

## **Chronemics in CMC**

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### **Introduction**

When I communicate with others using computer mediated communication (instant messaging, sms, social networks, also known as cmc), I frequently notice that the conversation has a rhythm and pace. For example, responding quickly to messages says something different from responding slowly. Another example is that texting someone at 6 in the morning feels very different from texting them at midnight.

In interpersonal communication, this is called chronemics. The phenomenon I am choosing to investigate in this paper is chronemics in computer mediated communication. Given that people today are communicating with each other more than ever using social media and instant messaging, I think this topic is important to understand.

To define this cmc chronemics clearly, I mean the frequency of communication, the pacing of the conversation itself (which is sometimes the same as the frequency of communication), and the time at which it takes place. My personal belief as I explore this topic is that chronemics communicate a lot in computer mediated communication, and to some extent take the place of nonverbal cues. Additionally, I think chronemics can be used to pull empirical data about relationships out of individual and aggregated conversations. This paper will begin by examining the way researchers have studied the existence of chronemics in cmc, and then discuss the ways researchers have been able to put chronemics to use.

### **Useful Theories**

To start examining the literature on computer-mediated chronemics, we need to define and explain some general theories. The first and traditional theory is cues-filtered-out theory.

This theory was introduced by Sproull and Kiesler (1991), and is an extremely naive approach. It argues that cmc and cyberspace exist without any non-verbal cues, and therefore is a fundamentally different space. The main conclusion is that there will be fewer

and less intense relationships in cyberspace. A side effect, according to the theory, is that relationships are less hierarchical and more democratic; everyone can have an equal share of the conversation. A good summary of the theory is that it views cmc as “inherently impersonal.” The cues-filtered-out approach is the traditional approach that most other theories exist to disprove, and I think most people who have experienced cyberspace in any meaningful way would agree that this theory is seriously lacking.

The second theory to talk about is the social information processing perspective. It claims that people are able to edit how they present themselves more, and people give each other the benefit of the doubt more in cyberspace. This means that there is an opportunity for even more emotion and intensity of relationship than normal in cyberspace. It also claims that because people are missing normal cues, they fixate on what cues there are, such as writing style, written “nonverbals” like emojis, and other text cues like repeated letters.

The next important theory to be aware of is social presence theory. Online social presence in this context is the appearance or perception of a participant being a real person or being present in the conversation in cmc (Cui et al., 2013). It’s important to this paper because it is influenced by chronemics.

### **Describing CMC Chronemics Phenomena**

The first and most important discovery by researchers about cmc chronemics was the acknowledgement that they exist and influence people’s impression of the conversation. This is the claim made by Walther and Tidwell (1995), in contrast to the previous view that cmc is impersonal and doesn’t contain nonverbal cues.

This was effectively replicated for sms by Döring and Pöschl (2009).

The next important phenomenon documented by researchers is that of online silence. The idea that even in asynchronous communications, it is possible for silence to exist was documented by Ravid et al. (n.d.) and also by Y. Kalman and Rafaeli (2005). Kalman

explains that “silence can be defined as no response after an  $x$  period of time, at which, say, 99% or 97% of the responses have already been created” (2005). Y. Kalman and Rafaeli (2005) also explains that the silence generated there can have major disruptive effects on online communication, from interfering with team collaboration, to creating misunderstandings.

This can be viewed through the lens of expectation violation theory as well, as described in Y. M. Kalman and Rafaeli (2011) and Sheldon et al. (2006). Surprisingly, they find different results; both concluded that the reward valence of the person violating chronemic norms changes how that violation is perceived, but Sheldon et al. (2006) found that low-reward violaters were more simply more negatively perceived than high-reward violaters. Y. M. Kalman and Rafaeli (2011) found a more complex interaction, although both studies agreed that the norm violation was perceived negatively. Part of that is the context, as both the studies were centered around work. That lines up with Walther’s claims that task focused messages with high latencies were perceived negatively.

### **Chronemics Applications**

Part of the reason cmc chronemics are so interesting is that people build the systems that these interactions occur in; to me that means that if we can discover patterns in cmc chronemics that are well understood, people can apply those patterns when building cmc systems. For example, if a short response latency automatically meant that two communicators were closer to each other, that would be useful for measuring relationship strength and recommending future relational links in a social network. As far as I can tell, no such simple application exists. Instead, it seems that chronemics are being analyzed, but there isn’t all that much interest in it as a measurement. Part of this is because of contamination by other correlated variables, which will be discussed later. First, there are some promising uses of chronemics, starting with an apparent correlation with personality type discovered by Y. M. Kalman et al. (2013).

## Conclusion

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