

Abstracts

The Present Status of Industry-reconstruction after the Great Eastern Japan Earthquake of 2011

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The damage caused by the Great East Japan Earthquake, which struck in March 2011, was immense over a broad sphere and impacted everyday living, industry and employment, and historical and cultural resources in the affected regions. In particular, people lost family members, their jobs were lost, and community ties were severed, and efforts to reconstruct lives in the disaster zone are still continuing today.

Two-and-a-half years have passed since that terrible day; the national government, local government bodies, businesses, and other organizations are working hard to advance the reconstruction process, but how should we interpret this situation? This paper was prepared at with the assistance of Daisuke Iida, Director of the Regional Economic and Industrial Policy Division of the Ministry of Economy, Trade and Industry, who provided an explanation of the situation based on materials.

While considering the overall status of the economy and industry in the Tohoku region compared with the situation prior to the earthquake disaster as well as both aspects of reconstruction that have encountered difficulties and the harsh reality of the Tohoku economy, Mr. Iida explained both the impacts and effects in addition to the industrial damage inflicted by the earthquake based on data on the current status of industrial reconstruction as well as future government policies and issues.

In addition to providing this introductory overview, this paper also briefly considers changes that have occurred in the Japanese industrial system.

Commodity Production and Consumer Lifestyles

Kazuhiko Murata

Commodity production by private business enterprises contributes to the satisfaction of citizens' desire to externalize their living labor. Public services provided by governmental organizations attempt to solve the problems inherent in the system of commodity production. However, in so far as these public services are another means of externalizing living labor, they cannot entirely solve the problems of the atrophy of citizens' living competence and the collapse of family and community life.

Key words: commodity production; consumer life; living competence; living labor; means of living; universal market

Category-Theory-Based Conceptual Reconstruction of Natural Language Processing

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Until now, the various natural language processing concepts have been founded on processing algorithms and the databases to be processed. Because this approach excels in concreteness, it has the advantage of being easy to grasp for those building and operating systems. On the other hand, however, its strong emphasis on the technical aspects of software engineering has resulted in an excessive divergence from a way of thinking characterized by the universality and generality of the conceptual, theoretical, and especially algebraic structures of language, so the traditional approach is also inevitably prone to occasional myopic evaluations and the development of redundant technology.

In this paper, an attempt is made to reconstruct natural language concepts and overcome these shortcomings by viewing the transformation of data and information structures as mapping from one category to another, and invoking category theory, which enhances the examination of transformations between categories.

The concepts addressed include information retrieval, information extraction, sentence generation, text summarization, encryption processing, and machine translation, among others.

The main objective of this paper is to show that the concepts of limits, cones, and natural transformations in category theory can provide guidelines with positive prospects for the natural language development process.