INFORMATION SYSTEMS
FOR
QUALITY ASSURANCE

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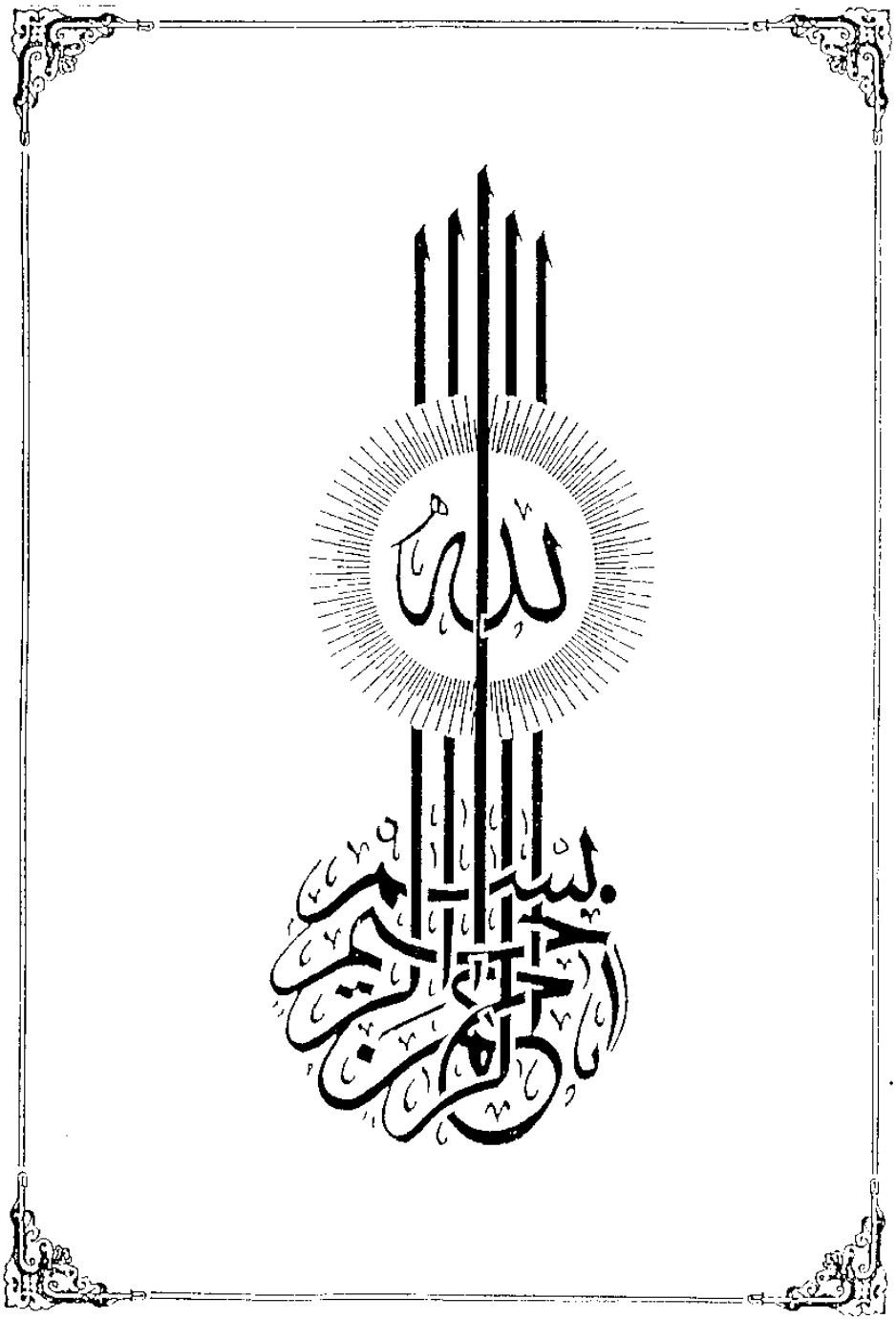

To

My Son

Ahmad Kabil.

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CHAPTER 1

INTRODUCTION

1.1. Background:

Information in its broadest sense is defined as "the name for the content of what is exchanged with the outer world as we adjust to it, and make our adjustment felt upon it." [204]. In that sense, every living system must have a type of information processing if it is to survive. This is true for living cells as well as for human societies. As a "ceteris paribus"* assumption, Miller [116] relates survivability of a system to its committing a high percentage of its resources to information processing.

> "Up to a maximum higher than yet obtained in any living system but less than 100 percent, the larger the percentage of all matter-energy input that it consumes in information processing controlling its various system processes, as opposed to matter-energy processing, the more likely the system is to survive."

Best and Marschak [13] noticed that more complex species (those higher in the evolutionary scale) devote a higher percentage of their total cell mass to information processing than do lower species (the brains of foraging predators are larger than those of sedentary animals in comparison with the rest of their bodies). It is also well established that in an advanced society a great portion of the labor force is involved in activities related to information, and a higher percentage of the cost running the economy consists of information related cost [146].

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* Other things being equal [130].