

# Chapter 1

## Natural Languages as Origin of Misinforming

### ABSTRACT

*This chapter explores linguistic factors that cause misinforming. It presents the origin of misinforming as building in the polysemy of the natural languages. The evolution of natural languages reflects the needs of human life according to its specific properties such as surrounding nature, climate, food, etc. They are developed historically and correspond to the way of formation of a group of people as a society. The language is the key component of the group's culture, and the society is usually identified by the language. The language is a tool to facilitate informing within the members of the group and may serve as a barrier in communication between members of the group with members of other groups. In the computer information systems era, communication via technology added complexity and as well as the risk of misinformation.*

### INTRODUCTION

Language is the natural way of communication. Over millenniums languages evolve to serve given group of people to communicate effectively. Different groups experienced different challenges and problems that resulted in developing different ways to communicate the meaning subject for communication. Evolution of languages follows the growing need for richer communication results from evolution of complexity in life and societies.

This chapter discusses two aspects of natural languages from point of view of misinforming – natural languages used to present qualitative information as text,

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### ***Natural Languages as Origin of Misinforming***

wording, sentences; and also, quantitative information as numerals. Diversity of the languages to express meaning is preserved. On the other side the people reached agreement to use the same numerals to present quantities. The efficiency of so called “Arabic numerals” is accepted globally as standard, reducing the probability for misinterpreting.

The following issues are discussed: next section discusses polysemy as a result of evolution and growing the society; the following addresses the evolution of communication between groups and the need of translation from one language to another; development of “jargons” to serve specific domains is introduced in the following sections, including developing of “formal” languages designed to avoid polysemy. The last section discusses the evolution of what is understood by “literacy”.

## **POLYSEMY OF NATURAL LANGUAGES**

Natural languages evolved during the history of civilization to serve as a tool for communication. A language is composed of words, used to code particular objects, facts, activities or their properties. Languages evolve to serve the growing needs of details to communicate. This long evolution led to polysemy, as a phenomenon creating misinforming hazards. Polysemy is a misinforming factor in communication between parties using the same language. Communication between parties originally using different languages, a typical case in our globalizing world, includes translation, or interpretation of words in one language to looking for corresponding word in another language.

Polysemy, multiple and often diverse meaning of words and phrases, of natural languages representing the richness of expression is natural nowadays. The language as a reflection of life is developing by constructing terms to mark human activities or observed phenomena in the surrounding nature. With the evolving complexity of life and learning more about nature the languages also evolve to allow representing the nuances in diverse environments. Originally, human life was simple, and people needed a few words to describe and communicate facts, events, actions. Within small groups – family, tribe, village – there was almost no polysemy. By growing complexity of life, and by growing connectivity between different groups, the complexity of language grows and understanding between groups with different experience is becoming more difficult. Uniting tribes includes creating a common language to allow communication, but different meaning of given word used by a separate groups or tribes remain in use and have been preserved. This enriched the language and diversified the meaning assigned to a single word.

Another aspect of using languages is that a word or phrase actually codes the real meaning. A human eye may distinguish about 4000 nuances of colors, but in

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