

De-skilling in Handloom Sector

A study of the handloom Weavers of Varanasi district, Uttar Pradesh in India.

Tanusree Shaw¹ and Arnab Das²

Abstract. *This paper examines the effect of capitalist control and technological changes in the handloom industry of Varanasi in Uttar Pradesh. The Karl Marx and Harry Braverman's concept of deskilling is one of the consequences of the capitalistic control and technological changes and it studied theoretically and empirically in the field area. Deskilling is a feature of the labour process theory and it is a process that gives rise to alienation of labour. The handloom industry of Varanasi is dominated by the system of monopoly capitalism where Merchant/Master weaver/Gaddidar controls over the labour process. The 'logic' of capitalist production requires the constant transformation of the techniques of producing. This involves increasing mechanization and automation and as a corollary, the displacement of skills. In Varanasi, such mechanization and automation has taken place. As a result the artisan becomes deskilled and loss of job from the traditional handloom industry.*

Keywords: Handloom, Capitalism, technological change, Deskilling, labour Process.

Introduction

This paper is discussed about the Marx-Braverman's deskilling concept which is the effect and/or impact of capitalist control (mode of production process) and technological change upon the skilled handloom weavers of Varanasi in Uttar Pradesh. Deskilling is the process by which skilled labour within an industry or economy is alienated through the separation between conception and execution (Marx 1876). Deskilling is the features of the labour process theory and this feature is seen in the traditional handloom weavers of Varanasi. The Varanasi handloom industry is a field where the rudimentary mode of production (pre-capitalism) to modern mode (capitalism) of production is seen markedly. In previous time, production was organized in the house premises of weavers or producers, either independently or under putting out system. There was thus the unity of conception and execution in the labour process and this is the features of pre-capitalism. Then, with grow of capitalism in Varanasi; the handloom weaving is dominated by Capitalist Merchant. It means under a 'Putting out

1 Senior Research Fellow, Department of Anthropology, University of Calcutta. Email: tanu.anthropologycu@gmail.com

2 Associate professor, Department of Anthropology, University of Calcutta.

system' where the instruments of production possessed by the weavers and the merchant capitalist advances the circulating capital (the wage fund and raw material). The weavers work only for wages and wages gradually dwindle. This wage labour system causes alienation. There was no existing value of skilled labour and no unity between conception and execution. The capitalist merchant or mahajan or gaddidar wanted to produce larger quantities and to control over the increasing number of labourers who were gathered under the control of single capitalist. At this stage detailed division of labour is introduced and after that started alienation of labour under the capitalist relation of production.

In this circumstance, a large part of the technology came to be personified in machinery and equipment, what is Marx called 'Modern Industry' and Braverman identified as mechanization and automation. In 1980's power-loom were introduced in Varanasi besides the handloom. Now Varanasi has become a power-loom sector. With the introduction of machinery, the control of the relative motion between the tool-material pair goes out of the human hand to the machine and the skill of the craftsperson is no longer required. The deskilling of the worker weakened his/her resistance to capitalist control of the labour process (Marx 1867:380-85). Workers gradually become depend on the machine. The weavers could not compete with this technological change and at last they adapted it for surviving their life as management or capitalist has already accepted. The weavers of Varanasi do not longer want to stay with handloom and they shifted handloom to power-loom as a semiskilled or unskilled labour.

The objective of this paper is to study the Marxs and Braverman's deskilling concept in handloom industry at Varanasi of Uttar Pradesh in India. For the study of deskilling, this paper has also highlighted on the production system, capitalism and technological changes which denotes the features of labour process of the handloom industry.

Deskilling Concept (Karl Marx and Harry Braverman Insights)

Marx (1867) was the first to establish that there is a long-run tendency for workers to become deskilled in the process of production in a capitalist economy¹. Marx (1867:320) identified the deskilling process through the separation between conception and execution that gives rise to alienation of labour, emerged in the 2nd stage of production is called 'manufacture' (as a mode of organizing the labour process). When Marx (1986:318) worked on the labour process theory, he noted this tendency in the vehicle manufacturing industry in England. Because of in the 1st stage, production was organized in the house premises of the weavers or producers, either independently or under putting out system. In case of independent production, the weaver or producer had complete control on the labour process by means of production, that is, raw material and instrument (tools) and possessed weaving knowledge and skill. There was thus the unity of conception and execution in the labour process. In case of the putting-out system, the merchant supplied the raw materials to the producer. The producer or craftsman owned the instrument of production (that is, tool) with which he performed the work. The work involved the control, judgment and craft-knowledge of the craftsman. There was a unity of conception and execution in the labour process because the producer had to decide when to work, how to work

and how much. It was based on rudimentary technology that did not need a detailed division of labour. This is the features of pre-capitalism.

In 2nd stage production occurred in larger quantities and increased number of labourers were gathered under the control of a single capitalist. The craftsperson was transformed into what Marx calls a detail labourer, for the various stages of production were isolated by the capitalist to establish a detailed division of labour. The purpose of the capitalist was two-fold—to increase productivity and to control the labour process (Marx 1867:321-23). The technological basis of 'manufacture' was still craft technology. Productivity was enhanced "by the improved 'dexterity' promoted in each worker by the division of labour" (Weiss 1976:108). Adam Smith (1776:8) first in his study of pin-making enterprises clearly discusses the alienation of labour that originates from the detailed division of labour through the separation between conception and execution. Based on Smith's discussion, Marx elaborated the theme in the context of his discussion on the evolution of the mode of production from simple cooperation to modern factory system. After Smith, Charles Babbage (1771) in his book *On the Economy of Machinery and Manufactures* (1835) reflected in the skill of labour. He observed that the more detailed the division of labour is and the more the work is subdivided, the lower is the required skill level for most of the tasks. The management should therefore organize production in such a way that the work is subdivided to optimize the division of labour so that the cost of skill formation is minimized.

The deskilling process continued with the next mode of organizing the labour process—what Marx called 'modern industry'². With the transition from 'manufacture' to 'modern industry', a large part of the technology came to be personified in machinery and equipment. According to Marx³, the heart of the labour process now became the machine. With the introduction of machinery, the control of the relative motion between the tool-material pair goes out of the human hand and to the machine and the skill of the craftsperson is no longer required. The deskilling of the worker weakened his/her resistance to capitalist control of the labour process (Marx 1867:380-85). Workers increasingly become 'an appendage to the machine' (Marx 1867: 367). Also, the intensity of the labour process tended to increase with the use of machinery since the increased speed of the machine required greater activity and attention on the part of the worker (Marx 1867: 385-93). This theme has been vividly and most imaginatively depicted by Charlie Chaplin in his movie *Modern Times*. Real wages could be kept down with deskilling since the supply of suitable workers was widened and expensive apprentice schemes did not have to be supported.

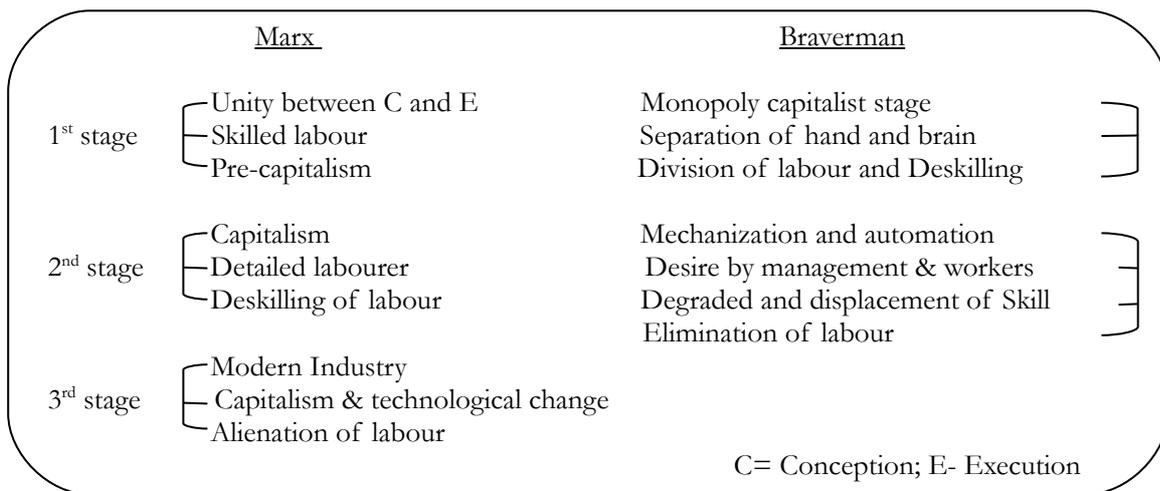
After Marx, Braverman studied the deskilling from competitive to monopoly stage and showed that capitalism had not altered the tendency to deskilling in these stages but change has taken place in method of doing so. The problem for management, to ensure the transformation of worker's capacity to work into actual work, which is the key to profitability, was resolved in the twentieth century by the application of Frederick Taylor's system of scientific management⁴ (Braverman 1974). "The separation of hand and brain is the most decisive single step in the division of labour taken by the capitalist mode of production. It is inherent in that mode of production from its beginnings, and it develops, under capitalist management, throughout the history of capitalism, but it is only during the past century that the scale of production, the resources made available to the modern

corporation by the rapid accumulation of capital, and the conceptual apparatus and trained personnel have become available to ‘*institutionalise this separation in a systematic and formal fashion*’ (Braverman 1974:126). The way in which this is done is as follows: (1) gathering together the know-how and mode of execution of each task and working out the best way to do it; (2) this complete know-how is made the exclusive preserve of management; and (3) management uses this exclusive monopoly over technology and the labor process to control the labor process and each specific step and the mode of its execution (Braverman 1974:119). The attempt is to dissociate the labour process from the knowledge and skills of the worker and make it dependent on the practices of management—the principle of separation of conception from execution (Braverman 1974:113). Each specific detail to be performed by each worker is communicated to her/him in the form of simplified instructions. It is his/her ‘duty to follow (these instructions) unthinkingly and without comprehension of the underlying technical reasoning or data’ (Braverman 1974:118). Braverman distinguishes the two specifically as the ‘scientific-technical revolution’ and Taylorism and seems to imply that a particular technology can be adopted with different variants of organization of the labour process. This seems to suggest that modern technology may not require the routine, monotonous, hierarchical, and mindless work which the majority of industrial workers are subjected to. Thus it may not be modern technology but the capitalist drive for profits and accumulation⁵ that is the root cause of labour process control and deskilling.

In *Labour and Monopoly Capital* (1974), Harry Braverman⁶ also postulated deskilling⁷ of labour will emerge from the combined effects of modern management and new styles of mechanization and automation⁸. Braverman pointed out two important factors in his deskilling thesis. First, technology alone does not deskill. Braverman rejected such a technologically determinist framework, arguing that deskilling is a result of the use of technology by management seeking increased control. Second, deskilling is not the only effect when management uses technology to gain more control over the labour process as there must be some workers or managers who are re-skilled or up-skilled. To Braverman, the crux of deskilling was the replacement of skilled workers, who were more expensive and less controllable by machines. For Braverman the ‘logic’ of capitalist production requires the constant transformation of the techniques of producing. This involves increasing mechanization and automation and as a corollary, the displacement of skills⁹. The work-force becomes ever more degraded and deskilled. For Braverman the deskilling of labour is part of a generalized tendency for capitalist managements to use scientific knowledge to subdivide labour and increase their control over all parts of the profit-making process. Braverman’s framework necessitates the presence of two factors for deskilling to occur. He does not suggest that technology¹⁰ alone is the source of deskilling. The introduction of a new technology to a workplace only becomes a mechanism for deskilling when it is accompanied by a desire by management¹¹ to examine and decompose work processes to its most granular level so that the tasks involved can be subdivided (1998: 180). According to Braverman’s thesis, deskilling occurs when technology is combined with management tools to subdivide a skilled task into smaller components, which can then be performed by a greater number of individuals with less skill (and at less cost). The first element of deskilling is a shift of control. The work process changes from one governed by skilled workers (who know all the required elements in a

process) to one where control is concentrated in the hands of management with individual workers given increasingly simple and routine tasks (Braverman 1998: 170). He also inscribes on his thesis about the skill is ‘there is a long run tendency through fragmentation, rationalization, and mechanization for workers and their jobs to become deskilled, both in an absolute sense (they lose craft and traditional abilities) and in a relative one (scientific knowledge progressively accumulates in the production process)’ [Zimbalist 1979:15].

Chart No. 1 *Deskilling concept of Marx and Braverman*



Methodology

The present work has emphasized on the Marx-Braverman’s perception of deskilling in handloom industry. The district which is selected for the field is Varanasi¹² city of Uttar Pradesh, known as famous handloom home. In Varanasi, there are many handloom clusters but the survey was taken up only one handloom cluster is known as Allaipura. All the weavers are Muslim in community. This research is based in the merits of ethnography¹³, which permits the researcher to become personally involved in the lived experiences and realities of the participants (Creswell 2008: 13). In-depth interview, semi structure interview, case study and focus group discussion also have been taken as a tool for data collection. The data have collected through the purposive sampling. The aim of sampling was to capture the feature of labour process i.e. deskilling phenomena that exist in the field area. Total 100 handloom weavers have interviewed, among them 50 who were independent weavers, 50 who worked under the gaddidar or Merchant to know the unity and separation of weaving process and consequence of the technological changes on them. And 50 gaddidars and 50 master weavers have also interviewed. The gaddidars and master weavers help me to understand the production system (mode of production process) and also the reason behind the desire of the automation and mechanization by management.

Overview of Production Systems

The production system is a set of established structure through which organization will run. It is observed that the weavers carry on their work of production either independently or under the merchant's jurisdiction with a superior base of assets. In the Varanasi, the word 'Gaddidar'¹⁴ is familiar to identify a merchant. 'Gaddidars' means an entrepreneurial group who invest their capital in the several stages from production to trading. These stages include buying of raw material, dyeing threads, designing, preparation of warp and weft, weaving, polishing and at last marketing of the finished product. A gaddidar is chiefly engaged in trade, for both the input and output in a market of handloom weaving. In the field area, one more category is also popular in the weaving sector i.e. Master weaver or locally known as 'Gerestha' who also involved in production unit. At the beginning of handloom industry, merchant and weavers, these only two performers found. Even in Varanasi, in earlier times, two types of people are said to be involved i.e. one is merchant or businessman (Hindu) and other is a weaver (Muslim). After Eighteen century, some weavers developed as 'Gerestha or Master Weavers' by introducing their capital, trading capacity with gaddidars, and good knowledge of weaving. In Varanasi, economic differentiation is the key factor for evolving the class of master weaver from the ranks of the artisans or weavers. It is true that the possession of capital had pushed certain weavers into a position of hiring out their labour. The job of the gerestha is to supervise the production process in an own production unit. There were two ways in which the master-weavers could organize textile production-either by supplying the weaver with advances in the form of raw material or cash or by bringing the weavers under one roof. But the role of the master-weaver began to change in the ninetieth century. Although in some rare instances, the bond between the master-weaver and the hired weavers continued to be close, the master-weavers working for the merchants or gaddidars began increasingly to act as the henchmen of the gaddidars and to coerce and extort the weavers working under them. The production process in Varanasi runs through the two systems i.e. Bani or monopoly system and Non-bani system.

Bani or monopoly system

'Bani' is one of the ways in which gaddidar exercises control over the weavers. 'Bani' is a local term in Varanasi. The local name of this kind of a system varies. Bani mean wages. The weavers called 'Bani' and gaddidars called it 'Majduri'. Most of the weavers used to work under Bani system. A gaddidar supplies yarn to the small weavers on the condition that all the products are to be sold to him and get their wages. This system has occurred in two ways-in one ways gaddidars though geresthas give the yarn and cash to the weaver. Cash is required for running weaving operations, such as dyeing, warping, wefting, denting, drafting and also for the subsistence of the weaver. After finishing of the product, gaddidar subtracts this cash amount from final wages of the weavers. In other way, gaddidars give all things like design, patta¹⁵, and warping yarn to the weavers and weavers weave only for wages. Subsequent to completion of this job, the wage of the 'product' is fixed after the negotiation between the gaddidar and weavers. The wages vary on the complexity of the design and these wages are too low.

In Varanasi, three types of weaver are found such as the independent weaver, the contact weaver and the loom

less weaver. The Contact Weavers and Loom-less weavers also are under this system. The contact weaver works on contract basis means they get raw material and other things from the gaddidars or master weavers in terms of getting wages. Wages are determined on the basis of the intricacy of the design and bargaining capacity of the weaver, which has weakened considerably during the last decade as the industry is facing a slump. Loom-less Weavers have no loom of their own but employed as a wage earner to others loom or master weaver's factory premises. Another kind of loomless weavers is found in Varanasi i.e. those weavers who have been given a loom by master weaver or gaddidars installed at their home and they take raw material from the employer and weave a saree. The loom continues to be owned by the trader and weavers is paid only wage.

Non-bani system

The independent or self employed weavers belong to this system. The weavers, who have their own loom, buy their own raw material on credit or cash from the raw material supplier, weave the actual product and then sell it to the trader or exporter directly or through an additional middleman. This type of weavers is independent in nature. The traders may help them in getting the raw material on credit. These weavers can be an individual weaver or a master-weaver, who designs and weaves as well as get other weavers to weave for him on his handloom or on the weaver's own handloom. In previous time, all weavers were independent weavers. The number of such weavers is decreasing over the last decade when capitalism started to rule. Apart from master weavers, an independent weaver should get a better price but lack of holding capacity and fluctuating raw material prices force him to compromise with the payment delaying tactics. Those weavers who have no enough capital for performing the production independently, they joined as a wage labour under the Bani system.

Capitalism and technological change

It is recognized that Varanasi is a famous handloom home of the India. After Industrialization, many innovations (in weaving sectors) have come to the door of the country. Varanasi is not an exception and accepts new innovation naturally. So, here changes have taken place with the development of the loom and competitive market strategy. With this advancement, handloom industry is in a process of transition. In Varanasi city, this transition process (from the community based to detailed division of labour) is markedly present. At the beginning, handloom production was organized in the house premises of the weavers or producers, independently. The loom was rudimentary in technology, locally called 'hat karga'. All the activities of weaving such as designing, dyeing, denting, drafting, weaving and polishing were done by weavers or weaver's family members. After making products, the weavers used to go to the market or a trading merchant or direct buyer to sell their product. Even in case of BS system, gaddidar or master weavers supplied the raw material to the weavers. Then the weavers performed the entire weaving work. This work involved the control, the conception, the execution and weaving knowledge and skill. This is the features of pre-capitalism. The weavers chose design, colour and yarn count (which is called conception) and then decided how to work (execution). There was thus the unity of conception and execution in the labour process. It shows some features of the community based

social division labour. Weaving still considered being the activity of a particular Muslim community in Varanasi. Even today the handloom industry retains this character to a large extent. Because of handloom weaving involves special skill and knowledge still specific to a certain community. For example, the 'Benarasi saree' is confined to the Muslim weavers of Varanasi. Only these weavers know the specific knowledge of design. The community maintains this skill and know how is not usually divulged to outsiders.

After that, with grow of capitalism and a competitive market economy, need more production and more control over the labour process. In Varanasi, handloom industry also adopts the labour process of capitalism as such when jacquard looms came into existence. To increase the production, the weaving process divided into different steps under a single capitalist control and from that time outside labour involved in this activity. Thus, this ways detailed division of labour came in dominant. The master weaver or gaddidar decides the design, colour and yarn count and bound the total time he finished the work. The weavers only work for wages which is minimized. So, unity in conception and execution is totally diminished. The deskilling process started from that time in the weaving community.

Detailed division of labour

There are 12 operations have observed in the field area (see figure no. 1). These operations are-Buying yarn, making design, patta cutting, bleaching, dyeing the yarn, rolling the threads in pirns and bobbins through charka, warping the threads in drum and beam, denting and drafting, weaving, cutting the threads (if necessary), polishing and carrying the finished product to the market. Each of the 12 operations is not executed by one person. Many people require for this job. These operations are categorized into three group i.e. preparatory works, weaving and post weaving work. The preparatory jobs are buying yarn, drawing design, patta cutting, bleaching, dyeing the yarns, rolling the threads in pirns and bobbins through charka, warping the threads in drum and beam, denting and drafting and post weaving jobs are cutting the threads, polishing and folding. Under pre-capitalism each 11 operations (except patta cutting) are planned and executed by the weavers and weaver's family members without involvement of the outside labour. At present involvement of outside labour is common features in the production under gaddidar and independently. The designing, patta cutting, warping and polishing are done by outside labour in terms of payment only.

It is observed in Varanasi that all the weavers and other associates who are connected with weaving are multi loom owner. For performing work, first the weaver needs the yarns which supply the master weaver or gaddidar if weavers are under the BS system. The table 1 shows 100 per cent of cases gaddidars supply the yarn to the weaver and the weavers who are independently weave; they buy their own raw material on cash or on credit from the raw material supplier. The independent weavers involved in the activities like buying the raw material, choosing the design, dyeing, and rolling thread in pirns and bobbins along with weaving. Design is a crucial job in handloom weaving. Designing is usually done by the design master who is belonging to the weaver's group or weaver's family member but not weave the product. But the weaver may exercise his options as regards which design he would adopt. In Varanasi, independent weavers have authority to choose the design (83 per cent) and

17 per cent weavers get instruction of the gaddidar or master weaver who buy his product. In the field area, it is found that gaddidar (92 per cent of the cases) gives the design to the weavers. Even gaddidar also engages a designer to draw a design according to gaddidar's or weaver's own conception. The Patta cutting is totally done by the outside labour (100 per cent) in both cases under BS system or independently weaves (see table no.1). These sections of people belong to either weaver's community or outside people who learn this job as a profession from the trainer. They take money for this work. In Varanasi, 65 per cent (see table no. 1) gaddidar gives the ready patta with the design; otherwise gaddidar (30 per cent) gives money to the weavers for cutting the patta from the shop. After that weavers / master weavers take these cards and installed into the jacquard device on top the loom, which guides the yarn (warp) according to the design. The design set-up in jacquard lasts till the next design is introduced.

Dyeing is the next stage which is mainly done by the male members of the family. When male members have no time and quantity of the material is high, it is sent to the dyer. A person whose job is only to dye the material (tana and bana) and he takes rupees 50-100 per sari. The rate of dying depends on the quantity of product and the numbers of colour are done. Suppose a man gives order of 20 saris with one colour for dying, the charge is automatically reduced from rupees 50 to rupees 35 per sari. The table no. 1 shows independent weavers (94 per cent) always involved themselves in this activity to save money. Sometimes, those weavers (6 per cent) who have no family labour power and quantity become huge; they send it to the outside labour for dyeing. Under Gaddidar, as production is always high, so outside labours (73 per cent) used to do this. When quantity is small weavers (27 per cent) can handle the material. The dried yarn is prepared for *tana* (warp) and *bana* (weft). In Varanasi the wrap reeling is called as '*Tana Tanana*' or '*Tana lepatan*'⁴⁶. The gaddidars or master weavers employ an outside labour for drumming, denting and drafting operations because their production scale is huge. The outside labour takes rupees 20 to 50 per six meters. It takes two hours. They do in a day about 180 to 240 meters (30 to 40 saris) tana. The table no. 1 shows 90 per cent of this job is done by outside labour in the case of under BS system. Those independent weavers who have no sufficient money and have labour power, they warp the tana themselves and it is found 65 per cent weavers done this job. 35 per cent weavers send to the outside labour. After the warp is completed, it is taken home and it is fixed with the loom, opposite the weaver's seat. To put the threads (tana) through the comb like frame, called 'Chirni' and it takes two days and it is called denting and drafting. Under the BS system, this work done by outside labour (90 per cent) and only 10 per cent done by weaver's family members. The involvement of the outside labour is higher in the BS system than independent enterprise. Rolling the threads in pirns and bobbin through charka are always done by the female members of the weaver's family. Under the BS system, 80 per cent female folk get some money for this job as an employer. In case of Independent enterprise, 95 per cent female members of the family did this job but they do not get any money separately. Only 5 per cent (see table no. 1) weavers send to outside female folk who has done this job in terms of payment. Then the weaving starts. After finishing a sari, it is generally sent to the female folk for cutting threads or zaris if necessary. They take 2-3 days for cutting the excess threads or zaris and get 100 rupees for one saree. Under the BS system, 87 per cent outside female members and 13 per cent female members of the

weaver's family have done this job. For saving money, the female members (100 per cent) of the independent weaver did this job. Then it is sent to polish and finally for selling. The polishing is known as 'Calendar method' in Varanasi. The finished product is polished either manually or by a compressor machine. Usually the weavers carry the product to the gaddidars and the gaddidar's responsibility is to finish the product for marketing. The gaddidars send the finished product for calendaring by machine to the outside labour. The Independent weavers take responsibility for polishing manually in maximum cases. Then the product is carried to the market. Marketing is always kept on in the domain of the gaddidars and master weavers.

After introducing of the jacquard looms and the detailed division of labour in Varanasi, new innovative machine i.e. power-loom came into existence. As such rule of capitalism, capitalistic production requires the constant transformation of the techniques of producing. The management desired it and accepted this technological change. The tendency of capitalist management is to use scientific knowledge to increase their control over all parts of the profit making process. The product cost and price are lower in power-loom. Power-loom product takes modest time to produce and wage is better than handloom sector. Thus, the use of the power-looms is rapidly increasing. The intensive labour of the weaver and weaver's family members are not required in power-loom sector as all the activities are done by the different machine itself. The control of conception and execution goes out of the weaver's hand to the machine. In power-loom, it is not mandatory or necessary to have knowledge of weaving. The power-loom does not require skilled person and it wants only those people who knows the operating system of the power-loom machine. Thus, anyone can join as a labour of power-loom. This is the process by which skilled weaver within an industry or economy is eliminated by the introduction of technologies operated by semiskilled or unskilled workers.

Deskilling

The reason behind the deskilling of the handloom weaver is i) the detailed division of labour ii) technological change, both are the separation between planning and execution that give rise to the alienation of labour from the production process. Both are the result of capitalism. In a deskilling process, weavers have lost control over the work process and performed increasingly smaller and routine tasks. Within this little responsibilities a weaver is not only deskilled, but also easily replaced. However, even though there is a decline in the level of skill of the worker, Braverman (1998: 294) argues that the reduction of an understanding of the labour process is an even greater loss to the worker. It is observed in Varanasi that under the BS system the weavers usually get instruction from the gaddidars or master weavers. Master Weaver supplies the design and dictates on what the cloth finally would be in terms of colour, design and texture to the weavers. This is the major part of the conceptual work in weaving. This part is not now performed by the weavers. As a result the control on the weaving of the weavers gradually hand over to the merchant or gaddidars. The gaddidars and master weavers were not depended on the weavers for weaving.

After introducing of power-loom in handloom sector, skill, knowledge and detailed labourer were totally diminished. Capitalistic merchant noticed it is more labour saving, time saving and profit making system. One or

two labour is enough for running production. The domestic and foreign markets were occupied by cheap rated power-loom products. The handloom weaving did not survive in competition with power-loom on the market. Though, the handloom has own market but it undersized. The handloom weavers had assumed that in power-loom, the wage is so high than handloom and survive easily from this crisis period. The weavers gradually engaged as a labour in power-loom for the struggle for existence. Thus, management and weavers both adopted the power-loom for uplifting the weaving industry. So, the handloom weavers were not only deskilled eliminated from their traditional industry.

Conclusion

The deskilling features of labour process have some resemblances to what had been sketched out by Marx and Braverman in their studies on the labour process in the context of West European and North American society and both existed by side by in the handloom industry in Varanasi. In manufacture, the improved division of labour was rather a means of virtually replacing the labourers. But, in machinery, the worker is actually displaced; the machine competes with him directly. Reduction in cost through concentration of production is much greater in modern industry than in the manufacture. The prices of finished goods prove how much the machine has cheapened production, and that the portion of value due to the instruments of labour grows relatively, but declines absolutely. The productivity of the machine is measured by the extent to which it replaces human labour-power. Since machinery itself contains the power-driving it, muscular power drops in value. There is an immediate increase in the number of wage labourers through the enrolling of members of the family who had not previously worked for wages. Thus, the value of the man's labour-power is spread over the labour-power of the whole family — i.e., depreciated. Now, four persons instead of one must perform not only labour, but also surplus-labour for capital that one family may live. Thus, the degree of exploitation is increased together with the material exploitation.

Thus, the handloom weaver became deskilled from their traditional knowledge, roles and also industry. The value of their skill is no longer remaining. These circumstances are put forward the handloom industry is come to an end and eliminated the skilled handloom weavers. The weavers have no choice, either stay with doomed handloom or adapt new technologies. The skilled handloom weavers have left or sell their handloom and joined as a wage labour of power-loom. Those weavers who have capital they installed the power-loom in their house premises or factory site. The handloom weavers and the outside labour learns the operating system of power-loom. Hence, the concept of Re-skilling emerged in this industry. It means the displacement of the skilled handloom weavers of semi-skilled or unskilled power-loom labour with knowledge of the operating system of power-loom machine. The later generations of the weavers have involved them in the power-loom business. It may be said this re-skilling concept is a later progression towards new innovation which is fairly automated, new skills associated with scientific and technical disciplines are necessary to be acquired by workers.

Notes

1. According to Marx, capitalistic mode of production is usually associated with the modern industrial societies. He divided class into two subclasses i.e. Bourgeoisie (the ruling class) and Proletariat (the exploitee). The bourgeoisie exploited the proletariat in the form of wage labour. The bourgeoisie always possess the means of production and proletariat has their own labour power, which they must sell for surviving.
2. The modern industrial societies require increasingly skilled workforces such as emergence of electronics as a new force in production (Bell 1973 & Touraine 1969). Perhaps the strongest argument concerning the importance of electronics for future developments in the division of labor was put forward by Fuchs (1968) in his seminal work, *The Service Economy*. Fuchs argued that the evolution of new advanced technologies (particularly computers) requires an increasingly educated labour force for their successful development.
3. Among the Marxist, Friedman (1977), Edwards (1979) and Burawoy (1979) had criticized Deskilling hypothesis. Friedman and Burawoy argued that it was necessary for controlling the labour process under competitive capitalism. According to them, under monopoly capitalism, deskilling is no longer necessary for control, but control on labour process can be achieved by adopting 'responsible autonomy' (Friedman 1977) or through 'manufacturing consent' (Burawoy 1979) that does not require deskilling of labour. Edwards (1979) has developed a more historicized view of the evolution of the labour process. He suggested three forms of control – 1) simple, 2) technical and 3) bureaucratic. He believed that the impact of the different forms of control on skills is mixed, which mean some workers are re-skilled while others remain deskilled. The capitalist production system does not necessarily deskill all the workers. The non-Marxist arguments are those of the 'human capital view' (Becker 1964) and the 'reskilling with automation view' (Blauner 1964). Both Becker and Blauner argue that there is scope for re-skilling associated with the scientific and technical disciplines that are needed for modern manufacturing. The deskilling hypothesis came under serious criticism more recently when scientific management was being superseded by flexible specialization, which is popularly known as the Japanese management technique. Briefly speaking, flexible specialization is associated with flexible technology, with the help of which the mass production of standard goods with inflexible technology, which is typical to Fordism or Taylorism, is being replaced. The flexible production organizes production with a workforce, trained to make a wide variety of goods with a general-purpose machine. It is claimed that flexible production thus reduces the detailed division of labour and removes the alienation of labour due to deskilling.
4. Scientific management was the extension of the idea of Charles Babbage in the context of the technology of the twentieth century. For detailed discussion, see Taylor (1947).
5. In this respect Stephen Marglin (1974:62) makes the point that the 'social function of hierarchical work organization is not technical efficiency, but accumulation'. However, the way Marglin defines technological efficiency—'output over input, with input of labour measured not by cost but by labour hours weighted for effort'— makes a change of techniques which replace skilled by unskilled labour, thereby reducing cost per unit of output, fall outside his conceptual framework (Landes 1986:594)
6. The primary value of Braverman's thesis lies not in objective tests of whether it is invariably correct, but as an

analytical tool for the examination of the dynamic interaction between management policy, technology and workers skill (Huws 2003).

7. Deskillling has also taken place in other occupations like nursing (Rinard 1996), librarianship (Hannah & Harris 1996), journalism (Liu 2006), and even law (Wall & Johnstone 1997). This broad range of occupations in which deskillling has been noted suggests that Braverman's thesis can be applied to intellectual as well as industrial forms of labour. Scholars have also examined other types of enterprise wide information systems and found evidence of deskillling. Knowledge management systems have been found to have a deskillling effect (Hasan & Crawford 2003), and computer integrated manufacturing was found to deskill machine operators while up skilling managers (Agnew et al. 1997).

8. Several authors have noted that the introduction of computer technology does not deskill intellectual workers in the same linear manner as machinery deskills manual labourers (Thompson 1989: 115, Meiksins 1994: 49, Heisig 2009: 1645).

9. Jones (1982:200) in his empirical research, reported on the re-distribution of skills in engineering as a result of the introduction of numerically controlled machine tools in Britain concludes that 'no process of a general reduction of skills can be said to be taking place'. Fincham (1983) also makes the same point in his analysis of the effects of new technologies on the balance of manual skills in the Edinburgh area.

10. Zeitlen (1979) showed in his study that craftsmen in the British Printing industry from 1890 to 1930 got into key position in the new division of labour after technical change.

11. Many literature shows that managements choose and implement into the labour process technological designs that reduce their dependence on workers' skill and increase their control over workers' activities (see papers of Cornfield 1987, Gartman 1986, Wallace and Kalleberg 1982, Zimbalist 1979).

12. For more than thousand years, the city of Varanasi (Benaras) has been home to the largest number of handloom weavers in India. It is estimated that there are more than 125,000 weavers in this cluster and it is one of the largest geographical concentrations of handloom weavers in the country. According to Outlook India 'Looms of Doom', 27 September 2004 issue, there were more than 500,000 weavers living in Varanasi.

13. Ethnography as a strategy in which variety of methods can be used in the quest for knowledge (pelto & pelto 1978) and it is both a process and a product (Morgan 1988).

14. In varanasi, the 'Gaddidars' are divided into three categories according to their trading capacity and capital i.e. a) big Gaddidars b) medium Gaddidars and c) mini or 'chhota' (small) Gaddidars. After interviewing the gaddidars and weavers, it is known that near about 20-30 or more master weavers (Gerestha) are under the big gaddidars who export the maximum goods and the remaining products are sold in domestic market. The medium gaddidars are working with about 10-20 master weavers and they trade in domestic and foreign market. The Chowk is famous place for big and medium gaddidars. In Madanpura the chhota gaddidars (small) are found in maximum number and they all are Muslims in caste. The chhota gaddidars are small entrepreneurial and they trade only in the domestic market. They open shops for local market and Madanpura is well-known for these types of shops. In case of small gaddidars, they have no fixed master weaver. They buy the goods from the

Independent weavers.

15. The completed design is sent to specialized shop that converts the design into a series of punch cards. This work is known as 'Card Making' or locally called it 'Patta Cuting'. Patta cutting is a process, in which making design on pitch board by cutting numerous holes according to 'naksha'. The graph paper is kept on an iron sheet which is full of pores. According to box of graph paper, a person makes pores on card box with the help of hammer and chisel ('chheni'). This is called 'Patta'. These patta or cards are stitched in a specified series.

16. In this process, four to five people are needed. The length of yarn reeled on a five feet long warp cylinder is sufficient for six times length of a sari (33 meters). This cylinder rod is known as 'Tur' (6 feet long) which is attached with two strong sticks or iron rods, 'Khutti or Khutt' struck upright in the ground. In the upper portion of the Khutta, there is a hook on the two sides. At the opposite side of the 'Tur', one wooden thick stick or thin iron rod is placed with several iron hooks (9 hooks are placed with some intervals). Another wooden or iron thin stick is passed through these hooks. This stick possesses number of threads along its length. Six or seven threads are placed between the distances of one hook to another hook, so in the total distance fifty threads are sited. In this way threads are stretched length wise between the two poles. To roll the 'tani' round the 'Tur' one person is needed, other two persons are engaged to look after the threads when it is rolling and a strong man holds the other ends of the threads round his waist and walk slowly in the direction of the 'Tur' when it is rolled.

References

- Agnew, A., Forrester, P., Hassard, J., & Procter, S. 1997. 'Deskilling and reskilling within the labour process: The case of computer integrated manufacturing'. *International Journal of Production Economics*, 52:3, 317-324.
- Babbage, C. 1972. 'On the Economy of Machinery and Manufactures' (1835), L E, Davis and J C Taylor (eds), *Design of Jobs*, Penguin, Harmondsworth.
- Becker, G. S. 1964. *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Columbia University Press, New York.
- Bell, D. 1973. *The Coming of Post-industrial Society*. London: Basic Books.
- Blauner, R. 1964. *Alienation and Freedom: The Factory Worker and His Industry*. University of Chicago Press, Chicago.
- Braverman, H. 1974. *Labour and Monopoly Capital*, Monthly Review Press. New York.
- Braverman, H. 1980. 'Transformation of Office Work', T. Nichols (eds), *Capital and Labour*, Athlons Press, London.
- Burawoy, M. 1979. *Manufacturing Consent*, University of Chicago Press, Chicago.
- Creswell, John W. 2008. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. New York: Sage.
- Cornfield, Daniel B., (eds.) 1987. *Workers, Managers, and Technological Change*. New York: Plenum.
- Daniel, H., S. A., & Harris, H. M. 1996. 'Information technology and the future of work', *Progressive Librarian*. 10/11. [http://libr.org/pl/10-11_Hannah.html].
- Edwards, R. 1979. *Contested Terrain: The Transformation of the Workplace in the 20th Century*. Heinemann, London.
- Friedman, A. 1977. *Industry and Labour: Class Struggle at Work, and Monopoly Capitalism*. Macmillan.

- Fincham, R. 1983. 'The diffusion of new technology: a study of some firms in the Edinburgh area', Napier College Social Research Working Paper, 4, *Essays on the New Technology*.
- Fuchs, V. R. 1968. *The Service Economy*. New York: Basic Books.
- Gartman, D. 1986. *Auto Slavery*. New Brunswick: Rutgers.
- Hasan, H., & Crawford, K. 2003. 'Codifying or enabling: The challenge of knowledge management systems', *Journal of Operational Research Society*, 54:2, 184-193.
- Heisig, U. 2009. 'The deskilling and upskilling debate', in R. Maclean and D. Wilson (eds.). *International handbook of education for the changing world of work*. Dordrecht: Springer.
- Huws, U. 2003. *The making of a cybertariat: Virtual work in a real world*. New York: Monthly Review Press.
- Huws, U. 2007. 'The spark in the engine: Creative workers in the global economy', *Work Organisation, Labour & Globalisation*, 1:1, 1-12.
- Jones, B. 1982. 'Destruction or redistribution of engineering skills? The case of numerical control', S. Wood. (eds.) *The Degradation of Work? Skill, deskilling and the labour process*. London: Heinemann.
- Liu, C. 2006. 'Deskilling effects on journalists: ICTs and the labour process of Taiwanese newspaper reporters', *Canadian Journal of Communication*, 31:3, 695-714.
- Marglin, Stephen A. 1974. 'What Do Bosses Do? The Origins and Functions of Hierarchy in Capitalist Production', *Review of Radical Political Economics*, summer.
- Marx, K. 1976. *Capital: a critique of political economy*, volume 1, trans. B. Fowkes. London, Penguin.
- Marx, K. 1986. *Capital, (1867)*. Progress Publishers, Moscow.
- Marx, K. 1993. *Economic and Philosophical Manuscripts of 1844*, National Book Agency, Calcutta.
- Marx, K. 1973. *Grundrisse*. Pengui.
- Meiksins, P. 1994. 'Labor and monopoly capital for the 1990s: A review and critique of the labour process debate', *Monthly Review*, 46:6, 45-59.
- Morgan, D. L. 1988. 'Focus Groups as Qualitative Research'. Qualitative Research Methods Series. Thousand Oaks: Sage. 16.
- Mukherjee, S. 2004, 27 Sept. 'Looms of Doom', Outlook India: Uttar Pradesh.
- Pelto, P. J., & Pelto, H. G. 1978. *Anthropological Research: The Structure of Enquiry*. Cambridge: Cambridge University Press.
- Peoples' Vigilance Committee on Human Rights (PVCHR), Varanasi, Uttar Pradesh, India, from <http://www.Pvchr.blogspot.com>.
- Rashid, S. 1998. *The Myth of Adam Smith*. Edward Elgar. Cheltenham, UK.
- Rinard, R. G. 1996. 'Technology, deskilling, and nurses: The impact of technologically changing environment', *Advances in Nursing Science*, 18:4, 60-70.
- Smith, A. 1961. *The Wealth of Nations*, Vol 1, (1776), Edwin Cannan (ed), Methuen and Co, London.
- Spencer, D. A. 2000. 'Braverman and the contribution of labour process analysis to the critique of capitalist production – twenty five years on', *Work, Employment & Society*, 14:2, 223-243.

Spencer, D. A. 2009. *The political economy of work*. London: Routledge.

Taylor, F W. 1947. 'The Principles of Scientific Management', *Scientific Management*, Harper and Brothers Publishers, New York and London.

Touraine, A. 1969. *La Societe post-industrielle*. Paris: Editions Minuet.

Thompson, P. 1989. *The nature of work*, 2nd Ed. London: Macmillan.

Wall, D. S. and J. Johnstone 1997. 'The industrialization of legal practice and the rise of the new electric lawyer: The impact of information technology on legal practice in the U.K.', *International Journal of the Sociology of Law*, 25:2, 95-116.

Wallace, M., & Kalleberg, A. 1982. 'Industrial Transformation and the Decline of Craft.' *American Sociological Review*, 47, 307-324.

Weiss, Donald D. 1976. 'Marx versus Smith on Division of Labour', special issue on *Technology, the Labour Process and the Working Class*, *Monthly Review*, July-August.

Zeitlen, J. 1979. 'Craft Control and the Division of Labour: Engineers and Compositors in Britain, 1890-1930'. *Cambridge Journal of Economics*, September.

Zimbalist, A. (eds.) 1979. *Case Studies in the Labor Process*. New York: Monthly Review Press.

Zuboff, S. 1998. *In the age of the smart machine: the future of work and power*. New York: Basic Books.

Figure No. 1 Different Stages of Weaving on Jacquard Loom

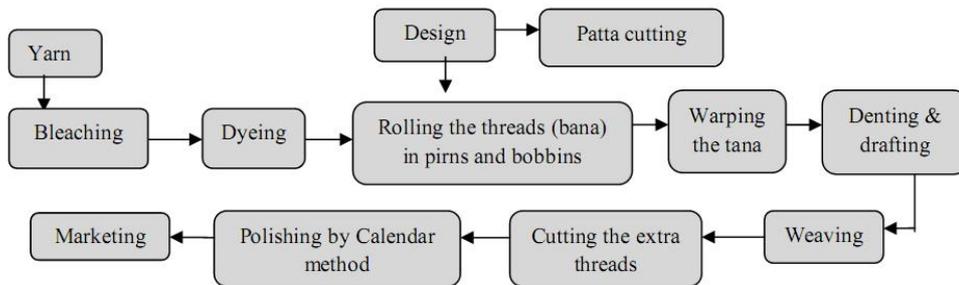


Table: 1 detailed division of labour in handloom weaving of Varanasi

Operations	Under Gaddidar (N=50)			Independent (N=50)		
	G (100)	W (0)	-	-	W (100)	-
Buying the yarn	G (92)	W (8)	-	G (17)	W (83)	-
Choosing Design	G (0)	W (0)	O (100)	-	O (100)	-
Patta cutting	G (0)	WF(27)	O (73)	-	WF (94)	O (6)
Dyeing	G (0)	WF(5)	O (95)	-	WF (65)	O (35)
Warping the yarn (Drumming)	G (0)	WF (10)	O (90)	-	WF (80)	O (20)
Denting and drafting	G (0)	F (20)	OF (80)	-	F (95)	OF (5)
Rolling the threads in bobbin and pirns through charka	G (0)	W(100)	-	-	W(100)	-
Weaving	G (0)	F (13)	OF (87)	-	F (100)	-
Cutting the threads	G (100)	W(0)	-	-	WF(69)	O (31)
Polishing Folding and packet	G (100)	W(0)	-	-	W (100)	-
Carrying the product to the market	G (100)	W(0)	-	-	W (100)	-

Source: Field Survey, 2010-2011. G= Gaddidar or Merchant; W= Weaver; WF= Weaver's family member; F= Female members of the family; O= Outside labour; OF= outside female members; N- number of respondents; Figure in brackets indicates percentage.