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### *Sockeye and Tinplate: Technological Change in the Fraser River Canning Industry.* Duncan A. Stacey. British Columbia Provincial Heritage Record, No. 15, 1982.

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## BOOK REVIEWS/COMPTEs RENDUS

*Sockeye and Tinplate: Technological Change in the Fraser River Canning Industry.* Duncan A. Stacey. British Columbia Provincial Heritage Record, No. 15, 1982.

In this brief monograph Duncan Stacey has provided us with an overview of the salmon fisheries and canning industry of the Fraser River in a period of significant technological change. On the canning side he begins with an industry that is decentralized and very labour intensive in the 1870s when cans were essentially hand-made and the fish product manually prepared before being packed into those cans. Through the introduction of the steam retort, filling machine, gang knives in the early period, that is before the turn of the century, some of the roadblocks in the way of higher productivity were removed. These new technological processes allowed for the beginning of the concentration of the smaller, one-line plants into multi-line operations. This process was in essence completed with the replacement of scarce manual labour by the 'Iron Chink,' which automatically processed the fish preparatory to canning, and through the elimination of the hand-soldered can through the introduction of the mechanically-produced sanitary can in the latter period dealt with in this study, that is from 1903-1913. On the fisheries side we see an industry that in 1871 is very limited in the areas it exploits both geographically and also in regards to the species of salmon caught. We follow the fishing industry as it grows from a few flat-bottomed skiffs following the drift nets in the current of the Fraser River to a fishing ground that by the 1890s was so overcrowded with gillnetters in their Columbia riverboats and their tenders that they were being pushed into the unprotected waters of the Gulf of Georgia to supply the number of fish required by the canneries. The new century brought the internal combustion engine to this fleet of fisherman and also the powered seiners which expanded the fisheries both in geographical extent and in the species of salmon caught for commercial exploitation.

In the very brief work Stacey has tried to show, with some success, that technological change in the period 'took the form of a leading innovation reinforced by a cluster of supporting techniques.' In so doing he attempts to show that it is this 'Key' factor that determines the rate at which the supporting changes are brought into the system. He has as much managed to present a fairly well unified and concise picture of the interlocking aspects of the technological innovations involved. There are, however, many other questions that Stacey hints at in his brief work that have as yet to be analysed before a complete picture can be presented of technological change in the Fraser River salmon canning industry. There is very little about the influence of market forces, in which can be included the transportation network to get the product to the consumer, noted in the work, and their effect on acceptance or receptiveness to technological change. The labour force available to the canners, although tantalizingly mentioned at times, has not been given enough analysis. One

might analyse this group's ethnic makeup, its level of technical expertise, its availability and its overall reaction to the introduction of the new technologies. There is as such no real analysis to unit labour costs throughout the whole of the period dealt with in this study. On another side, the photographs attached to the report present some intriguing questions that have not been answered. One of these has to do with the percentage of women and children in the work force. If the woman shown with her hands covered with lacquer is any indication they did not always work in the most pleasant of circumstances. Another has to do with plant layout of machinery and operations which is only briefly mentioned in the report. These comments are given as a suggestion for further work for it is realized that the length of the work precludes a lengthy analysis of all the factors that impinge upon technological innovation and change. This book is a fairly good beginning in the study of the canning industry and let us hope that more is forthcoming in this area.

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