

Chapter 1

Revisiting “Cyber” Definition: Context, History, and Domain

Riza Azmi

University of Wollongong, Australia

Kautsarina Kautsarina

University of Indonesia, Indonesia

Ima Apriany

University of Wollongong, Australia

William J. Tibben

University of Wollongong, Australia

ABSTRACT

The term “cyber” has been used widely in recent times and in particular in the context of security. Given the wide usage in formal and informal contexts, it is possible that its origin and true meaning will not be fully appreciated and understood. The Cooperative Cyber Defense Center of Excellence (CCDCE) has made available a range of various definitions. The term cyber has become very prevalent and appeared in many national and international statements and in some cases having contradictory interpretations. This chapter aims to revisit the term cyber by walking through its use in various contexts. It starts from the context of the word’s origin; what is really entailed in the cyber world; and definitions portraying the understanding of the term from academics, national, and international organizations. Finally, the chapter combines the different interpretations into a single abridged definition from the various accumulated perspectives.

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INTRODUCTION

The term *cyber* is commonly used jargon to describe computers, networks, the Internet and its associated “virtual” environments (Merriam-Webster, 2020; Oxford Dictionary, 2020). Despite its prevalence in the media, conversations and official statements, this term is still understood in different ways (CCDCE, 2017; Lehto, 2015). In this chapter, we investigate the term *cyber* and its definition to see how various scholars interpret the word. In doing so, this chapter aims to bring together the definitions of *cyber* to enable better comprehension of the term as it is used today.

In investigating the definition of *cyber*, we explore several contexts in order to develop a working definition of the term. In section 2 we start by discussing the diverse perspectives which includes the differences between its use as an adjective vs. a noun, as well as the confusion of the word in other domains reflected in the two common terms *information security* vs. *cyber security*. In Section 3, we will explore the use of the term by seeing it used from multiple perspectives: linguistic genealogy, the context of the cyber world, and the use of the word in today’s context, which we find varies considerably. In Section 4, we will combine these different perspectives to advance a single abridged definition which is suitable for today.

“Cyber”: Jargon and the Divergence of Understanding

Although *cyber* is used as common jargon in modern societies, a singular meaning is elusive. Until now, *cyber* has been understood in differing ways across the domains of time and disciplines. Interestingly, an association with computers or the Internet is not a prerequisite for understanding this term which can be readily grasped by referring to a common dictionary (Merriam-Webster, 2020; Oxford Dictionary, 2020). Despite this, there is currently no consensus on a definition. We found that there are several diverging understandings, such as on the semantic discussion (adjective vs. noun), and domain (such as the confusion between information security and cyber security).

Semantic Debate: Noun vs. Adjective

In a semantic debate, *cyber* is often used as an adjective that emphasizes its corresponding domain, such as the use of terms *cyber space* and *cyber security*. In these cases, the word modifies “space,” which refers to a virtual room, and adds meaning “security” in the cyber space (see semantic discussion in Bayuk et al., 2012; and Ramirez & Choucri, 2016). The term *cyber* is also used as a noun to combine with its corresponding domain, such as in the use of *cyberspace* and *cybersecurity*.

The use of *cyber* as a noun is usually used and recognized with US English, while the use of *cyber* as an adjective is used globally and is recognized with UK English. However, this claim is not entirely valid since some organizations in Europe use the US style of English. One example of different uses, for instance Oxford University (GCSCC, 2014) uses the term “Cyber Security” (with a space), while the International Telecommunication Union (ITU, 2012), and the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC, 2012) uses the term “Cybersecurity.”

While the use of *cyber* as noun and adjective are interchangeably used in modern statements, the open compound word “cyber security” is often used as a noun, and the closed compound word “cybersecurity” is commonly used as an adjective. The actual definition of each variation in order to attain a

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