A COMPARISON OF SIZE AND CONSTRUCTION FEATURES OF SIZE 12 BOYS' SHIRTS AS FOUND ON THE LANSING, MICHIGAN MARKET WITH SPECIAL EMPHASIS ON IMPORTS FROM HONG KONG AND JAPAN

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INTRODUCTION

Today's American consumer lives in a world of choice. The average wage is higher than ever before; our income and the amount of money used for necessities and luxuries gives the consumer great opportunity to live well above subsistance level. The flexibility of this higher income and the allowance for greater choice by the consumer can determine the characteristic and direction of "American Life." There is available, as never before, discretionary income to purchase what the customer desires and to develop his own "American Life." As a result of technology, mass production, advancement in the textile industry, and a highly competitive market; a smaller percentage of the consumer dollar is being spent on clothing. At the same time the consumer dollar is buying a greater number of units at lower unit cost. With these factors taken into consideration, size 12 boys' shirts were chosen as a representative type of garment for this study. The following purposes were established:

1. To gain an understanding of the present market conditions, especially the economic aspects of the foreign markets as represented by Hong Kong and Japan.
2. To determine the size variations of size 12 boys' shirts selected to represent the American, Japanese, and Hong Kong market.

3. To determine the differences in construction features of size 12 boys' shirts selected to represent American, Japanese, and Hong Kong workmanship.

4. To establish relationships of price, size, and construction features as to source and time of purchase.

To fulfill these objectives the author did background readings mainly reviewing the articles written about Japanese and Hong Kong trade as published during 1959 or articles published in 1958 that lead to action affecting the textile trade in 1959. The results of this reading is found in chapters one and two. Chapter three is an attempt to show size comparisons, based on government bulletin CS 14-51. Chapters four and five review construction features of the shirts studied.

The purpose of this paper is to present the economic factors and the information concerning the available products on a competitive market, that assist the discriminating consumer to distinguish the factors that develop the characteristics and direction of the "American Life."

INDUSTRIALIZED JAPAN, 1959

Contrary to the stereotype of Japan as a country of cherry blossoms and geisha girls, is the fact that Japan has ranked for the past 20 years among the six most highly industrialized countries of the world. Much is to be learned of Japanese industrialization when reading Norman Jacobs' book, The Origin of Modern Capitalism and Eastern Asia in which he writes, ". . . The social values which led to the emergence of a capitalism in Japan were in existence from a very early stage in the evolution of Japanese society, . . ." Capitalism is often measured by Gross National Products. Japan's G.N.P. reached 28.2 billion in 1958, a rise of eight percent per year since 1950. The present national income is about 50 percent above pre-war level or a per capita income increase of 25 percent.[1] Japan can be looked upon as an island meager in national resources, but rich in human skills. She imports almost all industrial raw materials, converting them through cheap labor into finished goods which make up most of her exports. Approximately 25 percent of 700 million dollars worth of Japan's exports come to the United States.[2]

1959 Trade Outlook

The struggle and failure of military supremacy neither affected Japan's high ability as a trader, an industrialist, nor the size of her

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1. "Japanese Business Men; Leaders in an Economic Miracle," Business Week, April 18, 1959, p. 103.

2. Ibid. p105.

manpower--only the direction of her endeavor was changed. Because of World War II activities and present economic and political conditions, Japan's prewar "Guaranteed" market of Formosa, Korea, Manchuria, and China has been lost. The long range view of the Japanese is to have more trade with industrialized countries rather than with underdeveloped countries. At this point Japan is attempting to develop new markets and is investigating possibilities for increased trade. Japan's industrial efforts have included the opening of a Fifth Avenue Shop, in 1958, to introduce high quality Japanese merchandise to the United States. If this venture is successful, Japan will establish high quality merchandise shops in Chicago, Los Angeles, and Miami, and will lease departments in stores throughout the United States.[3]

Early in 1959 Japan converted a cargo ship to represent 850 Japanese manufacturers or about 70 percent of her industries and sent a floating exhibit to Latin America. The ship docked for a day or two in each of the important ports of Latin America, and concluded its tour by visiting the United States port of San Francisco. The purpose of this exhibit, which included exhibits of textiles and textile machinery, was to promote Japanese industrial products in Latin American countries and in San Francisco.[4] Internal signs of prosperity and increased standards of living are shown by TV sets, electrical appliances, the ladies wearing copies of Paris and New

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3. "Tokyo Opens Fifth Avenue Shop," Business Week, October 25, 1958.

4. "Japan Floats a Fair to Latin America," Printers, Inc., March 27, 1959, p. 80

York fashions, and the gay quarters of Osaka.

Investment and Foreign Trade

An inventory of Japan finds her rich in people and abilities, but lacking in natural resources and investment dollars. Japan has a growing population, the figure standing around 92 million at the present time; of these 800,000 enter the labor force each year.[5] Manual labor has been appreciated as power since early industrialization. Although not necessarily privileged, each role in the division of labor is honorable. In 1948 the United States began earnestly to build Japan as an anti-communist stronghold in Asia and the present industrial boom started. To stop inflation and create sound currency an American banker, J. M. Dodge, led a mission to Tokyo in 1949. The American interests paralled a production jump of 25 percent and a consumption climb of 10 percent for 1949 and over the past 11 years the Japanese have signed some 825 contracts with foreign companies. The Japanese companies agreed to pay a flat fee, or royalities, of two percent of the annual sales, or a combination of fee and royality. Seventy-five percent of these contracts include: technical know-how concerning electrical equipment, communications equipment, machine tools, chemical products, and processes. Over 525 companies from the United States participated in licensing the program. In 1958 United States companies earned over 25 million from Japanese licensed programs. The Bank of Japan estimates

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5. Op. Cit., Business Week, April 18, 1959, p. 103.

earnings will total 50 million annually by 1961.[6] The United States Department of Commerce estimates that we have investments of around 181 million dollars in Japanese industries. The investment is low in comparison to investments in Latin American countries and Western Europe. Japan has limited foreign investments by requiring a foreign company to link with a Japanese company. In these linked companies the investment is usually less than 50 percent foreign capital. The Japanese give several reasons for keeping the lid on foreign investments: 1. Heavy investments requiring remittance in dollars would upset the delicate foreign exchange balance. 2. Heavy investments by non-Japanese might bring foreign ownership of important domestic industries. 3. Japan's traditional economic nationalism. Japan is often mentioned as a threat to world trade today, however, she does not have her pre-war share of the world market. In 1938 Japan was fourth in the world trade market and today, eighth. To off set this loss in world trade, a domestic market is being developed and an improved standard of living.[7]

Industrial Development

In discussing the industrialization of Japan and its development both during the industrial revolution and now, Jacobs writes, ". . . industrial Japan contains many feudal features among which the following may be listed: (a) persistence of a large domestic-village type industry; (b) atomization of land holdings; (c) stagnant village population; (d) large element of unskilled

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6. Ibid, p. 03

7. Ibid. Business Week, April 18, 1959, p. 105.

labor composed of women and children, in industry; and (e) narrow home market."[8] These he compares with Western Europe rather than Asian culture. The small-scale and big industry operate side by side in Japan, which is a combination vital to Japanese economy. Japanese industrial operation has been so successful that the Government of India sent Chaman Lal to study the Cottage Industries of Japan and to make a report to the government as to how the system could be adapted in India. Chaman Lal was very favorably impressed. Perhaps his views are different than those of a Westerner, but the fact remains that the Cottage Industry is an economic and social structure viewed with favor and possibility for underdeveloped countries. Throughout history textiles and textile products have been the barometer of industry for the following reasons: the adaptability to small scale cottage methods, relatively untrained workers, low investment in machinery, and the need of little standardization in supervision to meet production needs.

Mr. Lal describes all of Japan as a home of factories and family cooperative industries. Everyone from children at the age of eight or ten, who work after school, to the aged, work in home industry. Spinning is done mostly in large mills, and weaving in small-scale industry. Eighty-six percent of the textile industry depends on home factories or the Cottage Industries. Home looms are run by cheap electric power which is found in 90 percent of all buildings in Japan. The small home factory of six looms

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8. Jacobs, Norman, The Origin of Modern Capitalism and Eastern Asia, p. 75.

can produce three hundred yards of cloth per day for the larger factory which does the finishing, packaging, and shipping.[9]

Both the Asian and Western industrialist feel that the factory is the center of industry. The plant, in Japan is often small scale and contains necessary machinery to take care of the assembling of parts made in many homes. Often the final product goes through many phases, and many homes, before the final assembly and shipping from the factory. The underdeveloped country looks upon the cottage-factory system of Japan with favor; while the highly industrialized country looks upon the system with disfavor for lowering wages and acceptable standards of living through cheap merchandise on the world market. The labor industry can show that in the cottage-factory industry the worker in the home earns as much as 50 percent less than the worker in the factory. Home production keeps down living standards and prevents the Western competitor from meeting production costs-- and eventually sales price. The Asian evaluation shows the Japanese to be efficient and well organized, because of trained technicians in every industry. The Westerner sees standards not being maintained, delivery dates not being met, and inefficiency stemming from a top-heavy organization of company operation.

East and West agree that Japan is educating both labor and management. Early in Japanese industrial development learning was recognized as the most practical technical tool for occupational groups. In

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9. Lal, Chapman; Cottage Industries & Agriculture in Japan, Chapter 5, p. 55.

Japan industrial education is supported by provincial government. Each year leading industrialists in textiles, steel, and other fields go on foreign tours to learn more about production and distribution of manufactured goods. Industrial education is supported by the provincial governments. Japan's industrial class has risen high in the post war world because the political stability rested on the economy and the economy controlled foreign investments and increased internal prosperity.

The Mighty Monopoly

Much of Japan's post-war recovery has been at the expense of the American taxpayer. Approximately 25 percent of 700 million dollars worth of Japan's exports come to the United States. The United States believes Japan to be a strong ally in Asia and that Communism threatens this area. While Southeast Asia is slowly developing and industrializing, Japan is attempting as quickly as possible to recover her pre-war place in the world market.

During the period Japan was under military rule the United States found it jurisprudent to separate the mighty monopoly of Mitsui Bussan into 180 separate firms. This action took place in 1947 accompanied by the Japanese comment, "Because one's parents are dead, will one cease to recognizing one's brothers and sisters?"[10] Within two years, there were signs of the Mitsui companies recombining. In 1953, a year after the peace treaty was signed two companies had been established. One was the Daiichi

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10. "Mighty Mitsui;" Fortune, May 1959, p. 85.

Bussan, a trading company dealing with almost every commodity, and the other Muro-machi Bussan was mainly a metals trader. Later in 1958 a merger of the two was arranged by Mitsui Bank President, Kiichiro Sato under the name of Mitsui Bussan. There is a significant difference between the old company and the present agreement. The old monopoly was controlled by 11 Mitsui families, but now the Mitsui financial institution holds only 11 percent of the new firm's stock. Nevertheless, this merger is regarded with foreboding, because already .04 percent of Japan's 400,000 companies make over 50 percent of the profit. The new Mitsui company has 40 domestic and 41 foreign branches. It is again Japan's largest trading company. They hold the sole agency for Japan's largest coal producers, some of the largest chemical and fertilizer companies, and Japan's steel works and the Mitsui ship building. Mitsui Machinery, Show AirCraft, Tokyo Rayon, and Sanki Engineering will work closely with Tōyo Shibaura Electric which is linked with General Electric International. These companies, trading through Muro-Machi Bussan, will become what are in effect aliments of a vertical trust. The monopoly is also looking forward and has its eye on two fields: atomic energy and petrochemicals. They also hope to do some domestic hand holding in the form of more mergers to "eliminate unnecessary, excessive competition." [11] The great Bussan monopoly is the problem of the American manufacturer who must maintain wage scales and living standards.

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11. Ibid. . . .

In Japan the large industry is supplied by the small cottage industries whose wage scale is around 50 to 83 cents a day. In Japan mark-up for factory processes runs under 10 percent in comparison to four or five hundred percent needed in the United States. However, a much closer mark-up is taken by the two countries when comparing total production; in Japan it is around 20 percent, while the United States takes around 36 percent.[12] The lower wage scale and lower cost of raw material bring down the wrath of the United States producer, because he cannot compete with the lower production costs. The Socialist Party of Japan is agitating for a minimum wage bill. If passed many handicraft industries will head into bankruptcy. A minimum wage bill would also aggravate unemployment and the higher wage costs would drive up Japan's general low prices. One sees emerging a battle between monopoly and wage. In the studies of Japanese culture one finds that throughout Japanese history the merchants have been able to assert their economic, political, and even fiscal, independence of any ruling authority.

1959 Textile Topic

The 1959 Japanese textile topic has been that of textile quotas. For two years the Japanese have been operating on a self imposed 235,000 square yard limit which has been considered "voluntary." In April of 1959 Japan asked for an increase of 15 million square yards. Immediate opposition was voiced by the American textile and clothing makers.[13] By August seven

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12. "Japan is Opposed on Textile Quota," New York Times, April 1, 1959, p. 51:1

13. Ibid., New York Times, April 1, 1959, p. 51:1

groups headed by the United States-Japanese Trade Council had voiced against the Cotton Council petition for imposing restrictions.[14] By November the White House asked for a cotton study and for a short time at least Japanese quotas would stay the same.[15] The purpose of the proposed increase was to foster increased trade between the United States and Japan. The Japanese were charged with bad faith to raise the "voluntary quotas" which were agreed to for a five-year term. The Pastore Committee in Congress made the suggestion that the whole theory of the Japanese quotas be abandoned and the United States quotas be substituted. The Pastore committee is strongly opposed to any increase. Opposition is based on figures showing a recession in the textile industries and American industries have not recovered to the level on which the original quotas were based and the five-year agreement made.

Little complaint will be heard throughout the United States textile industry if Japan does not increase her quotas. However, the United States does propose some changes including the tightening of the flexible clauses and defining gingham and striped gingham. Harry M. Ferguson of Dan River Mills and Chairman of the Gingham Market Group of the Association of Cotton Textile Merchants of New York gives an example of how the "voluntary" quota is working. In 1958 the gingham quota was 35 million square yards.

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14. "Trade Groups Hit Textile Curbing," New York Times, Aug. 5, 1959, p. 33:2.

15. "White House Asks Cotton Fee Study," New York Times, Nov. 11, 1959, p. 49:7.

In the first nine months of the year Japan shipped twenty-nine and seven tenth million yards of gingham to the United States. In addition she sent thirteen and nine tenth million yards of yarn-dyed goods similar to gingham plus a twelve months total of gingham garments equal to twenty-one million yards. All told, the Japanese competition with the United States government producers easily amounted to 70 million yards or double the "voluntary" quota by the end of the year. Further, the Japanese gingham fabric quota represents 15 percent of the domestic production and 31 percent of Japan's whole cotton woven-goods quota. If anything, Ferguson feels that the quota should be more clearly defined and reduced.[16]

President Eisenhower instructed The Tariff Commission, in November 1959, to "ascertain if fiber exports return as cheap grey goods,"[17] to the United States. At the present time United States cotton is supported under existing legislation at a price considerably above the world level. The cotton placed on the world market is subsidized through the Commodity Credit Corporation at eight cents per pound. The present inquiries would determine the need of an "eight cent" fee per pound on cotton content of imported textiles to equalize costs between world and domestic cotton market prices. The imports chiefly affected would be cheap cotton goods from Japan, Hong Kong, and a few of the Asian countries. This type of fee normally applies after the

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16. "Japanese Export Quotas - The Battle Goes On," Textile World, January 1959, p. 8.

17. Op. Cit, New York Times, November 11, 1959, p. 49:7

quota allotment on imports has been exceeded. At the present time such fees are applied to British woolens, and Canadian rye when these commodities exceed the quota figures. The American cotton people realize the importance of several things: 1. Japan is being careful at the present time because of the facts brought out in the Pastore report. 2. The 1960 election. 3. The political implications of keeping Japan as the link between the West and Communist Asia.

The Japanese economic expansion follows the United States by about six months and is good for competitive co-existence with the Communist world. Economic expansion in Japan promises to, and is giving, a rise in living standards, but for all of the favorable aspects, the United States is in an uncomfortable position. Only the American companies with overseas production facilities or individuals with foreign investments stand to gain for at least the next year or so. A good part of the gold dollar accumulated in Japan comes from United States military expenditures. Several hundred million dollars also reach the Japanese treasury thourgh the United States aid program. The Japanese also sell goods financed by these American dollars to customers of United States business men. Special trade and investment restrictions have been pointed out earlier. The United States is committed not to undermine the Japanese economy, and will be more comfortable when she has proven her competitive strength, and lightened the load of dollar expenditures abroad that find their way into foreign exchange reserve.

INDUSTRIALIZED HONG KONG, 1959

Hong Kong, a British Crown Colony, is an island off the coast of China. The area is about the size of the City of New York with agricultural areas and a concentration of industry in the free-port city. Hong Kong is the delight of the tourist and the gateway to Communist China and all of Eastern Asia. With post-war activities and the investment in underdeveloped countries Hong Kong has become a focal point of interest. Industries have developed fast and efficiently in the British Crown Colony of Hong Kong with textile manufacture becoming the biggest single industry. The manufacturer of textiles, fabrics and apparel brings the colony $66,000,000 a year in export earnings and gives employment to 100,000 persons, many of whom are refugees from Communist China.[18] Typical of the situation is the supply of grey goods going into Hong Kong. In 1953 Japan supplied Hong Kong with 32 percent of the grey goods she needed, practically nothing coming from China. Today Communist China supplies 84 percent and Japan two percent. The overall export-import record for the first eight months of 1958 shows a 360 Hong Kong dollar decrease from the United States, Belgium, Japan, and the United Kingdom; and an increase by 126 million dollars from Communist China. In Hong Kong ten department stores and one hundred food shops have been established exclusively distributing items produced in

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18. "Textile Field There Divided on Trade Limit with U.S.," New York Times, January 19, 1960.

Communist China.[19] These shops are remarkable for the variety and pricing of the merchandise offered. Retail shops with merchandise from Communist China provide windows on a capitalist world in political avenues, and afford the "know-how" in trade spheres. Hong Kong is a convenient free port and the retail shops are a part of cold war technique to acquire foreign exchange. In acquisition of exchange from private overseas trade sources, Hong Kong provides a medium for getting large amounts of remittances directly into the Bank of China, sometimes paid for by arbitrary rates unfair to the sender. For political purposes these merchants engage in ruthless price cutting and sporadically renew the war midst price maintenance when the market is safely theirs. The Chinese shops in Hong Kong are able to do this because of the state-subsidized industries and state-controlled prices. The Red Chinese are constantly shipping in new products, not in large quantites, but for prestige purposes. Impressing the consumer is good propaganda mileage. Broad credit terms is another form of propaganda used by the Reds as wedge-driving. Maturities extend for a period of as long as two years as contrasted with two or three month maturities offered by the Hong Kong and Japanese money lenders.[20]

The critical effect on the trade offensive directed at the Hong Kong manufacturers has reduced local profits 20-25 percent and with some

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19. May, A.W., "Hong Kong-Funnel for Communist Economic Agression," The Commercial and Financial Chronical, Oct. 30, 1958, V188 p. 1768.

20. Ibid., May, p. 1768

production rates cut as much as 50 percent.[21] The communists have been motivated to grasp control of the market, particularly textiles which are the barometer of the economic world. Further political strategy is manifested in the favoring of merchants who support the communist politically. Price cutting has put out of business some of those who are unsympathetic. The tactics being used in Hong Kong are described in the Economist,[22] as being of two kinds: Communists are not expected to make physical invasions, but from the outside they exert diplomatic pressure and export "dumping." From the inside they show political self determination and manage labor unrest. An example of internal dissatisfaction is shown in an advertisement by the Federation of Korean Trade Unions against the Japanese attitude toward Korean Labor and deportation. The advertisement is called "A Statement Against Japan's Deportation," and is found in the March 8, 1959 issue of the New York Times, IV 7:7.

"Voluntary" Quotas, Great Britain

Limitations on Hong Kong's exports have been a topic of heated discussion in two countries during the past year. On February 2, 1959, a three-year agreement was reached with Great Britain whereby Hong Kong would have "voluntary" ceilings for the next three years. In November, 1959 Henry Kearns, United States Assistant Secretary of Commerce, visited Hong Kong to persuade local exporters to regulate sales to the United States' market. From this point the dispute with the United States

21. Ibid.

22. "Facts and Fantasy in Hong Kong," Economist, Dec. 27, 1958, p. 1166.

took off; and it followed similar lines of the earlier dispute with Great Britain.

The chain of events leading to "voluntary" quotas of Hong Kong merchandise exported can be followed by beginning with a report in the July 1958 Economist. Here was reported the suggestion that a Minister of the Crown visit Hong Kong and negotiate an agreement for a three-year ceiling on exports to Britain to include made-up goods as well as piece goods. The ceiling was to be "voluntary." It was expected that the agreement would embrace cotton goods for British home market and leave the door open to an increased quantity for re-export after finishing. By October 1958, the Economist reported the three things that Hong Kong felt should be in any agreement. Hong Kong also expressed its fears at what would follow if the agreement were not favorable. The trade agreements being established were of great importance, because they were among the first for Hong Kong and would set precedent for trade with other countries. The points Hong Kong felt important were: 1. any quotas established be confined to grey cloth only, 2. any quotas agreed upon be "controlled" by the Hong Kong government and textile interests, and 3. more details be gained from Lancashire (British) representatives about the amount of Hong Kong textiles that would be retained for use in Britain as opposed to those re-exported. Opposition was expressed by the textile manufacturers of Lancashire (Britain) to an agreement covering

only grey goods as being useless.

By January 1959, the agreement had been made and was to continue for a three-year period. Hong Kong agreed to limit the export of cotton-piece goods for home consumption in the United Kingdom to 115 million square yards annually for the next three years.[23] No limit was placed on the amount for re-export. The agreement also provided that export of yarn dyed cloth and towelling in excess of four million square yards per year would be subject to limits.[24] Any shortfall in overall quotas may be carried forward for the first half of the succeeding year for piece goods, but not for finished goods. Lancashire expressed dismay that no explicit limit was placed on export of made-up goods. An overall ceiling of 161 million square yards was agreed upon so if made-up goods exceeded 46 million yards piece goods would decrease correspondingly.[25] Exemptions were reported as being cotton yarns, thread, and a number of made-up goods. The end result of this agreement was much higher than the original request by the British Cotton Board and much lower than the Hong Kong proposal. Figures for the first eleven months of 1958 on imports of textile items into the United Kingdom from Hong Kong show 135 million square yards of which 92 million were grey cloth,

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23. "Better than Nothing," Economist, Jan. 10, 1959, p. 156.
24. Ibid., p. 156
25. Ibid., p. 156.

three million were finished cloth, and 38 million were made-up goods.[26] According to the British paper the results of this agreement will depend on two things: (1) economic conditions of Hong Kong not deteriorating badly and (2) a long overdue re-equipping of the Lancashire industry.

Voluntary Quotas, U.S.

The American version of this agreement is found in the February, 1959 issue of the Textile World. The article, "Hong Kong to Limit Exports to Britain," expresses the thought that both Hong Kong and Lancashire entered the agreement reluctantly. The English are reported to have agreed only after receiving a telegram from the Prime Minister that India and Pakistan would renegotiate on their own limited exports to Britain unless limitations were imposed on Hong Kong. The article also points out the 360,000 spindles and 9,500 looms account for 60 percent of Hong Kong's locally made exports. It is significant to note that the Textile World reported in the September 1958 issue a decrease in the number of looms in the world. Large decreases took place in the western world, but increases took place in the underdeveloped countries of Asia.

The ceilings are not harsh and the impact will not be felt until 1960 or 1961 and then only after an increase in Hong Kong production. The important things about the pact are the source of yarns and the effect of ceilings imposed by other countries. Hong Kong wants the quota open to competitive bidding and to use yarn from any source. The British

26. Ibid., p. 156.

want the weavers to be required to use Hong Kong yarn. Hong Kong rightly feared that the United States would begin to clamp down because exports were beginning to reach the United States in a considerable volume.

Hong Kong's fears were well founded for in November, 1959 Henry Kearns went to Hong Kong to begin negotiations on regulated sales from Hong Kong to the United States. Chances for United States restrictions were felt to be very good, and by the end of the year the offer to impose an "voluntary" quota had been sent to the United States Consulate-General. Opposing the quotas were the Chinese Manufacturers Association in Hong Kong who expressed the idea that the United States is an exponent of free trade and democracy. The president of the Association, Chu Shek-lun, believes that Mr. Kearns would not jeopardize the interests of the colony as a whole to please a "few" and called on the Hong Kong government to oppose restrictions by other countries on imports from Hong Kong. American textile manufacturers pressed for quotas because there was a rise in the first four months of 1959 in imports from Hong Kong. During that period approximately 37,500,000 yards of manufactured yard goods and garments came into the United States as compared to fifty-eight million yards during the entire 1958 year.[27]

U.S. Imports, 1959

Trade sources report that when the discussion of quotas in Hong Kong reached a high pitch that manufacturers began scouting around

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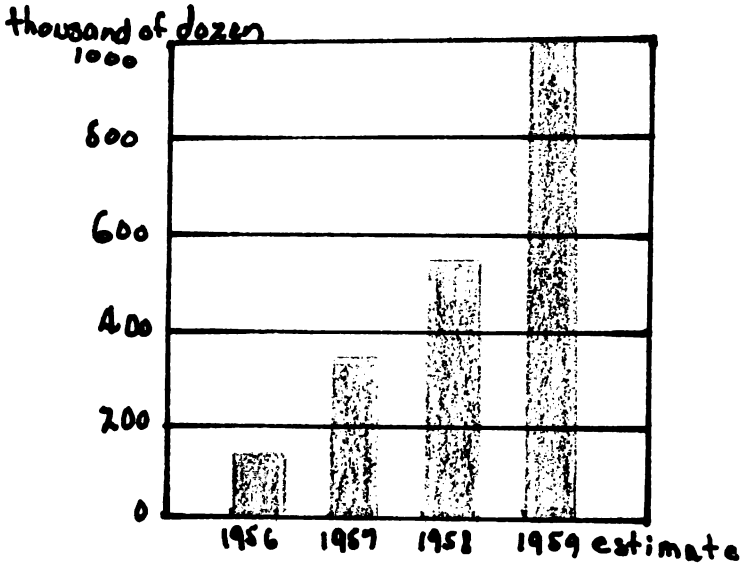
27. "Rise in Imports of Textiles Hit," New York Times, Oct. 16, 1959, p. 50:2.

for other locations for plants. Labor is as cheap or cheaper in Formosa, Portugal, and Spain. Limiting imports is needed because of the rise in the amount coming into the United States. The following quote is taken from the New York Times: "At the present rate of exports to the United States, Japan and Hong Kong together, it was pointed out, would be sending in shirts amounting to more than 12 percent of domestic output. It is feared that this rate would present competition for the domestic producers too formidable to overcome in times of stress." The following graph, taken from the same New York Times article shows the sharp rise in the number of shirts imported from Hong Kong.[28]

GRAPH I.

Shirt Imports from Hong Kong



Less than two-hundred thousand dozen shirts entered the United States

28. "Hong Kong Split on Export Quota," New York Times, Jan. 13, 1960.

market in 1956 and the estimated number was expected to exceed one thousand dozen in 1959. This would amount to more than 12 percent of our domestic output in 1959.

The major question in discussing Hong Kong and textile exports to the United States is, "Who should bear the economic burden?" During World War II the textile industry was considered number two in importance to our national security. At that time Hong Kong had no industry, but textiles are easy to develop and can be a real means to secure hard currency in a world market. The textile problem affects not only the textile industry, but the entire economy.

SIZE COMPARISONS

"Gee, Mom, this doesn't fit," and "Well, I can't understand why, because it is the same size and style as the shirt you like so well," are familiar phrases in the modern American home. Through an analysis of the facts behind these remarks, this paper will attempt to make understandable the variations in a given size shirt as found in the sample selection.

To compare shirt sizes, three size 12 American-made shirts selected by the Textile, Clothing and Related Arts Department of Michigan State University for research purposes during 1955, and 11 size 12 shirts purchased in the Lansing, Michigan stores in January of 1960 were used. The 1955 shirts were duplicated as nearly as possible in price, brand, and place of purchase with 1960 shirts. Besides these American-made shirts, the same size and the same brands or similar brands were purchased in size 12 shirts made in Hong Kong and Japan. A comparison of size 12 shirts manufactured five years ago with those found on today's market, both of American and foreign make, was attempted using the fourteen shirts selected.

Commercial Standards

The first step in comparing the shirts in the study was to discover what size standards had been developed and were being used by American, Japanese, and Hong Kong manufacturers. As early as 1951 standards had been developed and published as Commercial Standards

14-51 by manufacturers, distributors and users in cooperation with the Commodity Standards Division of the Office of Industry and Commerce, Bureau of Foreign and Domestic Commerce, and with the National Bureau of Standards. Most companies have adopted these standards and in addition have other specifications of their own. Application of these standards is voluntary, their purpose is to assist the consumer in making more satisfactory purchases. However, relatively few people refer to standards as buying guides, since standards are not a part of consumer information or readily available to consumers. As stated in the bulletin, Commercial Standards 14-51: "The purpose of this commercial standard is to provide standard methods of measuring and standard size measurements for boys' sport and dress shirts, for the guidance of producers, distributors, and users. Another purpose is to base the shirt measurements for size on a system of standard body measurements that can be presented to the consumer as a guide in buying, and that will be uniform for boys' garments of all types." The standard applies to all types of finished garments and woven shirts, and describes the method of measuring, size measurements, and label information. After studying the commercial standards the writer measured each shirt in the project by laying it out smoothly, without tension, and measuring to the nearest one-eight inch. The six standard measurements described in Commercial Standards 14-51 were followed and are included here:

"Neck. - Measured from the center of button parallel to the neckline to far end of buttonhole.

"Chest. - Twice the distance across the bottoned-up shirt, measured to its outer limits, 1 inch below the bottom of armhole.

"Length. - Measured from the highest point of the yoke to the bottom of the shirt when the front and back lengths are even at the bottom.

"Armhole girth. - Twice the distance across the sleeve at armhole, measured in a straight line from top to bottom of armhole.

"Yoke width. - Measured across bottom of yoke where it joins body of garment.

"Sleeve length. - Measured from top center of yoke to bottom of cuff."

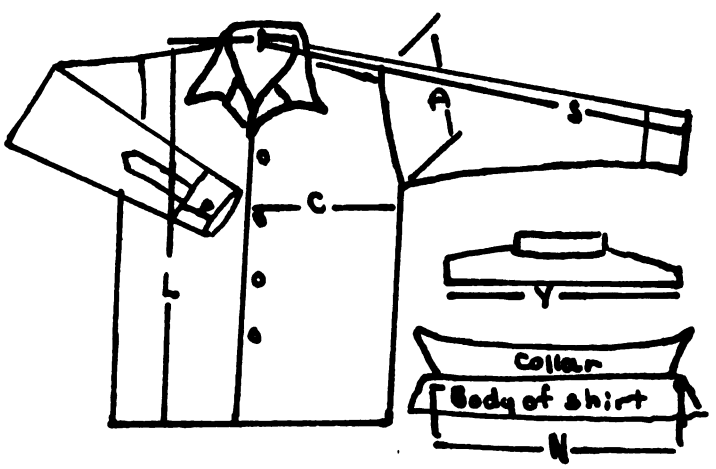


Figure 1 Boy's Sport Shirt

Table 1 of Commercial Standards 14-51 shows that measurements are based on boys' body measurements listed in government bulletin CS 155-50. Standard body measurements for a boy wearing a size 12 boys' shirt is 58 inches tall, weighs 87 pounds and the neck of the boy is 12 1/2 inches.

Chart I shows the measurements as set up in CS 14-51 and the measurements of each shirt in the study based on the description given in Commercial Standards 14-51. Each shirt was given a code number as shown in Chart I. Shirts purchased in 1960 are coded 60-1-2, etc. The 1955 shirts use code numbers WS-1-7, etc.

Chart I

Measurements of Selected Shirts

Compared With Commercial Standards 14-51

Shirt	Neck	Chest Girth	Body Length	Armhole Girth	Yolk Width	Sleeve Length
CS 14-51	13 1/2 ± 1/4 *	35 ± 1/2	23 ± 1/2	16 ± 1/2	14 1/2 ± 1/4	27 1/2 ± 1/2
60-1	14	35 1/2	22 1/4	16	14 3/4	27 3/4
60-5	13 3/4	35	23 1/4	16	14 3/8	27
60-4	14	32 3/4	24 1/8	16 1/4	14 1/2	28
60-2	13 1/4	34	22	14 1/2	14 1/4	28 3/4
60-7	14 1/2	35 1/2	22 7/8	15 1/4	14 1/2	27 3/4
60-6	14 3/4	34	23 1/4	15	14 1/2	27 3/4
60-9	13 1/2	36 1/2	22 1/2	16	14 5/8	27 1/2
60-8	14 5/8	33 3/4	23 3/8	15 3/4	14 3/8	27 1/4
60-10	14 1/8	34 1/2	23 3/8	17	14 1/2	27 3/4
60-8a	13 3/4	35	23 1/4	16	14 1/2	27
60-3	14	35 3/4	22 3/4	15 1/2	14 1/2	27
WS-7	13 7/8	34 3/4	23	16	14 1/2	27 5/8

* Tolerance is expressed with ± for each standard measurement given.

WS-1	14 1/8	33 3/4	23	16	14 3/8	27 3/4
WS-8	13 7/8	35 1/2	22 3/4	16 1/4	14 3/4	28 1/4

Chart II shows shirts with measurements falling within CS 14-51 in relation to: (a) all measurements for one shirt, (b) all shirts to each of the six measurements taken, and (ç) shirts to source. Accuracy varied from shirt 60-2 which came with in the standard tolerance measurements in only one instance to shirts 60-5 and 60-8a was accurate in all six

Chart II.

Accuracy of Measurements of Selected Shirts

When Compared to Commercial Standards 14-51, Grouped By

Country of Origin.

Shirt	Neck	Chest Girth	Body Length	Armhole Girth	Yolk Width	Sleeve Length	No. of Accurat Measure
*60-1		x		x	x	x	4
*60-5	x	x	x	x	x	x	6
*60-4		x		x	x	x	4
*60-9	x		x	x	x	x	5
+60-2					x		1
+60-7		x	x		x	x	4
+60-6			x		x	x	3
60-8				x	x	x	3
60-10		x			x	x	3
60-8a	x	x	x	x	x	x	6
60-3			x	x	x	x	4
WS-7		x	x	x	x	x	5
S-1			x	x	x		3
WS-8		x	x	x	x		4

*Made in Japan; +Made in Hong Kong

measurements taken. Three shirts of the 14 measured were within the standard tolerance five times; six were accurate in four measures, and

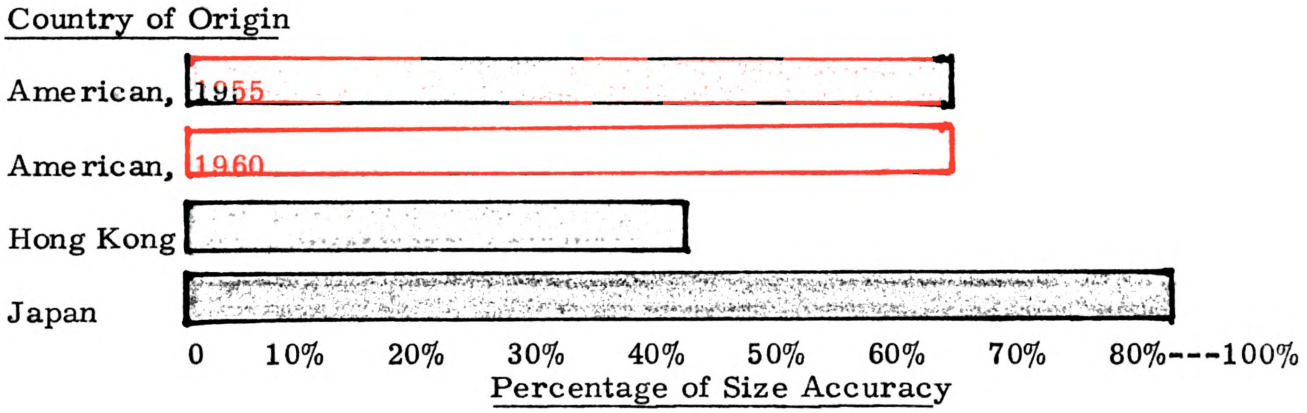
three were accurate in three measures. All shirts came within Commercial Standards 14-51 specifications in yoke width, 11 in sleeve length, 9 in body length, 10 in armhole girth, eight in chest girth, and only three in neck size.

Chart II. tends to point out that more needs to be done to develop accuracy in measurement. Considering the country of origin, shirts manufactured in Japan were most accurately sized, in 83 percent of the measurements taken. The American made shirts, purchased both in 1955 and 1960, had an accuracy of 66 percent. Shirts imported from Hong Kong were accurate in 44 percent of the measurements. Despite these differences one shirt from the United States and Japan were found to be accurate in five or six of the measurements taken when compared to commercial standards. Therefore, from the limited number of shirts selected for this study there is lack of evidence that imported shirts are inaccurately sized.

GRAPH II.

Percentage of Size Accuracy of Selected

Shirts in Relation to Country of Origin and Time of Purchase



The selected shirts were also compared as to accuracy among the selected stores. The comparison was limited to three large nation-wide chain stores selling soft goods. Two of the stores conduct mail order business, however, the selected shirts were purchased in retail outlet stores. Greater implications were noted when comparing the accuracy of measurements of shirts (including tolerances) purchased from among the selected stores as is shown in Chart III. Shirts from Store A were found to be accurate in 43 percent of the measurements taken,

Chart III.

Accuracy of Measurements of Selected Shirts

When Compared to Commercial Standards 14-51, Grouped By

Stores Where Purchased.

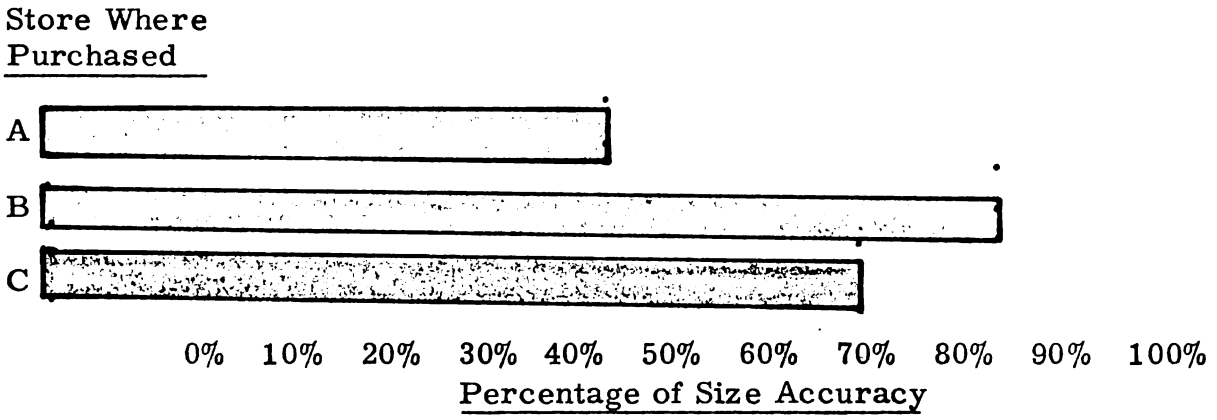
Shirt	Neck	Chest Girth	Body Length	Armhole Girth	Yoke Width	Sleeve Length	No. of Accurate measure
STORE A							
S-1			x	x	x		3
60-3			x	x	x	x	4
60-2					x		1
STORE B							
WS-7		x	x	x	x	x	5
60-8a	x	x	x	x	x	x	6
STORE C							
WS-8		x	x	x	x		4
60-10	x	x			x	x	4
60-8				x	x	x	3
60-9	x	x	x	x	x	x	6

shirts from Store B in 83 percent of the measurements, and shirts from Store C in 70 percent of the measurements taken. (See Graph III)

GRAPH III.

Percentage of Size Accuracy of Selected

Shirts in Relation to The Store Where It Was Purchased.



Considering all the figures discussed, one might decide that a reliable store is the most important item in accuracy when purchasing a size 12 boys' shirt and the American manufacturer might take a good look at his own and foreign operations to decide how he is meeting competition.

Looking at boys who might wear size 12 shirts it can be concluded that these boys probably vary as much as the shirts measured. Some are tall; some are short; some look tall because they are thin; some look short because they are chubby; and so the combinations go as in relation to sizes of boys. Each of the six measurements was examined to determine which shirt was largest, which smallest, and what the difference in inches was between the largest and smallest measurement for each particular measure. After the largest and smallest individual measurement was cited, the number of variations for a given shirt was examined to determine if a given shirt might be a better buy for a particular size boy. Chart IV gives information on the largest and smallest

measurement for each comparison. By examining Chart IV, it can be seen that in four out of six measurements shirt 60-2 is the smallest.

Chart IV

Summary of the Largest and Smallest Measurements Taken.

	CS 14-51	Largest	Shirt	Smallest	Shirt
Neck	13 1/2±1/2	14 3/4	60-6	13 1/4	60-2
Chest	35±1/2	36 1/2	60-9	32 3/4	60-4
Body Length	23±1/2	24 1/8	60-4	22	60-2
Armhole Girth	16±1/2	17	60-10	14 1/4	60-2
Yoke Width	14 1/2±1/4	14 3/4	60-1	14 1/4	60-3
Sleeve Length	27 1/2±1/2	28	60-4	26 3/4	6-2

However, in examining the largest measurements one's selection is not clear cut. Shirt 60-4 measures longest in body and sleeve length and the smallest through the chest. Could it not be concluded that this would probably be a good choice for a tall thin boy? What about the chubby child? Although shirt 60-9 had the largest chest measure it was within the standard tolerance for all other measurements; not giving extra room except through the chest. It might be noted that shirt 60-9 checked with five out of six standard measures. Little relationship was noted in shirt measurements larger than Commercial Standards 14-51 and therefore

no shirt could be recommended for the chubby boy. Although standards were established and accepted by many manufacturers, the shirts measured in this study were found to vary from the largest to the smallest in the following amounts: one and one-half inches in neck measurements; three and three-fourths inches in chest girth; two and three-fourths inches in armhole girth, one-half inch in yoke width; and one and one-fourth inches in sleeve length.

Chart V shows a comparison of actual shirt measurements to Commercial Standards 14-51 (without tolerance) purchased from the same store and of the same brand. Shirts from Store A fell under the

Chart V.

Difference in Inches of Shirt Measurements

From Commercial Standards 14-51 (without tolerance)

Shirt	Neck	Chest Girth	Body Length	Armhole Girth	Yoke Width	Sleeve Length
STORE A						
s-1	+ 5/8	-1 1/4		+ 1/8		+ 1/4
60-3	+ 1/2	+ 3/4	-1/4	-1/2	-1/4	+ 1/8
60-2	-1/4	-1	-1	-1 3/8	-1/4	-3/4
STORE B						
WS-7	+ 3/8	-1/4		+ 1/8		+ 1/8
60-8a	+ 1/4		+ 1/4	+ 1/8		-1/2
STORE C						
WS-8	+ 3/8	+ 1/2	-1/4	+ 3/8		+ 3/4
60-10	+ 5/8	-1/2	+ 3/8	+ 1 1/8		-1/2
60-8	+ 1 1/8	-1 1/4	+ 3/8	-1/8	-1/8	-1/4
60-9		+ 1 1/2	-1/2	+ 1/8	+ 1/8	

standard measure in ten cases and over in four. Shirts from Store B had the most accurate measurements but were over in three instances and under in two. Shirts from Store C had greater than standard measurements in ten instances and less than standard in eight.

Country of manufacture was also compared. Shirts from Japan were found to be over sized in eleven instances and under sized in four. Shirts made in Hong Kong were slightly under sized, with figures showing shirts to be below standards in ten cases and over in six. American-made shirts purchased in 1960 were larger than the standard in 11 measures and smaller in nine; while the shirts purchased in 1955 were larger in seven instances and smaller in four.

Despite the fact that government standards have been developed and adopted by most manufacturers and distributors for the purpose of assisting the consumer in making more satisfactory purchases, few consumers know of the standards. Instead of depending on standards customers depend on stores that through advertising and store policy have emphasized the reliability of their apparel merchandise for correct size, (occasionally mentioning commercial standards) and for quality. These stores have tried to develop in the minds of their public the image of stores which stand back of their merchandise; they have worked hard to implant in the public mind a reputation for quality merchandise. Consumers are not likely to think directly of these stores as using commercial standards, but rather that these merchants carry merchandise that meets their needs in terms of size and quality.

CONSTRUCTION COMPARISONS

The image of reliable merchandise developed in the minds of customers often takes form in expressing a personality or group of personalities. In this study one might think of merchandise, as expressing the personality of the distributor, the manufacturer and the worker through construction features of the shirts examined.

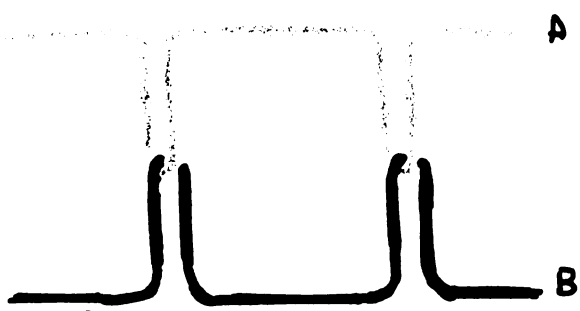
Travis Whitsel, Vice President of Union Special Machine Company, who wrote about federal specifications in the 1960 publication, The Apparel Engineering and Needle Trades Handbook, is one personality. Data was collected in 1924 and 1925 which was used in preparation of a federal specifications bulletin. This bulletin was revised in August 1959. Very little interest has been shown among the trade in adopting the specification symbols. Mr. Whitsel says in the above mentioned publication: "Some of the more progressive concerns, especially those which might have been doing government work, did pick up a few of the more commonly used types such as the terms '301 and 401'." World War II and the writing of government orders to specifications aided in establishing many terms in the minds of producers. To date these specifications have not been available to the author of this paper. She is indebted to Mr. Edward Artim, J.C. Penney Company, and Mr. D. G. Ashworth, Montgomery Ward

and Company, for information on standards accepted by their organizations. The term "standards" of construction as used in this paper is established on minimun standards of these two companies.

General requirements of shirt manufacturers take into consideration the number of stitches per inch and the type of stitch used. The strength of the seam can be measured by the number of stitches per inch. the size of the thread, and the type of stitch used. Three basic machine stitches were used in the shirts examined: 1. lock stitch used when the same appearance is desired top and bottom; 2. two thread chain stitch, used when strength, elasticity, and durability are required. (This stitch can be ravelled, but not easily) and 3. the buttonhole stitch.

Figure 2.

Stitch Types Used in Shirt Construction

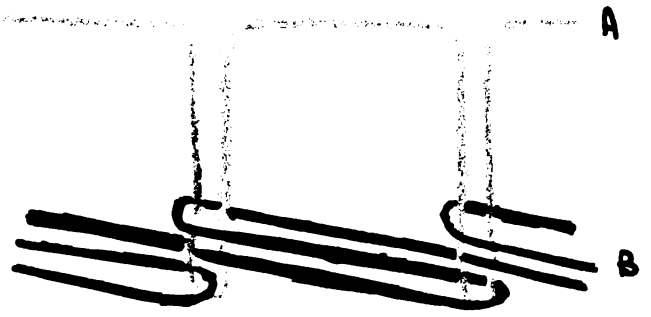


Stitch Type 301

"This type of stitch shall be formed with two threads: one needle thread, A, and one bobbin thread, B. A loop of thread A shall be passed through the material and interlace with thread B. Thread A shall be pulled back so that the interlacing shall be midway between surfaces of the material or materials being sewn. [29]

29. Federal Standard No. 751, "Stitches, Seams, and Stitchings."

Direction of Successive stitch formation.



Stitch Type 401

"This type of stitch shall be formed with two threads: one needle thread, A, and one looper thread, B. Loops of thread A shall be passed through the material and interlaced and interlooped with loops of thread B. The interloopings shall be drawn against the underside of the bottom ply of material.[30]

By observation it was found that all shirts, except 60-9 were chain stitched around the armscye and the side seams. Chain stitches were used for elasticity, security, strength, laundry, and wear. Single needle stitching was applied in all other places on the shirts where the same appearance on both sides of the garment is desired and the stitching is not subject to great strain. A pick glass was valuable in counting the stitches. Ten counts, of one inch each, were taken in ten different parts of the shirts for each type of stitch examined. The buttonholes were measured by counting stitches per half inch and the number multiplied by two to show stitches per inch. The averages of these counts are found in Chart VI. and compared to the standards established for this paper.

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30. Ibid.

Chart VI.

Number of Stitches Per Inch in the Selected Shirts as Compared to the "Standard."

Shirt	Chain Stitch	Lock Stitch	Lock Stitch In Hem	Buttonhole Stitch
Specifications:	16	16	12-14 min.	70
*60-1	15.4	17.0	13.15	64.8
*60-5	12.7	14.8	12.5	59.0
*60-4	12.5	14.4	12.6	43.6
*60-9	none	15.3	15.5	76.7
+60-2	10.2	15.7	13.3	68.8
+60-7	14.2	15.4	12.6	64.6
+60-6	13.2	10.9	12.6	35.4
60-8c	11.7	12.5	12.2	64.2
60-10c	11.5	14.6	10.8	56.8
60-8a	11.3	12.5	10.3	53.0
60-3a	10.1	13.5	8.3	60.7
WS-7b	13.3	13.5	11.8	57.0
S-1a	14.0	14.5	13.2	56.4
WS-8c	11.1	15.7	10.8	54.2

*Japanese made shirts; +Hong Kong made shirts.

Data from Chart VI. was selected and reassembled in Chart VII. to show instances the stitch was accurate in comparison to standards established. In only one case, 60-9, were all "standards" met. It should be noted that

Chart VII.

Accuracy of Stitch in Comparison to

the "Standards" Used for This Paper.

Shirt	Chain Stitch	Lock Stitch	Lock Stitch In Hem	Buttonhole Stitch
*60-1	x		x	
*60-5		x	x	
*60-4		x	x	
*60-9	none	x	x	x
+60-2		x	x	
+60-7	x	x	x	
+60-6			x	
60-8			x	
60-10		x		
60-8a				
60-3				
WS-7				
S-1	x	x	x	
WS-8		x		

*Shirts manufactured in Japan, +Shirts manufactured in Hong Kong.

this shirt used single needle stitching throughout and was the only shirt to meet the buttonhole requirements.

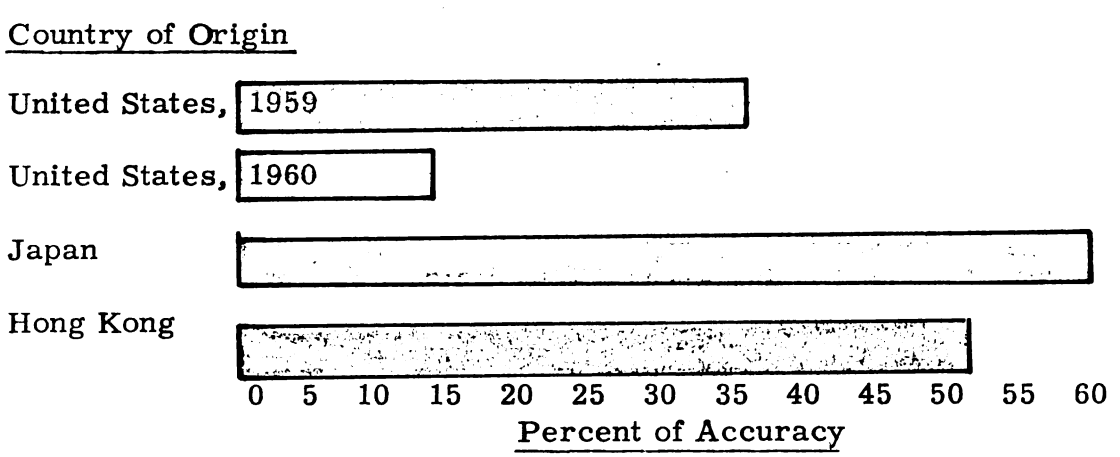
It is noteworthy that more accurate stitching was done in the hem and where other single needle stitching was used than where two needle stitching was used. Nine out of 14 shirts were within the standard range established as average stitch count in the hem. Eight out of 14 shirts were within the average for other single needle stitching done throughout the garment. In only three out of thirteen shirts using the two-thread chain stitch, was accuracy found. Could one assume that lock stitchery is 10

percent more accurate than chain? Another question that might be asked is? Why is only lock stitch used in 60-9 which has been noted as the most accurately stitched shirt in comparing to the established standards? Graph IV was made to show the comparison of accuracy as to the country of manufacturer. Accuracy ranged from 12 percent in the 1960 American measured shirts to 60 percent in those from Japan. The 1955 purchased

GRAPH IV.

Percent of Stitch Accuracy in Relation to

Country of Origin



shirts (American made) were accurate in 33 percent of the checkings and Hong Kong (1960) shirts in 50 percent. Although this sampling is small and therefore of little validity because of size, one stops to wonder if the American manufacturer with its high priced labor is meeting construction feature competition. Sylvia Porter, in her column published in the March 7, 1960

Detroit Free Press tells of an American Shoe Manufacturer facing the import trade. The shoe manufacturer met his problem with what Mrs. Porter called : "cold decision . . . new machinery, techniques, and factory setup. . .". This management resulted in no layoffs, equal or better pay, and the ability to meet competition of import budget-priced shoes. More than one garment manufacturer is probing manufacture methods and management, hoping to gain the same results. Eric Johnson, in a speech, "Time for Bridges," on Michigan State University campus, February 10, 1960, called the present American economic era a "Golden Opportunity of Initiative."

Can one depend on stores for accuracy of construction? Chart VIII. was designed to show accuracy as to store of purchase.

Chart VIII.

Accuracy of Stitch in Comparison

to Standards in Relation to the Source

Shirt	Two Needle	Single Needle	Hem	Buttonholes
STORE A				
60-2		x	x	
60-3				
S-1	x	x	x	
STORE B				
60-8a				
WS-7				
STORE C				
60-9	none	x	x	x
60-10		x		
60-8			x	
WS-8		x		

Little relation is shown between this chart and Chart III of the previous chapter where Store B is found to have the most accurately sized shirts. Chart IX shows a comparison in construction features, measured in inches.

Chart IX

Summary of the Largest and Smallest Measurements Taken of Construction Features

	Standard	Largest Measurement	Shirt	Smallest Measurement	Shirt
Cuff width	2 1/2	21/2	60-7, 6, 3 S-1	2 1/8	60-1, 5
Placket Length	6	8 7/8	60-10	4 7/8	60-5
Placket Width	1/2	5/8	60-7, 10	1/4	60-1
Facing Width	3	3 1/8	60-8	1 5/8	S-1
Hem Width	5/8	7/8	S-1	3/8	60-2, 7
Pocket	4 1/2	5 1/8x4 1/2	60-8	4x3 1/2	60-6
Hem	5/8	7/8	S-1	3/8	60-2, 7

Commercial Standards 14-51 requires that measurements should be taken to the nearest one-eighth inch. Although construction "standards" were established by the writer for the items in Chart IX., it was on the

basis of Commercial Standards that the examiner allowed for one-eighth inch error in measurement for Chart X. This Chart shows the degree of accuracy in the seven suggested measurements shown in Chart IX. Greatest accuracy is shown in the width of the placket, and the hem width. It is interesting to note that in all other features

Chart X.

Accuracy of Given Construction

In the Relation to Country of Origin

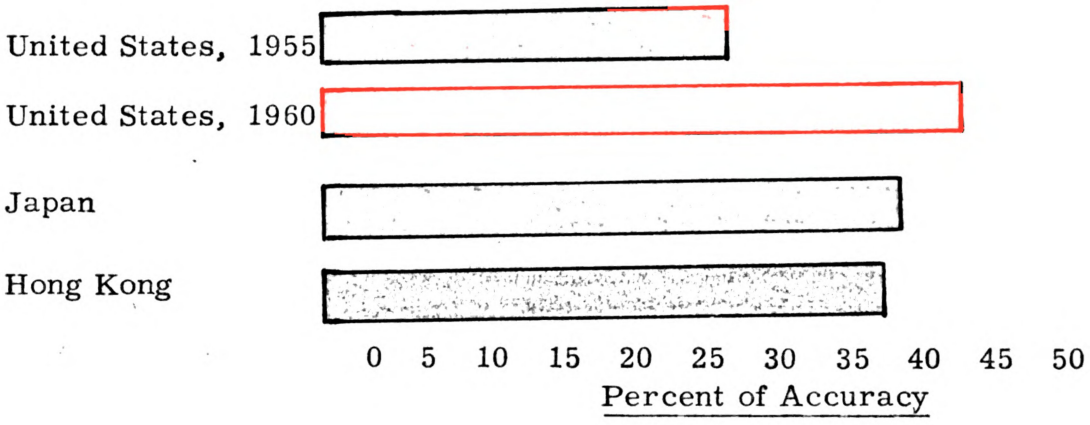
Shirt	Cuff Width	Facing Width	Hem Width	Pocket Size Deep	Width	Placket Length	Width
Standard:	2"	3"	5/8"	4 1/2	4"	6"	1/2"
*60-1	x		x		x		
*60-5	x		x		x		
*60-4			x				x
*60-9		x	x				x
+60-2				x			x
+60-7				x	x	x	x
+60-6			x				x
60-8			x				x
60-10		x	x				x
60-8a		x					x
60-3		x	x	x	x		x
WS-7			x				x
S-1							x
WS-8		x	x				x

*Japanese made; + Hong Kong made.

compared, the accuracy is very low. Country of construction was compared and Graph V. was compiled to show the percentage of accuracy.

GRAPH V.

Percent of Accuracy in Given Construction Features in Relation to Country of Origin.



The most accurately manufactured shirts were those found produced by the United States for the 1960 market -- 42.8 percent of the shirts were accurate in the features compared. Only 28.5 percent of those found on the market five years ago, produced by the same manufacturers, were found to be accurate. Shirts imported from Hong Kong were accurate in 38 percent of the average measurements recorded. Japanese shirts were accurate in 39 percent of the instances. A comparison of the same construction features was made in relation to the place of purchase. Chart XI. shows this comparison and from it Graph VI. was designed to show

Chart XI.

Accuracy of Construction

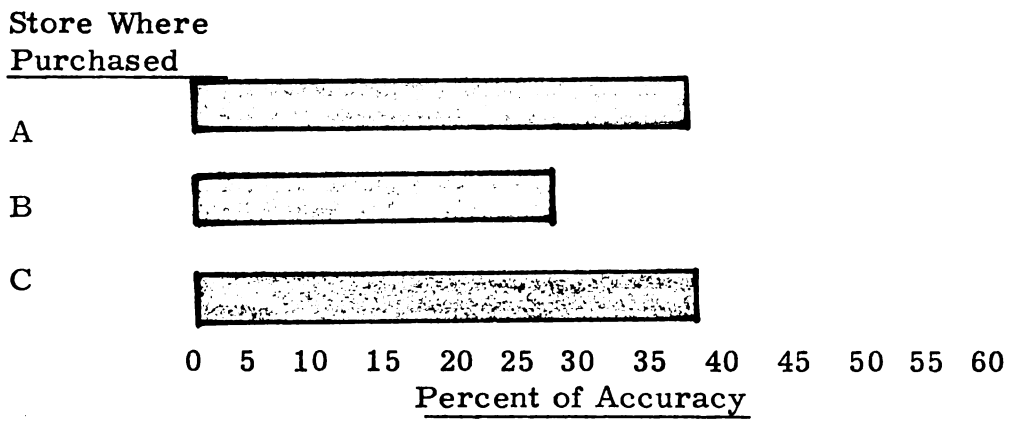
Features in Relation to Store Where Purchased

Shirt	Cuff Width	Facing Width	Hem Width	Pocket Size Deep	Width	Placket Length	Width
STORE A							
*60-2				x			x
60-3		x	x	x	x		x
S-1							x
STORE B							
60-8a		x					x
WS-7			x				x
STORE C							
*60-9		x	x				x
60-10		x	x				x
60-8			x				x
WS-8		x	x				x

GRAPH VI.

Percentage of Construction

Accuracy in Relation to the Store Where Purchased



the percentage of accuracy in relation to store or purchase. Store C has the highest degree of accuracy with 39.2 percent; Store A had 38 percent; and Store B had 23.5 percent.

The largest and smallest construction feature measurements were compared. Great variation appeared in the placket length with a difference of four inches between the shortest and the longest. Noticeable differences were found in the pocket size. The smallest pocket was four inches deep and three and one-half inches wide and appeared very small for use. The largest pocket was five and one-eighth inches deep and four and one-half inches wide. The narrowest facing was one and five-eighth inches in width.

It might be interesting at this point to look at a comparison of price, country of origin, accurate size measurements, and construction features that have been compared. In looking at the following chart one must remember that we are comparing individual shirts. It has been stated earlier that there is little relationship between country of origin and store when comparing the groupings of shirts in this way. It has also been stated that the customer often depends upon a reliable merchant for quality and merchandising policy when making a choice or purchase. However, the following chart shows that if the customer looked at the shirts individually rather than collectively she might have made different choices.

To take the time to shop and look at individual shirts would depend on her family situation and how much time she could allot to shopping and making individual comparisons. Chart XII. was devised to show the relationship of size, price, country of origin and construction on an individual basis.

Chart XII.

A Comparison of Price, Size, and

Construction Features of Shirts Used in This Study

Shirt	Country of Origin	Price	Number of Accurate Size Measurements *	Number of Accurate Construction Measurements. +
60-1	Japan	$ .88	4	5
60-5	Japan	1.00	6	5
60-4	Japan	.88	4	4
60-9	Japan	2.98	5	6
60-2	Hong Kong	.99	1	4
60-7	Hong Kong	1.00	4	7
60-6	Hong Kong	.88	3	3
60-8	United States	1.18	3	3
60-10	U. S.	1.98	3	4
60-8a	U. S.	1.98	6	2
60-3	U. S.	1.59	4	5
WS-7	U. S.	1.98	5	2
S-1	U. S.	1.59	3	5
WS-8	U. S.	1.59	4	4

Although in no way conclusive the facts given in this paper show trends in the textile industry, the importance of developing sound merchandise policy, and the choices the American consumer has in developing her standard of living and using her discretionary income.

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* The number of accurate measurements in comparison to the six established for each shirt by Commercial Standards 14-51.

+ The number of accurate construction features in comparison to the 11 established for each shirt as "standard."

GRAIN AND CONSTRUCTION FEATURE COMPARISON

If a shirt does express the personality of the maker through construction features already mentioned, it now can be said to express the customer image through features the customer might prefer. In anticipation of discriminating customers, standards have been set up by companies for manufacturers. One of the cooperating stores has kindly furnished the author with the standards they have established for the plaid match of the front, front grain, sleeve grain, cuff style, collar style, and button size.

Three of the 14 shirts did not require matching of plaid. In 11 shirts the match was required only for center front; however, it was checked at the side seams, collar, and back. Shirt 60-9 was matched at all three places. Shirt 60-1 was slightly mismatched. Eight of the shirts were matched in the front according to requirement and two did not match the plaid any place. The 1960 American-made shirts were matched at center front in all cases. This was also true of the shirts from Hong Kong, but not of those from Japan or those manufactured in the United States five years ago. In each of the latter groupings one shirt did not match center front. Accuracy of design match was checked according to store. Shirts from Stores A and C were found to be accurate in front design match. These shirts were 1960 purchases. From Store B the

shirt purchased in 1960 was found to be accurate in design match at center front; however, this was not true of the 1955 purchase where front design was not matched.

Straight of grain was checked at the center front of shirt and the fold of the sleeve from the point where the sleeve is attached to the shoulder and follows down to the cuff. In only two shirts was the grain not straight at center front. Both of these shirts were of foreign make and did not come from stores being compared. Sleeve grain is much more difficult to keep accurate and is illustrated here by accuracy in only two shirts. Both shirts were of the same brand and from the same store. It is noteworthy that one was of foreign make and the most expensive shirt in the study. To determine correct lengthwise grain in the sleeve, the sleeve was pressed to form a crease from the shoulder point to the cuff. The cuff of the sleeve was barrel type in all instances.

Width, length of point, and general style of the collar were noted and compared. The collar style was very similar, but appeared to be smaller than five years ago with fashion pointing to a button down style.

"Button, button, who has the button," must be a phrase used occasionally in a shirt factory. Mr. William A. Stein wrote, "Button sizes are measured by lignes. A ligne equals 1/40 of an inch in diameter. A circular button with a diameter of one inch is a forty-ligne button. In most other shapes, such as diamonds, oblongs, squares,

dominoes, etc., the button size is measured across its greatest width. Thus, a diamond-shaped button, which measures one and one-fourth inches across its widest point is a size 60."[31] Most physicists agree that "any physical measurement is to within + or -1/5 of the smallest unit of measure."[32] Accuracy to this degree was not felt necessary for this study, therefore, the buttons were placed on the circle chart found on page 102 of The Apparel Engineering and Needle Trades Handbook and corresponding size determined. Suggested standards were for a size 22 button to be placed three and three-fourths inches apart. One out of the 14 shirts had size 22 buttons. All shirts purchased in 1960 except one, had size 18 buttons. In contrast to these smaller buttons found on the 1960 shirts, the 1955 shirts had size 20 or 22 buttons.

At this point one wonders if this is a cost measure that still gives customer satisfaction. It is well accepted that a good business man keeps a cost control system. In this day of severe competition, expecially price wise, it would be interesting to note the savings by use of the smaller size button. If one might draw the conclusion that small size buttons do cut costs, one might also conclude that this is a cost measure that can be taken and still satisfy customer preference.

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31. Stein, William A., "How to Control the Buying of Trimmings," Apparel Engineering and Needle Trade Handbook., p. 102.

32. Cio Hari, Bernard; Experiments in College Physics, "Introduction" p. iv.

SUMMARY AND CONCLUSION

What has and is happening in world trade is well illustrated by the endeavor that Japan and Hong Kong are making for their share of the world market. It has long been recognized in the industrialized world that the textile industry is one of the first industries to appear in a young industrial society and one that can be used as a barometer of world trade and industrial progress. Japan and Hong Kong represent two types of textile industries working for a place in "the sun."

Japan represents those countries well developed and highly recognized as world traders before World War II. During the war all internal efforts were devoted to military purposes. War activities caused political and economic breaks with some of their assured markets. Destruction and divestation caused them to start at the bottom to rebuild an industry. The Japanese had some "know-how", and were able to gain some foreign investment, which was and still is internally controlled, to begin rebuilding their economic structure. In comparison with the American textile industry Japan has new machinery, and has also had American invested dollars to develop leadership in use of this machinery and in developing a new market. Hong Kong differs from Japan in that the industry is new, less than a decade old. Textiles have come to an underdeveloped area and have grown. The place Hong Kong has in world trade is worthy of note. Hong Kong is a

free-port and is being used by the communists as a window on a capitalistic world and its economy. Hong Kong, as are other "economically free" ports and countries, is used for "export dumping" to upset the free trade world. The role Hong Kong plays in the free trade world is important both economically and politically.

What type of merchandise is Japan and Hong Kong placing on the market? Japan and Hong Kong are trying to furnish what the customer demands. Both countries are trying to dispel the connotation of "cheap" when thinking of their countries and their products. No attempt has been made, in the sample of shirts used, to show the wide range of price and quality available; however, all types of shirts from Hong Kong and Japan sold in the Lansing, Michigan area were purchased. The American-made shirts were kept within a price range based on what the middle class might purchase, and within the price range of those shirts available in a selection study carried on five years ago. It might be noted that the least and the most expensive shirts in the study were foreign made.

Common instruments of measure were used to determine the size and construction of the shirts. In terms of size the writer attempted to follow specifications as set forth in government bulletin Commercial Standards 14-51. For construction features the writer established "standards" based on available information from two large retail stores.

This study shows that there are government standards established for the benefit of producer and consumer. The standards are used to some

extent by the producer, but almost unknown to the consumer who often depends on the retailer. Acceptance of standards did not insure accuracy but the more mechanized the process the more accurate were the sections of the garment inspected. In other words, size was more accurate than construction.

The construction features of the shirts examined show a sense of style and awareness to public interest and fashion. With the exception of stitch accuracy, shirts found on the 1960 market made by American producers were found to be the most accurate. American-made shirts produced in 1955 were found to be the least accurate. Has foreign competition found results in the American managerial pattern?

What can the customer depend on? Perhaps most of all her own knowledge and keen observation. A wise consumer can depend on obtaining good information from government sources and reliable merchants. This takes time, effort, and study that will show profits in being a better consumer. She can assume that the size of shirt is more reliable than the construction features, and that her own observation and knowledge is important in selecting merchandise, as represented by the shirts of this study. The consumer can depend on the manufacturer and the retail store. More and more business dollars are being spent to improve the name and reputation of the company. Foreign manufacturers are educating both the worker and manager. American merchants are making "cold decisions" as to methods of manufacture and management. Americans recognize what Eric Johnson calls the

"Golden Opportunity of Initiative," and, as interest in the American way of life, are using all their know-how and ability to improve the "good life."

Why are we concerned with the rising textile industries around the world that are manifesting themselves at the present time, such as the industries in Hong Kong and in Japan? This is ably answered in an interview of J. Spencer Love, Chairman of Burlington Industries and reported in the January 31, 1960 issue of the New York Times by William M. Freeman. Mr. Love is quoted as saying, "Like others in the textile industry, I am very much concerned about the threat of foreign competition from low-wage areas. The problem is not that of the textile industry alone but of the entire economy. I do not believe the United States can keep the relative productivity advantage it has enjoyed until recently. Others in Asia and in Europe are catching up fast. There is an artificial advantage, a subsidy in our cotton at less than we pay for it and returning finished goods for less than we can sell them for."

The writer is compelled to ask, Are we entering into a new economic era characterized by greater world trade? Is the textile industry again leading in industrial development and international trade? The answers to these questions are probably a provocative yes. The full answer to these questions will take years of knowledge, days of intense thought, group interaction, and greater understanding. These problems posed by the development of the textile industry and underdeveloped trade will command much attention from both political leaders and economists in the future.

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