contrast with the general state of affairs, lack of such organisation among the weavers 'which could enable them to produce new types of fabrics to suit changing tastes .. the principal reason for the progressive decay of the industry'. Rural weaving imposed constraints on the facility for training, in this context in jacquards, and was held back by the conservatism of the consumers themselves, 'the great majority of the products are woven to suit the taste of the rural muslims only'. Designs were 'clumsy and too showy' and changeless. Location also imposed constraints on capital, the incapacity of the average village mahajan to successfully intervene in technology. This contradiction between control of nonproducers and resistance to adaptation was observed in other regions too.

Regional Features and Dynamic Adjustments It is probable that certain region specific conditions interacted with dynamic adjustments. A few speculatory hypotheses can be advanced on this.

In Bengal the tradition of dyeing and printing was weaker and confined to silk. This was reflected, for instance, in the absence of a separate dyer caste in the region. Correspondingly Bengal represented the largest market for bleached cloth in which mill made products were dominant. Thus the inducements arising from within dyeing were weak in Bengal cotton. The entrenched khadi tradition in Punjab might also have had a counteracting influence. Another point invariably emphasised is the rigidity of
garment preference in the south. Here both in male and female attire borders continued to define the standards, and loomwovens represented the dominant decorative technology. These features could have contributed to the kind of adjustments that southern handlooms experienced.

**Material**

One major inducement for handloom factories and small powerlooms was the shift to synthetic fabrics, which came under tariffs soon after cotton. This was increasingly a mass market out of reach of the mills who spun their own yarn. In the west coast, Surat, Bhiwandi and Ahmedabad, powerlooms were engaged in art silk and spun silk piecegoods and saris while those in Bangalore wove pure silk. In Deccan powerlooms used mercerised and twofolds, to avoid processing. In its origin the standard powerloom unit was a direct outgrowth of handlooms. There are numerous instances of a large handweaver household installing secondhand powerlooms. At a different level but confirming the same association handloom karkhanas converted to powerlooms.

**Conclusion**

The facts surveyed here suggest two results. Firstly, the longterm market constraint within which the handlooms functioned did not arise from mill competition, but preferences. The latter explains the specific sorts of diversification the industry resorted to. And secondly, in a wide range of cases changes in product composition necessitated technological, organisational adjustments. This could happen directly, e.g., where the new
product was more standardised and allowed mass production, or indirectly, through an initial degeneration in craftsmanship or productive forces.

To the extent craftsmanship was under pressure, the nature of adjustments can also be observed at the level of labour process. The 1961 census monographs on handlooms invariably project a separation between weaving and designing, a division of labour predicted and argued volubly in the thirties. The products studied were dominated, in different degrees, by the workshop system and designing was done either by the master weaver or by a specialist, an employee of the shop, or by other crafts, e.g. heddle-makers of Patan mashru. Manual labour was consequently devalued, payment to weavers depended on the number of picks/knots/stitches, and not on the product woven. The common enough incidence of factory worker being a nonweaver by caste or original profession could have been related. In decorative crafts, where craftsmanship itself constitutes a technology, this movement is analogous to appropriation of physical means of production.

If market induced mass production, the latter in turn induced spatial concentration of weaving and trade. Forms of this tendency will be studied in Chapter 5 below.

Notes

1 This occurs in Specker (1985), in Nanekar (1968) on Burhanpur, among others.
2 Definite evidence on the positive effects of Swadeshi on handlooms are available only from United Provinces (1924): Etawah, p 17, Fyzabad, p 25, Hardoi, p 39. Fine weaving, on the other hand, could be adversely affected by Swadeshi, Bengal (1937), p 58.

3 The Dheds of Gujarat, Katias and Mahars of Bombay-Deccan and Central Provinces, Gandas of Orissa, Malas of coastal Andhra were, by hereditary occupation, both coarse weavers and village servants.

4 'In tracts situated at a distance of the iron road the village "general shop" has not yet come into existence; the wants which it meets are not felt; the villager either tans his own leather and weaves his own clothing, or he journeys from time to time to some neighbouring fair or market', Blennerhassett (1898), p 5.

5 Berar in Central Provinces, see Central Provinces and Berar (1908-09), p 105 and United Provinces (1924) : Etawah, p 38, on Punjab see Gazetteer (Imperial), Punjab, p 81, on Ahmedabad Gazetteer, Ahmedabad, p 135.

6 The Dheds were absorbed in public works as both cultivators and mill weavers refused to associate with them. Handloom factories, however, employed Dhed labourers. Handloom factories of the east coast employed Malas. Gazetteer, Ahmedabad, p 80; Gazetteer, Berar, p 237 and Textile Enquiry Committee, p 1250

7 Gazetteer, Ahmedabad, p 136; Gazetteer, Nadia, p 92; Gazetteer(Imperial), Bengal, p 81; Gazetteer, Sambalpur, p 1; Badenoch (1917), p 1; Mukharji, p 322; Industrial Commission, evidence of Theogarayachetty, vol 3, p 56; Gazetteer, Mysore, p 240

8 Hardy (1929), pp 5, 47

9 This was reinforced by the specific division of labour in decorative crafts. 'Division of labour is usually applied, not only to single operations, but to wares'. Lenin (1972), p 391.

10 'The Europeans in India are now the principal buyers of embroidered cloth', Mukharji (1888), p 382. There are many local instances of similar adjustments. These extended to a number of other decorative crafts. Wood carving, earlier allied to architecture, reapplied its skills to furniture, glazed vessels gave way to teapots and candlesticks.

11 Seven of them were interviewed by the 1927 ITBC. The possibility of competition with handlooms was discussed. As a lobby these mills maintained a distinct identity and opposed tariffs on yarn.

12 Handloom census in Bombay (1948).

13 Watson (1866), pp 2-7
14 Irwin and Hall (1971), p 152.

15 Essentially three, kusum or safflower for red and yellow, al for red, and indigo for blue, black and green. Alum or myrabolan (Indian gall nuts) were used as mordanting substances. Minor dyes included cochineal, chay-root, all three for red.

16 For two authoritative descriptions, Birdwood (1887), p 295 and Thurston (1897), p 7.

17 Out of the several scores of names occurring in the 1880s surveys, four major concentrations still appear in the mid-thirties sources: Lucknow and Farrukhabad in eastern UP, Sanganer in Rajasthan, Ahmedabad in Gujarat. Dyeing, however, was far more widespread. Isolated instances of migration of printers were also reported. Mukharji (1888), p 353.

18 Hobson found, in 1887, block-printing 'a remunerative trade' in several Berar towns including Ellichpur. Ten years later Garrett reported that printing was practically unknown in Berar. Hobson (1887), p 6 and Garrett (1897), p

19 Weavers being their own dyers was found to be common in the south about the mid-twenties, Madras (1925), p 125. An earlier source on the north speak of it as a tendency, a 'retrograde step', Chatterjee (1908), p 66.

20 Irwin and Hall (1971) describe many examples of hybrid styles, results of Lancashire copying Indian prints and the Indians, in turn, copying these imitations. Confusion was widespread. See p 160, plates 93C, 9, colour plates VII and VIII for comparative instances of imitative and authentic work. Technical and art schools were also party to the process. See for example the debate between Burns, Principal of the J J School of Arts, a 'progressive' on synthetic styles, and Havell, Coomaraswamy et al, champions of authenticity, Havell, p , also Mukharji (1888), p 370. Switch to mineral dyes also loosened regional specificities in colour usage and printing styles, threatening the existence of any style at all. Prior to the shift every major location was known for its handling of particular dyes, masulipatam palampores for madder red, Kathiawar prints for deep brown and yellow, Umrer for cochineal red, Burhanpur for yellow and sparse use of indigo, Madur for chay-root deep red, etc. These patterns were broken by the standardised mineral dyes.

21 Hadi (1896), p 3, Latifi (1911), p 93. A whole literature exists on the apparent effects of the shift to chemical dyes. For a typical account, see Baden-Powell, 'That a country in which the older work, ... everything in which combined colour played a part, is so excellent; in which richness and depth, warmth and life, are combined with sobriety, delicacy and subdued harmony of tone, should delight in greens which are complimentary to no known colour, in violets which give one a disagreeable sensation at the bottom of one's throat, and in bluish crimsons which nature herself can hardly manage ... is truly wonderful', p 32. Thurston described the following example of 'the grotesque', 'And I have
before me, as I write, a glazed label depicting a group composed of a native lady with turmeric complexion, clad in a pink sari, seated on a maroon cushion, and engaged in conversation with a naked little blue boy, while a chubby, pink child looks round the corner of a violet purdah', p 6.

22 Gazetteer (Imperial), India, Economic, p 185, also Latifi (1911), p 93.

23 Baden-Powell (1886), p 32; Thurston (1897), p 7.

24 United Provinces (1924): Mirzapur, p 1; Gazetteer (Imperial), Madras, p 143, Latifi, p 97; Industrial Commission, vol III, evidence of Theogaraya Chetty, p 56; Irwin and Hall, passim; Gazetteer, Benares, p 60; ITBS, 1935, Written Evidence, p 311.


26 'Directly they depart from their traditional designs the Indian craftsmen do not know what is right and what is wrong', Industrial Commission, vol IV, evidence of Burns, p 255. Simplification of designs, conscious assimilation of styles were rarely successful. The craftsman either stubbornly resisted change or discarded all conventions, a polarisation appearing time and again in decorative crafts. Lenin (1972) noticed this reaction and generalised it into a feature of simple commodity production, pp 339-40.

27 FFC, p 165; Enthoven (1895), p 2; Bengal (1937), p 86. In silk ITBS noted a longterm decline in sizes and weights of typical fabrics.


30 ITBS, 1935, Oral Evidence, p 259 and Written Evidence, passim. Tariff Board, Art Silk, p 15; ITBS, 1935, Written Evidence, p 270 (on Benares), and Ghosh (1949) suggest fine cotton as the main loser, and ITBS, 1935, Written Evidence, p 275 (Mysore), 282 (Punjab), 287 (Central Provinces), 289 (Bengal) suggest silk.

31 FFC, p 120; Birdwood (1888), p 252, Maxwell-Lefroy and Ansrge (1916), p 161; Bombay (1948); Banking Enquiry Committee, Punjab, passim.

32 FFC, p 172, Chatterton, p 229, Havell, p 10.

33 At the turn of the century Banerjei (1896) found wage
employment among dyers of eastern Indian towns, Patna, Gaya, Calcutta, Murshidabad, p 12. For later examples, United Provinces (1924): Farrukhabad, p 70; Lucknow, p 95; Bombay (1938), p 62 on Ahmedabad and ITBS, 1935, Written Evidence, pp 309-10 on Hyderabad. The Ahmedabad and Hyderabad sources refer to a tendency towards p

34 Thus, in Hyderabad, 'almost all the dyers and printers are ignorant of the proper way of using and manipulating the synthetic dyes or of combining the same with mordants', as a result 'majority of them prefer to work under master-dyer as labourers', ITBS, 1935, Written Evidence, pp 309-10.

35 Evidence of Marsden, Industrial Commission, vol III.

36 Ranga (1930), p ; Industrial Commission, Vol 3, p 187; Thurston (1897), p 8; Chatterton (1912), p 134. There were a few cases of yarn merchants investing in dyehouses, from Howrah hat, Surat, Yeola and Nagpur, FFC, p 137; ITBS,1940. Written Evidence, p 412; Dewar (1901), p 30, Mukharji (1888), p 339.

37 ITBS, 1940, Oral Evidence, p 288. Proposal of Director of Industries, Bombay.

38 FFC, pp 121-4, 126, 131; Bengal (1940), p 32; Textile Enquiry Committee, vol II, p 618.

39 Venkatraman (1936-7), p 95. Trade in nonstandard items at the same time might have become increasingly speculative for information on these did not travel freely. This condition plagued raw silk and is likely to apply to fabrics as well.

40 ITBS, 1935, Written Evidence, p 300

41 Bengal (1940), pp 22-5, 32. Per capita cloth consumption by Hindus was about 50 per cent higher than that of Muslims, to the extent the latter were less urbanised rural weavers also meant serving a smaller market, Bengal (1937), p 74, 86. Also Joshi (1936), p 119

42 Gupta (1909) reports, 'except in Pabna and Dacca and Rangpur, I did not come across any other place where thread is dyed locally', p 13

43 India (1954), pp 8, 1408; India (1964), p 24; India (1965), p 69. Besides local handloom weavers, other early entrepreneurs in small powerlooms included unemployed mill workers (Sholapur), migrant handloom weavers (Bhiwandi), wholesale cloth traders (art silk mills of west coast).