

Analysis Paralysis – The Product of Information Explosion

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ABSTRACT

Information is wealth. The modern digital technology has increased the sources of information and the breadth of audience reached, by easier and quicker methods of dissemination of information. But too much of anything is not good. The phenomenon of information overload and the physiological, cognitive, social and organizational effects of too much of information needs to be understood, for proper utilization of the data received from various sources and also to avoid the detrimental effects of excess information and misinformation. This article underlines the causes of information overload, its impact and also suggests steps to deal with information overload.

KEYWORDS: *Information overload, information anxiety, infoxication.*

I. INTRODUCTION

Information overload is the term coined by Bertram Gross in 1964 in his work ‘The Managing of Organizations’ which is said to occur when the amount of input to a system exceeds its processing capacity. It was popularized by ‘Alwin Toffler’ in 1970 in his book ‘Future shock’. Digital culture enables us to access more information and dissemination of the gathered information is also made easier by modern information technology.

Information overload is also called as Infobesity, information glut, data smog & data glut (Shenk, 1997). Information overload leads to infoxication i.e information pollution where contamination of useful information with inaccurate information occurs. Clay Shirky at New York’s Web 2.0 Expo in 2008 called such a situation as ‘filter failure’. So it is the individual’s responsibility to filter and manage information flooded upon him, by distinguishing between relevant and unwanted information.

Information overload causes information anxiety which is due to the gap between the individual’s actual understanding on the shared information with that of what is expected from the individual. The limitation in processing the information and lack of ability to differentiate raw information from useful information causes distraction and interruption in thinking. This creates a negative impact on the performance of the individual and finally causes stress.

II. PHYSIOLOGICAL EFFECTS OF INFORMATION OVERLOAD

Human brain has unmatchable power. It can store as much information as internet and the cells of the brain uses 26 different ways to encode information. But overstimulation of brain due to constant flow of information causes danger to our brain leading to destruction of neurons which ultimately leads to dementia and other neurodegenerative disorders like Parkinson’s and Alzheimer’s disease. The following symptoms are the signs of information overload: Increased blood pressure, low mood or energy, impaired vision, insomnia, vivid dreams and tiredness.

Even in the present scenario where the entire world is affected by the outbreak of coronavirus disease - COVID19 pandemic, the health professionals of various branches of medicine like allopathy, ayurveda, siddha and psychologists warn about the negative effect of excessive information regarding the disease flooded on us by various social media. The anxiety caused by excess of information about the pandemic deteriorates the immunity of the individual thereby causing them more prone to the disease than others who have limited access to information.

III. EFFECT OF INFORMATION OVERLOAD ON COGNITION

Complexity in processing too much information affects human learning and behaviour. Exposure to information attack by instantaneous devices affects the thought process by obstructing deep thinking and impedes the formation of memories. Cognitive overload also leads to diminished information retaining ability in brain thereby reducing the storage of information in long term memory.

Under stressful conditions due to flooding of information from books, journals, internet etc. the analytical capacity of the individual is affected and causes anxiety and self-doubt leading to foolish decisions and flawless

conclusions (David Lewis, 1990). Decision making plays a vital role in structuring a problem and solving the same. Due to paralysis of analytical capacity, the decision making ability and problem solving capacity of the individual gets affected resulting in poor interpersonal relationship. Information overload also stops one from taking action thereby encouraging procrastination.

IV. SOCIAL IMPACT OF INFORMATION OVERLOAD

In the modern urban world, the people residing in cities are indifferent to new situations because of overload of sensations caused by information explosion as noticed by the Sociologist Georg Simmel(1858-1918). The mentality of the city dwellers has become jaded to all types of violence, crime and child abuse due to overexposure of such news in social media. Social psychologist Stanley Milgram (1933-1984) hypothesized that the bystander callous behaviour is the strategy adopted by people to cope with information overload.

V. IMPACT OF INFORMATION OVERLOAD IN ORGANIZATIONS

Employees in an organization feel burdened, overwhelmed and stressed when they find difficulty in absorbing and assimilating the excess information flooded upon them to complete a task efficiently (Farhoomand, Ali F.; Dury, Don H, 2002).

In an organisational set up, two interrelated concepts are involved while understanding information overload – conventional overload and information entropy, both ending with information anxiety. The first one occurs when too many communication is received by an individual which could not be responded. When the incoming information is not segregated by context or topic, information entropy occurs (Christensen, K & Levinson, D., 2003).

Wurman (1989), describes our attitude towards the volume of information and our limitations in processing it using the term “information anxiety”. According to him, there are five scenarios where information anxiety may occur. They are - not understanding information, feeling overwhelmed by the quantum of information to be understood, not knowing if certain information exists, not knowing where to find information; and knowing exactly where to find the information, but not having the key to access it. The frequency of task and complexity of task are the contributing factors in the study of information anxiety. While completing complex tasks, the level of information anxiety increases as the quantity and force of distraction increases (Groff, Baron and Moore, 1983). Another statistical study revealed that there exists a negative relationship between frequency of task & level of anxiety and the results also underscored that it is the frequency of task and not the type of task which determines the level of information anxiety (Girard, 2005b).

VI. INFORMATION OVERLOAD AS AN OCCUPATIONAL STRESSOR

Employee empowerment has a direct impact on the performance and job satisfaction of an individual. When an employee do not have the ability to make autonomous decisions on the basis of the information received by him, without consulting the management, he cannot solve the work problems “on the spot”. Due to lack of such skills the employee will not be confident enough to face any adverse situations and his dependency towards co-workers will increase which causes anxiety and finally leads to occupational stress.

VII. DEALING WITH INFORMATIONAL OVERLOAD

Information overload can be considered as a virus that spreads through news networks and social media (Roetzal, 2018), for which there is no cure and no vaccine. It can only be overcome by self-control. In the organizational level, information overload can be dealt by reducing the amount of incoming information and enhancing the ability to process information, for which one needs to select only reliable sources, filter the information so obtained by distinguishing between relevant and irrelevant information and then prioritizing the activities. In team settings, it is preferable to delegate information responsibilities by encouraging people to specialize and then rely on their understanding.

VIII. CONCLUSION

Tamil poet-saint Thiruvalluvar in his exceptional and widely cherished work Thirukural couplet 475 has discussed the outcome of overload.

“With peacock feathers light, you load the wain;
Yet, heaped too high, the axle snaps in twain.

In today's era of globalization where information systems play a vital role in day-to-day' activities, it is the responsibility of the user to identify, access, filter, utilize and disseminate relevant information.

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