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**A Conceptual Analysis of the e-Channel's Multifaceted  
Nature in the 21st Century**

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## **Abstract**

Nowadays, Internet is widely used for conducting business. For companies, the question is not anymore whether they are online or not, but only which stage(s) of the buying cycle they cover with their website. Accordingly, here is a large body of academic contributions on online consumer behaviour, e.g. online shopping or information search. Yet, research on the nature of the e-channel with respect to the evolving multimedia capabilities is scarce. The different forms of computer-mediated communication, e.g. chat, have hardly been examined in depth. For an effective and efficient use in customer-company interactions, however, it is imperative to know the basic properties of the communication channels. It is a necessary condition for goal-directed channel management.

This paper provides an overview of the current state of research on the nature of the e-channel in a context of c2b communication. It contributes to the theoretical foundations of channel research by suggesting a framework for channel analysis. Knowing the nature of the different forms of online communication will support scholars and practitioners alike in appropriate channel design. The channel analysis in this paper is relevant for all fields where customers communicate with companies, e.g. for complaining.

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## Abbreviations

c2b	consumer-to-business
CMC	computer-mediated communication
MRT	media richness theory
PDA	personal digital assistant
POS	point of sale
TAM	technology acceptance model
WEMF	WEMF AG für Werbemedienforschung

## 1 Introduction

Though Internet can still be considered to be a nascent channel, the majority of the populations in industrialised countries is online.<sup>1</sup> For companies, the question is not anymore whether they are online or not, but only which stage(s) of the buying cycle they cover with their website. However, what is meant by “Internet”, “e-channel” or “being online”? Thanks to the impressive development in the computer industry, we nowadays have relatively inexpensive multimedia computers offering a wide variety of online communication possibilities. Nevertheless, in c2b communications, getting online in touch with a company is often restricted to email and webform. Innovative forms such as avatars or chat are only rarely offered. This is expected to be changing in the next decade.

For an effective and efficient use of computer-mediated communication in a business context, it is imperative to know the properties of both the e-channel in general and the different manifestations of online communications. While there is abundant research on online communication, online shopping, online information search etc., hardly anyone has recently examined the nature of the e-channel in depth.<sup>2</sup> Mostly scholars from IS research and marketing do not explicitly outline what they refer to when writing about “the Internet”. And theories on communications are still based on the seminal contributions written in the 1980ies and 1990ies.<sup>3</sup> Given the dramatic change from simple DOS-interfaces to nowadays’ multimedia computers and the trend to convergence of media, it is imperative to reconsider the constitutional properties of a channel, and in particular the e-channel.<sup>4</sup> An increasing number of devices enables users to go online, be that a mobile phone, a laptop, a personal digital assistant PDA or an MP3 player. The underlying technology and transmission protocols will not shape usage anymore. A first step in this direction are mobile phones that use whatever protocol are available.

This paper provides an overview of the current state of knowledge on the nature of the e-channel in a context of c2b communication. It contributes to a theoretical foundation of channel research by suggesting a framework for channel analysis. Knowing the nature of the

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<sup>1</sup> See Dholakia et al. (2005), p. 72, Harris et al. (2006), p. 425, Soopramanien/Robertson (2007), p. 73.

<sup>2</sup> See e.g. for online shopping Ambekar-Shitre et al. (2007), Cho et al. (2003), Devaraj et al. (2002), Soopramanien/Robertson (2007), Ward (2001), Wolfinbarger/Gilly (2001). For online communication see e.g. Chen et al. (2004), Flanagin/Metzger (2001), Karahanna/Limayem (2000), Lin (2003), Rice (2005) or Tidwell/Walther (2002).

<sup>3</sup> See e.g. Daft/Lengel (1986) or Walther (1996).

<sup>4</sup> See Groner et al. (2006), n.p., Harms (2002), pp. 27.

different forms of online communication will support scholars and practitioners alike in appropriate channel design. The channel analysis in this paper is relevant for all fields where customers communicate with companies, e.g. for complaining.

The remainder of the paper is organised as following: In the next section, a framework for analysing channels in a c2b-communication context will be developed. Based on these attributes, a new channel classification is proposed. Then the framework will be applied to the communication channels.

## 2 Framework to Describe Channels for c2b Communication

Depending on the discipline, the term channel is understood quite differently. In business administration, channels are often defined as means of communication, transaction, and / or distribution.<sup>5</sup> This research focuses on the communication function from a customer perspective, because due to its virtuality, Internet is mainly an information and communication channel. The transaction process can be reduced to information transmission and apart from digital products, distribution is not possible. In a general e-service context, Rust/Lemon (2001) observes “The Internet is built upon this concept of information service. By its very nature, the Internet is a network that permits the interchange of information (at its very core, in zeroes and ones).”<sup>6</sup> Consequently, channel in this research denotes always a communication channel and is defined as a medium which transmits the signal from the sender to the receiver.<sup>7</sup> Companies mostly offer different communication channels whose characteristics have different manifestations.

For profiling channels, various attributes from communications theories can be taken into account.<sup>8</sup> These may be channelinherent characteristics, e.g. interaction type, or criteria assessed differently by each user, e.g. ease of use. The following set of criteria reflects the b2c focus of this research, i.e. attributes that are highly relevant for organizational communication, but not for customer – company communication, are not considered. As a

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<sup>5</sup> See Anderson/Choobineh (1996) in Chen et al. (2002), p. 705, Kiang et al. (2000), p. 384, Li et al. (1999), n.p., Peterson et al. (1997), p. 334. In marketing, however, channel denotes also “[...] a set of interdependent organizations involved in the process of making a product or service available for use or consumption.” Coughlan et al. (2001), p. 2, see also Kotler/Bliemel (1999), p. 818.

<sup>6</sup> Rust/Lemon (2001), p. 86.

<sup>7</sup> See Fiske (1990), p. 18, Shannon/Weaver (1998), p. 7.

<sup>8</sup> For a short overview on communications research in an organisational context see Salmon/Joiner (2005), p. 56.

result, the following attributes are chosen to profile a channel<sup>9</sup>:

- transmitting device: What device is used to transmit / receive the signal?
- interaction type: Is the communication mediated or direct?
- mode of communication: Is the information text-, audio- or videobased?
- richness: Is the channel lean or rich? (including the constitutional attributes of richness, synchrony, multiple cues, personal feelings, and language variety)
- costs and benefits: How much does it cost the sender to use the channel? Which channelspecific benefits can a user profit from?
- suitability: How suitable is the channel for ensuing a particular aim?

Given the c2b focus of the research, mass communication is not considered, i.e. only 1:1 communication relationships are analysed. Before each channel is discussed against the background of these criteria, the following sections will first explain the attributes.

## 2.1 Transmitting Device

The transmitting device denotes the means which is used to encode / send and decode / receive the message, e.g. a computer. In the perception of customers, channels are strongly determined by the constitutional characteristics of the transmitting device, e.g. it is a difference whether customers use VOIP, mobile or fixnet telephony.<sup>10</sup> Except for face-to-face communication, a transmitting device is always required, thus the device mediates communication (human to object, object to human).<sup>11</sup> Which leads to the next attribute, interaction type.

## 2.2 Interaction Type

Depending on the immediacy of the contact, communication can be split up in non-mediated and mediated communication (see figure 2-1).<sup>12</sup> Non-mediated communication does not depend on an interposed device, i.e. a person communicates directly with another physically present person. Mediated communication in contrast requires both sender and receiver to use

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<sup>9</sup> See Daft et al. (1987), p. 358 based on Daft/Lengel (1984), Gräf (1999), p. 65, Gronover et al. (2002), p. 27, Lin (2003), p. 355, Sitkin et al. (1992), p. 568.

<sup>10</sup> See Schmidt (2004), p. 38.

<sup>11</sup> Some authors consider the vocal chords or the person per se as transmitting device, see Cowles/Crosby (1990), p. 521. As these are parts of the body, however, they are not understood as a transmitting device in this research. Transmitting devices are limited to objects. Most researchers consider face-to-face interactions as non-mediated, see e.g. Kelly/Keaten (2007), p. 352.

<sup>12</sup> See Gräf (1999), p. 65.

a device in order to communicate, e.g. a phone or a paper. Thus, the communication is mediated by the device used to transport the message.

For communicating online, customers use their computers (= interposed device) to transmit their messages. The receiving company then must also use computers to decode the signals into a message before they can start working on the message. A considerable advantage of mediated communication is that the communication partner neither has to be present at the time of interaction (ubiquity) nor both sender and receiver have to communicate at the same time (asynchrony).<sup>13</sup> As a result, the number of possible communication partners increases sharply.

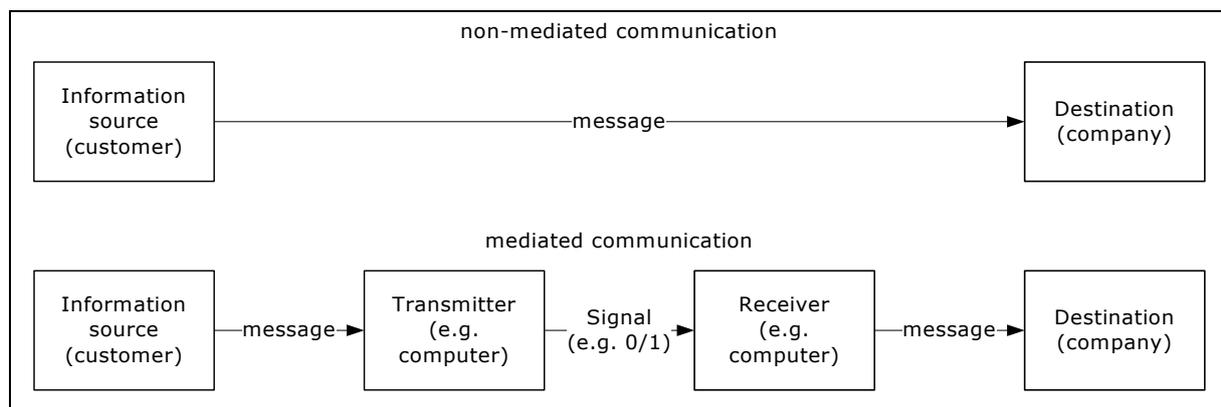


figure 2-1. Non-mediated vs. Mediated Communication.<sup>14</sup>

Based on the interposed device, mediated communication can further be subdivided into computer-mediated and not computer-mediated communication. Focusing on the e-channel, mainly CMC is of interest here.<sup>15</sup>

### 2.3 Mode of Communication

Often, media are classified as either written or oral, whereas CMC is subsumed under written communication. Today, however, this assumption is challenged; current CMC is far from being exclusively textbased. Most computers are multimedia terminals, i.e. they allow to combine text-, audio- and videobased information in one message.<sup>16</sup> Hence, they are increasingly used to send and receive multimedia content. Very conducive to this development is the fast diffusion of broadband internet access which enables users to send multimedia messages by Internet.

<sup>13</sup> See for the following Gronover et al. (2002), p. 27. For the attribute synchrony see section 2.4.1, p. 8.

<sup>14</sup> Following Shannon/Weaver (1998), p. 7 (for mediated communication).

<sup>15</sup> Computer-mediated channels are also referred to as "new" media, see e.g. Rice (1992), p. 475.

<sup>16</sup> See for the following Gronover et al. (2002), pp. 27.

In order to fully capture the nature of CMC, this research therefore proposes to differentiate between text-, audio- and videobased communication instead of using the written-oral classification (see table 2-1). While textbased communication equals written interactions, the category oral is split up in audio- and videobased.

<b>type</b>	<b>textbased</b>	<b>audiobased</b>	<b>videobased</b>
<b>activity sender</b>	writing	speaking	speaking, watching
<b>activity receiver</b>	reading	listening	listening, watching
<b>exchange based on</b>	exclusive exchange of written symbols	audio cues only	audio and video cues
<b>channels</b>	letter, fax, text messages and mostly instant messaging / chat; often email	phone conversations (analogue, VOIP or mobile), email with audio attachment	face-to-face, videoconferencing, email with video attachment

table 2-1: Channel Classification according to Mode of Communication.<sup>17</sup>

Textbased messages require the sender to write and the receiver to read. They are exclusively based on the exchange of written symbols. Also audiobased communication relies on only one type of information, namely audio cues. To communicate, the sender must speak and the receiver listen. For videobased communication, speaking and listening is necessary as well. However, these activities are complemented by watching, i.e. the use of visual cues. Considering the communication activities, it becomes obvious that the written-oral classification focuses on the result of a communication action (but without acknowledging the sending of visual cues). In contrast, the classification used in this thesis is based on the communicator’s activities in order to send / receive the message. Thus, the hybrid nature of CMC can better be taken into account.

## 2.4 Richness of a Channel

Based on Bodensteiner (1970) and Short et al. (1976), Daft/Lengel (1984) have developed the MRT for explaining media selection in an organisational context.<sup>18</sup> The main statement is that different channels vary in their ability to transmit ambiguous and equivocal information.<sup>19</sup> This is referred to as information richness whose four constitutional characteristics are:<sup>20</sup>

- a) feedback: To what extent can a medium provide immediate feedback, i.e. overcome constraints of place and time?
- b) multiple cues: How many cues, e.g. symbolic or social, can be communicated?

<sup>17</sup> Partly following Gronover (2003). p. 42.

<sup>18</sup> The first publication of the MRT is Daft/Lengel (1984), with reference to Bodensteiner (1970) and Short et al. (1976).

<sup>19</sup> See Salmon/Joiner (2005), p. 57. Equivocality is defined as “[...] the lack of shared understanding about some situation that requires learning and sense making.” Rice et al. (1998), p. 4

<sup>20</sup> See for the following Daft et al. (1987), p. 358 based on Daft/Lengel (1984).

- c) personal focus: To what extent can personal feelings and emotions be conveyed?
- d) language variety: To what extent can language be varied?

A rich medium provides multiple, verbal and nonverbal cues, which helps to clarify ambiguous issues.<sup>21</sup> Thus, uncertainty and equivocality is reduced. Daft/Lengel (1986) suggest that “[i]n order of decreasing richness, the media classifications are (1) face-to-face, (2) telephone, (3) personal documents such as letters or memos, (4) impersonal written documents, and (5) numeric documents.”<sup>22</sup> It is generally agreed upon that face-to-face interaction, i.e. non-mediated communication, is the richest channel because all possible forms of verbal and nonverbal expression are available.<sup>23</sup> E.g. by looking quizzically, receivers can indicate that they have not understood the message. Or they can nod as a sign of approval. In contrast, text-based, asynchronous CMC, e.g. email, is considered to be lean.<sup>24</sup> Lean channels can convey only a limited amount of cues, e.g. visual and symbolic meanings may miss. These means of communication are also said to be less emotional and more depersonalised.<sup>25</sup>

For a long time, MRT has been a dominating concept in organisational communications research. It can be subsumed under the technologically deterministic perspective (also referred to as cues filtered-out.<sup>26</sup> This umbrella term encompasses several theories such as MRT and social presence theory that posit that the lack of nonverbal cues makes CMC less personal and leaner.

However, with the emergence of CMC, and in particular the recent multimedial forms, empirical studies failed to support MRT, even though MRT has been adapted to include these new communication forms.<sup>27</sup> While MRT can explain the richness of “traditional” media, empirical evidence for CMC is highly inconclusive.<sup>28</sup> As a reaction to the inability to explain the contradictory results, the perspective emerged that CMC can convey rich social

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<sup>21</sup> See Büchel (2001), p. 84.

<sup>22</sup> Daft/Lengel (1986), p. 560. An equal ranking is confirmed by Timmerman/Harrison (2005), p. 383.

<sup>23</sup> See Chidambaram/Jones (1993), p. 468, Daft/Lengel (1986), p. 560, Daft et al. (1987), p. 358, Gronover et al. (2002), p. 27, Sitkin et al. (1992), p. 567.

<sup>24</sup> See Chidambaram/Jones (1993), p. 468, Dickey et al. (2006), p. 67, Rice/Love (1987), p. 88 in Walther (1994), p. 475, Rice/Shook (1990), p. 220.

<sup>25</sup> Hiernstra (1982), p. 883 in Walther (1994), p. 475.

<sup>26</sup> See for the following Hian et al. (2004), n.p. For the media richness theory see Daft/Lengel (1984), for social presence Short et al. (1976).

<sup>27</sup> See Fulk/Boyd (1991), p. 410, Kayany et al. (1996), p. 400, Sillince (1997), p. 289, Steinfield/Fulk (1986) and Treviño et al. (1987) in Markus (1994), p. 505, Zmud et al. (1990), p. 444.

<sup>28</sup> See Carlson/Zmud (1999), p. 155, Fulk/Boyd (1991), pp. 410, Kayany et al. (1996), p. 402, Kim et al. (2007), p. 1185.

information just as well as non-mediated communication can.<sup>29</sup> Recent research emphasizes the importance of social influence, norms of media use and the image of a technology stronger.<sup>30</sup> “Rather than viewing richness or scope as a cause of behaviour, these concepts are perceived as an outcome of social behaviour.”<sup>31</sup> Channel characteristics, such as richness, are said to be less crucial.

It has also been recognized that one problem of the MRT is the failure to fully take into account the changing nature of computerbased media.<sup>32</sup> While most exponents of the cues filtered-out perspective classify email as a lean medium, somewhere between letter and phone, more recent research claims email (and other forms of CMC) to be rich.<sup>33</sup> Given that in the early ninteennineties CMC was exclusively textbased and rather limited in its ability to provide multiple cues, it is obvious that the initial classification cannot be maintained. Today, CMC offers a wide range of multimedial interaction forms, e.g. emails with audio- and / or visual attachments or video-conferences.<sup>34</sup> “Any deterministic hypothesis about the IT-to-organization effect is liable to run into problems in this area because of the dynamic and developing nature of the technology.”<sup>35</sup> I.e. assumptions about CMC in the ninteeneighties may not be true anymore due to the technological change. It implies also that in a decade, the assumptions about current CMC may not be appropriate anymore because the media’s nature will have changed.

While MRT alone cannot explain media choice, it nevertheless makes a substantial contribution.<sup>36</sup> Moreover, for “traditional” media, the explanative power is high and research following the second perspective (social influence) has lead to contradictory results as well.<sup>37</sup> Therefore, this project will use the four attributes proposed by Daft/Lengel (1986) as elements of the channel profile.

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<sup>29</sup> See Büchel (2001), p. 21.

<sup>30</sup> See Hian et al. (2004), n.p., Kayany et al. (1996), p. 400, Kim et al. (2007), p. 1185. For the new perspective see Daniel (1999), p. 52. Examples for theoretical concepts are the social identification/deindividuation (SIDE) model (see Spears/Lea (1994) in Hian et al. (2004), n.p.) or the social information processing (SIP) theory Walther/Burgoon (1992), pp. 81.

<sup>31</sup> Büchel (2001), p. 86.

<sup>32</sup> See for the following Flanagin/Metzger (2001), p. 157. See also Büchel (2001), p. 20 Markus (1994), p. 523.

<sup>33</sup> For the traditional classification of email see Chen et al. (2004), p. 389, Kiesler et al. (1985), p. 80, Markus (1994), p. 505. For email as rich medium see Flanagin/Metzger (2001), p. 173, Markus (1994), p. 506.

<sup>34</sup> See Flanagin/Metzger (2001), p. 175.

<sup>35</sup> Sillince (1997), pp. 289.

<sup>36</sup> See Salmon/Joiner (2005), p. 62.

<sup>37</sup> See Carlson/Zmud (1999), p. 155.

### 2.4.1 Synchronicity

Synchronicity (also called immediateness) refers to a medium's ability to provide timely feedback.<sup>38</sup> Synchronous communication takes place real time, i.e. sender and receiver communicate at the same time. It therefore allows to clarify ambiguous issues instantly.<sup>39</sup> Generally, synchronous media are said to be richer than asynchronous media.<sup>40</sup> The disadvantage of synchronous communication is that it requires sender and receiver to communicate at the same time.

As far as "traditional" media are concerned, oral communication is synchronous (phone, face-to-face) and written interactions are asynchronous (letter, fax).<sup>41</sup> With CMC, however, the classification becomes more intricate. While instant messaging / chat is textbased and synchronous, email may be basically asynchronous but may also be (mis)used synchronously due to the speed of the medium. Messages are delivered with virtually no time delay. Videoconferencing and the like equal a face-to-face conversation mediated by a computer interface and are therefore synchronous.

### 2.4.2 Multiple Cues

The attribute multiple cues refers to the number of different communication features that a channel can convey.<sup>42</sup> Besides verbal language, the message may consist of a large variety of nonverbal cues, e.g. physical presence or body language.<sup>43</sup> These cues transport tacit information which otherwise would not have been conveyed.<sup>44</sup>

Non-mediated communication provides the most cues and is therefore the richest form. As soon as a device is interposed between sender and receiver, the transmission of cues is restricted.<sup>45</sup> Phone excludes visual cues while it still allows for audio cues, e.g. pitch of voice. With textbased communication, also these audio cues are excluded.<sup>46</sup> As a result, oral media are said to be richer than written media.<sup>47</sup>

Again, the emergence of CMC challenges this assumption. Multimedia applications allow to

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<sup>38</sup> See for the following Daft et al. (1987), p. 358.

<sup>39</sup> See Daft et al. (1987), p. 358, Sillince (1997), p. 280.

<sup>40</sup> See Markus (1994), p. 505.

<sup>41</sup> See Gronover (2003), p. 43, Markus (1994), p. 505. As Gronover (2003), p. 43 pointed out, exceptions are voicemails and messages on answering machines, which can be recorded and listened to later.

<sup>42</sup> See Daft et al. (1987), p. 358, Sillince (1997), p. 280.

<sup>43</sup> See Daft et al. (1987), p. 358, Harms (2002), p. 30, Sitkin et al. (1992), p. 567.

<sup>44</sup> See Sitkin et al. (1992), p. 567.

<sup>45</sup> See Gronover et al. (2002), p. 27.

<sup>46</sup> See Tidwell/Walther (2002), p. 318.

<sup>47</sup> See Markus (1994), p. 505.

use different communication means at the same time.<sup>48</sup> An email, for instance, can include audio or video files and is consequently not exclusively text-based anymore. While senders do not necessarily have to create multimedia content for the email, receivers do not understand the entire message without listening or watching.

### 2.4.3 *Personal Feelings*

The third attribute, personal focus, encompasses how suitable a channel is to convey personal feelings.<sup>49</sup> The higher the emotional capacity of a medium, the richer it is. In this research, the capacity to transport emotions is complemented by the underlying concept of social presence (also referred to as the degree of personalisation). It can be defined as “[...] the extent to which an individual psychologically perceives other people to be physically present when interacting with them.”<sup>50</sup> The cues filtered-out perspective postulates that an increasing number of nonverbal and verbal cues transported by a medium lead to higher social presence.<sup>51</sup> This in turn leads to a higher feeling of intimacy and immediacy.<sup>52</sup> Generally, channels with a subjectively high social presence are said to be warm, sensitive and sociable.<sup>53</sup> Accordingly, textbased CMC is said to be more impersonal than face-to-face interaction.<sup>54</sup> The main reason for this assessment is the lack of non-verbal cues and social information.<sup>55</sup> “CMC encourages certain attitudes of detachment because, even when not anonymous, senders pick up a perception of anonymity that the keyboard imparts.”<sup>56</sup> As a result of depersonalisation, communicators may display more uninhibited behaviour, such as swearing and hostile, intense language.<sup>57</sup> In comparing face-to-face with CMC encounters, Kiesler et al.

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<sup>48</sup> See Gronover et al. (2002), p. 27.

<sup>49</sup> See for the following Daft et al. (1987), p. 358.

<sup>50</sup> Büchel (2001), p. 27. See also Short et al. (1976), p. 65.

<sup>51</sup> See Chen et al. (2004), p. 389, Short et al. (1976), p. 65.

<sup>52</sup> See Rice (1993), p. 452, Short et al. (1976), p. 73. However, social presence and immediacy does not necessarily need to be linked, see Short et al. (1976), p. 73.

<sup>53</sup> See Short et al. (1976), p. 66.

<sup>54</sup> See Hian et al. (2004), n.p., Kiesler et al. (1985), p. 98, Tidwell/Walther (2002), pp. 318. But research has provided evidence that also CMC allows for building intimate relationships, see Hian et al. (2004), n.p., Walther (1992), p. 51 in Kayany et al. (1996), p. 402. But it takes considerably longer than in face-to-face encounters, see Walther/Burgoon (1992), p. 55. CMC users adapt to the restrictions (i.e. having less cues) and focus more on social information gained over time, see Walther (1992), p. 51 in Kayany et al. (1996), p. 402, Walther (1994), p. 493. So the difference is in rate, not in kind, see Hian et al. (2004), n.p., Kayany et al. (1996), p. 402.

<sup>55</sup> See Hian et al. (2004), n.p., Kiesler et al. (1985), p. 81, Rice/Love (1987), p. 88 in Walther (1994), p. 475, Tidwell/Walther (2002), pp. 318.

<sup>56</sup> Daft/Wiginton (1979) in Sillince (1997), p. 289.

<sup>57</sup> See Kiesler et al. (1985), p. 81 and p. 94.

(1985) found a higher proportion of participants swearing or being impolite.<sup>58</sup> As far as complaining is concerned, this would imply that CMC is highly suitable for venting because the medium supports dissatisfied customers in getting the frustration off their chests.

#### **2.4.4 Language Variety**

From language to language, the complexity and possibilities of expressing a specific fact varies.<sup>59</sup> In MRT, language variety can be understood as “[...] the range of meaning that can be conveyed with language symbols.”<sup>60</sup> The more symbols a language provides, the greater is the variety of how facts and thoughts can be expressed. On the other hand, symbols may have different meanings in a highly complex language and thus be ambiguous. With expanding variety, the ways of expressing something increases, and so does the richness.

According to Daft/Wiginton (1979), nonverbal language, e.g. music or body language, has the greatest variety. The number of possible symbols combinations is countless. Then natural language, which is defined as spoken and written language in daily situations (e.g. English), follows. The lowest variety and the highest precision is attributed to special purpose language, e.g. a computer language or analytical mathematics. These formal languages are mostly narrow in scope and can express but limited concepts and ideas.

### **2.5 Costs and Benefits**

The use of a channel always involves channelspecific costs and benefits. They vary from channel to channel and influence the attractiveness of a channel. Assuming a rational decision (homo oeconomicus), a communicator will use the channel with the best cost-benefit ratio.

Some costs / benefits can be quantified, or even valued with monetary units, e.g. access costs.<sup>61</sup> But the majority is difficult to measure, e.g. the psychological costs of a face-to-face confrontation or the convenience of using a channel. Therefore, this research uses proxies for capturing unquantifiable channelspecific costs and benefits. A very useful approach is the technology acceptance model (TAM), though it has been developed to explain information technology acceptance in an organisational context.<sup>62</sup> Later, it has also been applied to Internet

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<sup>58</sup> See Kiesler et al. (1985), p. 94.

<sup>59</sup> See for the following Daft/Wiginton (1979), pp. 180.

<sup>60</sup> Daft et al. (1987), p. 358.

<sup>61</sup> See Venkatesan et al. (2007), p. 119.

<sup>62</sup> See Harms (2002), p. 94, Soopramanien/Robertson (2007), p. 74. TAM was first presented by Davis (1986).

technologies and electronic commerce.<sup>63</sup> Its key components explaining the acceptance are ease of use and perceived usefulness.<sup>64</sup> In a cost-benefit context, ease of use is often related to costs and perceived usefulness to benefits.<sup>65</sup>

Davis (1989) defined ease of use as “[...] the degree to which a person believes that using a particular system would be free of effort”.<sup>66</sup> For this research, the definition is modified. Instead of a system, the object is a channel; Ease of use can thus be referred to as the degree to which a person believes using a particular channel would be free of effort, i.e. using would be without costs. The construct is heavily influenced by the usability of a channel. The higher the usability of a channel is, the easier it is to use it. It has to be kept in mind that low usability, e.g. due to complex and time-consuming navigation through a website / phone menu, benefits like convenience and time savings will be annihilated.<sup>67</sup>

By and large, the effort to use a channel is positively related to the time users need to accomplish their goals by means of the channel. If the time used is multiplied with the hourly rate of opportunity costs, ease of use can approximately be quantified. Nowadays, time is one of the most important resources.<sup>68</sup> Moreover, perceived time consumption for using a service is an essential quality determinant.<sup>69</sup> Therefore it seems legitimate to measure not only the quantifiable costs, but also approximate other costs by means of time estimations.

Additionally, the psychological costs of using a channel has to be taken into account, in particular for delicate issues such as complaints. Empirical evidence suggests that introvert, reticent persons have difficulties in organising, timing and wording of their speech.<sup>70</sup> Textbased communication supports these persons in reducing anxiety and inhibition because it allows them to think about the message, plan and word it carefully and then send it exactly the way they wrote it down.<sup>71</sup> The possibility to prepare the messages can therefore reduce psychological costs considerably.

The second element of TAM is the perceived usefulness, which denotes “[...] the degree to which a person believes that using a particular system would enhance his or her job

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<sup>63</sup> See Chen et al. (2002), p. 707, Devaraj et al. (2002), p. 319.

<sup>64</sup> See Chen et al. (2002), p. 707, Davis et al. (1989), p. 985, Devaraj et al. (2002), p. 319.

<sup>65</sup> See Davis (1989), p. 321, Venkatesh et al. (2003), pp. 447. Sometimes, ease of use is also called „channel accessibility“, see Li et al. (1999), n.p.

<sup>66</sup> Davis (1989), p. 320.

<sup>67</sup> See Walker/Johnson (2006), p. 131.

<sup>68</sup> See Schmidt (2004), p. 100.

<sup>69</sup> See Harms (2002), p. 116.

<sup>70</sup> See Kelly/Keaten (2007), p. 363 and the there mentioned sources.

<sup>71</sup> See for the following Kelly/Keaten (2007), pp. 362.

performance.”<sup>72</sup> Again, the definition has to be adapted. The use of a system is replaced by channel use and job performance by a customer’s channel use. Consequently, perceived usefulness is defined as the degree to which using a specific channel will create value for a customer.<sup>73</sup> In contrast to the costs, perceived usefulness is positively related to channel use.

Not only the specific service a customer wants to make use of, but also the channel can offer value.<sup>74</sup> Convenience is one of the most important benefits a channel can offer. According to Gräf (1999), convenience describes “[...] die Ansprüche des Kunden, die Entscheidungen in allen Phasen des Kaufprozesses bequem, aber effizient zu treffen.”<sup>75</sup> Key determinants are location (instore vs. home) and time (restricted opening hours vs. 24/7).<sup>76</sup>

On account of the socio-economic development and time scarceness, members of industrialised societies attach more and more importance on time-saving, effortless shopping, including pre and after sales service.<sup>77</sup> In particular customers who are money rich but time poor expect companies to adapt to their lifestyle characterised by flexible working hours and increased mobility.<sup>78</sup> While it would cost companies a fortune to offer 24/7 ubiquity with synchronous channels, the e-channel here offers a viable alternative.<sup>79</sup> Because of its “anytime-anywhere” quality, it is said to be more convenient than traditional stores.<sup>80</sup>

A very basic channel benefit is the provision of information about the activity / product customers are interested in.<sup>81</sup> Generally, textbased interactions have a high recordability, i.e. they can be copied or forwarded without any subsequent changes.<sup>82</sup> Whereas audio- and videobased encounters, in particular face-to-face, are more difficult to record.

## 2.6 Suitability

As good as the cost-benefit ratio might be, it is no use if the channel is not appropriate for ensuing the communication aim(s). Therefore, it is crucial that channel and communication aims match (media appropriateness). Given that channels differ in nature, they do not equally lend themselves to the same purposes. For urgent messages, hardly anyone would choose

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<sup>72</sup> See Davis (1989), p. 320.

<sup>73</sup> See Wyner (1995), pp.42.

<sup>74</sup> See Coughlan et al. (2001), p. 17, Wyner (1995), p. 43.

<sup>75</sup> Gräf (1999), p. 104.

<sup>76</sup> See Sharples (1998), p. 84, Chiang/Dholakia (2003), pp. 181, Rohm/Swaminathan (2004), p. 754.

<sup>77</sup> See Schmidt (2004), pp. 91. For the convenience trend, see Swoboda (1999), p. 95.

<sup>78</sup> See Bellman et al. (1999), p. 35, Schmidt (2004), pp. 91.

<sup>79</sup> See Kiang et al. (2000), p. 386.

<sup>80</sup> See Soopramanien/Robertson (2007), p. 74, Walker/Johnson (2006), p. 125.

<sup>81</sup> See Li et al. (1999), n.p.

<sup>82</sup> See for the following Sillince (1997), p. 283.

asynchronous media, whereas they would be highly suitable for delicate matters about which sender / receiver need to think carefully.<sup>83</sup> Textbased communication can be recommended for facts and simple relationships, because the receiver can focus on the most important aspects.<sup>84</sup> In the context of personal relationships, O'Sullivan (2000) found that for positive interactions, richer channels are better, as they allow seeing, hearing and feeling the praise.<sup>85</sup> Lean channels in contrast are more suitable for communicating embarrassing issues. Having outlined the relevant characteristics to describe the channels, the next section will now classify the channels based on the attributes interaction type and mode of communication.

### 3 Classification of Communication Channels

Today, companies mostly offer one or more of the following contact possibilities<sup>86</sup>:

- letter / fax
- phone (analog, not VOIP)
- face-to-face (point of sale)
- CMC (mostly e-mail and / or webform)

Therefore, these channels will be analysed in the following sections. Additionally, a closer look will be taken at the up-and-coming possibilities to communicate online, e.g. chat. Available classifications of channels are mostly not consistent. In consumer complaining behaviour research, for instance, complaint channels are often classified as personal (face-to-face), telephonic (phone) or written (letter, fax, online complaint).<sup>87</sup> Sometimes, online complaints are considered as a category of their own.<sup>88</sup> This classification, however, is neither consistent (both personal and telephonic channels can be subsumed under oral communication) nor has it the due accuracy for a research project focusing on complaint channels.

Also the classification online – offline is questionable in the light of the imminent convergence of communication media. The categories online and offline cannot appropriately delimit channels anymore. This has become obvious with the emergence of VOIP, which transforms a formerly analogue medium into a computer-based channel. A phone call cannot

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<sup>83</sup> See Sillince (1997), p. 292.

<sup>84</sup> See Gronover et al. (2002), p. 28.

<sup>85</sup> See for the following O'Sullivan (2000), pp. 408.

<sup>86</sup> See Homburg/Fürst (2006), p. 9, Robertson/Shaw (2005), p. 45.

<sup>87</sup> See Homburg/Fürst (2003), p. 14, Homburg/Fürst (2006), p. 9.

<sup>88</sup> See Stauss/Seidel (2007), pp. 125.

only be made by means of a traditional phone using the landline, but also by means of a VOIP software like Skype using the Internet. Given that this software nowadays can be installed on mobile devices as well as “traditional” phones, thus making the use of a computer obsolete, the difference between online and offline gets smaller and smaller.

Instead of using the offline / online distinction and the classification of complaint channels, this research classifies channels based on the attributes interaction type (mediation) and mode of communication (see figure 3-1).<sup>89</sup>

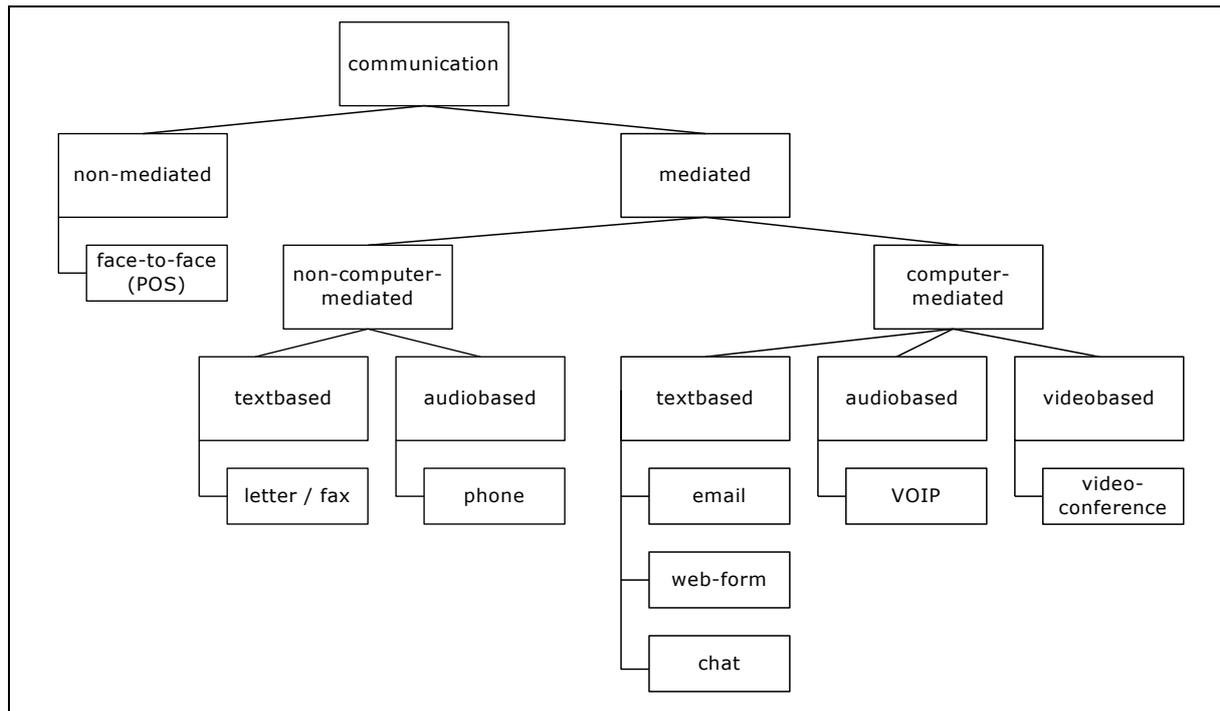


figure 3-1: Communication Channels - a Classification.<sup>90</sup>

## 4 Channel Analysis

In the following, the criteria to analyse a channel are applied to the most frequent communication channels in c2b communication.

### 4.1 Letter / Fax

Both letter and fax are textbased, mediated channels. While the transmitting device for letters is paper, fax requires additionally a machine to send and receive messages. Generally, fax does not seem to be very popular anymore. “Sending a fax, in almost all cases, was a last

<sup>89</sup> By differentiating between mediated and non-mediated communication, this classification partly follows Gronover et al. (2002), p. 27.

<sup>90</sup> Partly following Gronover et al. (2002), p. 27.

resort; it was not seen as effective or appropriate.”<sup>91</sup> In contrast, letters still have some features that are unique. They are perceived to be very formal and official. Moreover, with a registered letter, the sender can make sure that the receiver got the message.

Letter and fax are obviously asynchronous media, in particular letters.<sup>92</sup> It takes at least one day to get to the receiver, in the case of customer – company communication usually longer. Because the communication is exclusively textbased (no nonverbal cues, visual cues are limited to illustration and figures), the channels are lean and can hardly convey personal feelings.<sup>93</sup> Language variety is restricted to written natural language.<sup>94</sup>

Basic costs for letters / fax are the time used to write the message down and office supplies.<sup>95</sup> Writing a letter as such is quite easy, but requires the sender to carry out additional activities which increase the overall cost (buying a stamp, posting the letter).<sup>96</sup> In contrast, once a fax is written, it can be put on the fax machine and be sent instantly. However, using a fax machine might require some knowledge and ease of use therefore might be perceived low by some users.

A letter / fax can be written and posted anytime (asynchrony). However, the time it takes to transmit the message undoes the advantages of ubiquity. Moreover, these channels are devoid of additional instant information. On a website, in contrast, there might be additional information. A considerable benefit of fax / letter is the high recordability. The original sheets can be kept and used later as evidence in case there are misunderstandings or problems.

Both channels allow the sender to think about the message again and again. Before sending, the text can be modified as often as the sender likes. “The features of written communication allow the message to be read, reread, reflected upon, stored and retrieved.”<sup>97</sup> This is in particular useful for delicate messages. It is also less embarrassing than in a direct face-to-face conversation.

## 4.2 Phone

With the emergence of mobile phone and VOIP, this channel has become multifaceted. Nevertheless, most contributions to communications research still refer to phone as

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<sup>91</sup> Westmyer et al. (1998), p. 44.

<sup>92</sup> See Sitkin et al. (1992), p. 568.

<sup>93</sup> See Daft et al. (1987), p. 359.

<sup>94</sup> See Sitkin et al. (1992), p. 568.

<sup>95</sup> See Barlow/Moller (1996), p. 147, Stauss/Seidel (2007), pp. 67.

<sup>96</sup> See Barlow/Moller (1996), p. 147.

<sup>97</sup> Salmon/Joiner (2005), p. 61.

communication over the landline with an analogue phone. Yet, nowadays, communication by means of mobile phones and VOIP devices is on the increase. Here, the channel phone is defined more generally as exclusively audiobased, synchronous person-to-person communications by means of a specific device dedicated to voice communication, including appropriate hard- and software (see table 4-1).<sup>98</sup> Typically, sender and receiver (mostly) are not physically present at the same place.

Depending on the type of telephony, the transmission of the signals is different as well. For the sender / receiver, however, it does not matter whether a landline, a mobile telephone network or the Internet is used to transfer the data packages. It is assumed that not the way of transmitting signals, but the handling of the transmitting device is decisive for a communicator's channel perception.<sup>99</sup>

	<b>device</b>	<b>transmission of signals</b>
<b>Analogue</b>	analogue telephone	landline
<b>Cellular</b>	mobile phone	mobile telephone network, e.g. GSM
<b>VOIP</b>	any device with a microphone / speakers / designated software for VOIP	Internet (TCP/IP, UDP/IP)

table 4-1: Types of Phones.

Actually, VOIP could also be understood as a type of CMC. Here, however, VOIP is assigned to the channel phone. In contrast to early VOIP possibilities, it is nowadays possible to use a device for calling over the Internet which looks the same as an analogue phone. Again, the look and feel of the transmitting device, not the underlying technology is relevant for the perception.

Moreover, mobile phones would allow for textbased communication (text messages). Considering that a message is restricted to 160 characters, it does not lend itself to extensive interactions. As Kim et al. (2007) point out, sender and receiver must know each other quite well in order to use text messages for efficient, goal-directed communication.<sup>100</sup> Therefore, text messages are irrelevant for this research and will not further be discussed. Recently, MMS have been introduced, thus enabling mobile phone for videobased communication. Yet quality and quantity of data transmission is restricted. Today, MMS are mostly used for sending snapshots. Extensive videobased communication seems hardly feasible.

Phone is a close substitute to face-to-face encounters.<sup>101</sup> It allows immediate feedback

<sup>98</sup> The definition is partly based on Flanagan/Metzger (2001), pp. 154 and Sitkin et al. (1992), p. 568.

<sup>99</sup> For the importance of the transmitting device in respect to channel perception see section 2.1, p. 3.

<sup>100</sup> See Kim et al. (2007), p. 1185.

<sup>101</sup> See Kim et al. (2007), p. 1203, Westmyer et al. (1998), pp. 42.

(synchronous channel).<sup>102</sup> But because of the missing visual cues and filtered out body language, it is somewhat less rich than face-to-face.<sup>103</sup> As a result, pitch, volume and language capability are very important, in particular for conversations with unknown persons.<sup>104</sup> Most people perceive phone to be personal.<sup>105</sup> Language variety is determined by the use of natural language.<sup>106</sup>

Already in 1964, Cox/Rich (1964) pointed out how important convenience for the buying process is.<sup>107</sup> Instead of going to POS, which involves travelling costs (in terms of time and transport), one can just stay at home and take care of the matter by phone. In particular for the analogue phone, ease of use is very high, so channel costs are usually low. While analogue and mobile phones require the users to pay connection fees (and probably a basic charge), VOIP in combination with a flat rate does not even involve additional costs.<sup>108</sup> Some companies also offer toll-free numbers or numbers with reduced fees.<sup>109</sup>

Today, home shopping by phone is increasingly replaced by TV and Internet shopping which also allow staying at home, but additionally provide visual cues. As important as visual cues may be for shopping, for communicating embarrassing or delicate issues, e.g. complaining, exclusively audiobased conversation might still be more suitable. Senders risk less to lose their face, thus psychological cost are lower than in face-to-face encounters.

Although phone does not provide unrequested information, senders can ask their communication partners anytime for more information about an issue. Unless a voice recorder is used (which is not usual), the conversation cannot be recorded. This may be a disadvantage for delicate issues.

An interesting, hybrid alternative are “call me back” buttons on the website. If customers want to talk to an employee, they can click on the button, key in their phone number, and shortly thereafter, an employee will call them under the number provided. Though the request for communication is made online, the key part of the communication is conducted over phone. Furthermore, the connection fee is paid by the company, hence reducing communication costs for the customer.

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<sup>102</sup> See Daft et al. (1987), p. 359.

<sup>103</sup> See Daft et al. (1987), p. 359, Sitkin et al. (1992), p. 568.

<sup>104</sup> See Gronover et al. (2002), p. 26.

<sup>105</sup> See for the following Daft et al. (1987), p. 359.

<sup>106</sup> See Sitkin et al. (1992), p. 568.

<sup>107</sup> See for the following Cox/Rich (1964), p. 32.

<sup>108</sup> See Meissner (2000), p. 36.

<sup>109</sup> See Barlow/Moller (1996), pp. 189, Stauss/Seidel (2007), pp. 121.

### 4.3 Point of Sale (POS)

From a business perspective, the communication taking place at a point of sale (POS) is equivalent to a face-to-face encounter between customer and employee, i.e. sender and receiver meet at the same time in the same place and communicate in real time.<sup>110</sup> Outside the POS, face-to-face encounters between employees and customers are rather rare. Therefore, POS here is synonymously used to refer to a face-to-face conversation.

Unless the body is considered as transmitting device, face-to-face communication is not mediated and does hence not require an interposed device.<sup>111</sup> Due to the immediate feedback, the large variety of cues and the ability to convey personal feelings, face-to-face is the richest channel.<sup>112</sup> Language variety is high;<sup>113</sup> it includes both natural and body language. “A face-to-face medium provides an opportunity to receive and process a large quantity of verbal and non-verbal customer information. This medium provides the highest capacity for immediate feedback, personalized communication, and natural language”<sup>114</sup>

The physical presence of sender and receiver makes it the most intense form of customer interaction.<sup>115</sup> To date, it has not been possible to use technology for substituting employees who “[...] listen, empathise, provide assurance, solve problems and provide a customised and personalised response to individual customer needs and requests.”<sup>116</sup> Also for help desk staff, Chen et al. (2004) reported face-to-face to be the only channel to generate high perceived service assurance.<sup>117</sup>

In general, face-to-face is considered to be one of the most effective communication types, so perceived usefulness is high.<sup>118</sup> With rising complexity of the matter at hand, the importance of visual clues, in particular body language, and synchronicity increases.<sup>119</sup> Therefore, face-to-face encounters are highly suitable to solve complicated issues. The physical presence of an employee often gives customers the feeling that someone is in charge and takes care of the matter.<sup>120</sup> One of the benefits cuts both ways: Face-to-face conversations allow for an instant

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<sup>110</sup> See Gronover et al. (2002), p. 27, Kelly/Keaten (2007), p. 352.

<sup>111</sup> See footnote 11, p. 3.

<sup>112</sup> See Daft et al. (1987), pp. 358, Sitkin et al. (1992), p. 568, Wathen/Anderson (1995), p. 66, Westmyer et al. (1998), pp. 42.

<sup>113</sup> See Daft et al. (1987), p. 359, Sitkin et al. (1992), p. 568.

<sup>114</sup> Wathen/Anderson (1995), p. 66.

<sup>115</sup> See Gronover (2003), p. 42.

<sup>116</sup> Walker/Johnson (2005), p. 91.

<sup>117</sup> See Chen et al. (2004), p. 389.

<sup>118</sup> See Flanagin/Metzger (2001), p. 172, Westmyer et al. (1998), p. 44.

<sup>119</sup> See Gronover et al. (2002), p. 28.

<sup>120</sup> See Schmidt (2004), p. 109.

clarification / adjustment of the message, e.g. when receivers raise their eyebrows.<sup>121</sup> On the other hand, the immediacy of communication, the physical presence may also considerably increase psychological costs, in particular for introvert, shy persons. It will probably take more courage to confront communication partners with awkward issues.

As this type of communication is not mediated, travel costs arise (both time and transport cost).<sup>122</sup> Moreover, communication is only possible during opening hours and in the POS, i.e. customers have to adapt to local and temporal restrictions.<sup>123</sup> Within these boundaries, it is very easy to use the POS. Customers just can walk in and talk to the next employee available. They do not have to pay for the use of any transmitting devices, e.g. stamps or connection fees.

#### 4.4 Computer-Mediated Communication (CMC)

Along with the increasing number of internet users, the importance of Internet in the economy rises as well.<sup>124</sup> This is in particular true for electronic customer – company interactions.<sup>125</sup> “A combination of computer, telecommunications and internet technology is now being widely used for a variety of service delivery purposes including the provision of banking and financial services, information, booking and retail shopping services.”<sup>126</sup> Implied by the term computer-mediated, a common feature of CMC is that it always requires a computer device to send / receive messages (= mediated communication). CMC can generally be defined “[...] as communication carried out through the use of networked personal computers.”<sup>127</sup> As Büchel (2001) points out, it includes only human communication activities, i.e. one user has to send a message by means of a computer and another one has to receive it by means of the computer (human to computer or computer to human interaction).<sup>128</sup> Automated computer-to-computer communication, e.g. for exchanging sets of data from a server to a client, is excluded.

In contrast to the channels presented up to now, CMC is a generic term which summarises different forms of online communication. Although O’Sullivan (2000) postulates that new

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<sup>121</sup> See Daft et al. (1987), p. 359, Sillince (1997), p. 280.

<sup>122</sup> See Best (1981), p. 35, Richins (1980), p. 51, Schmidt (2004), p. 109.

<sup>123</sup> See Dholakia et al. (2005), p. 65 Schmidt (2004), p. 109.

<sup>124</sup> See Harris et al. (2006), p. 425.

<sup>125</sup> See Brown (1997), p. 25, Göttlicher (2002), p. 343, Hong/Lee (2005), p. 91, Meissner (2000), p. 25.

<sup>126</sup> Walker/Johnson (2006), p. 125.

<sup>127</sup> Hian et al. (2004), n.p.

<sup>128</sup> See Büchel (2001), pp. 5.

communication technologies provide “nothing terribly new from a functional perspective”<sup>129</sup>, there are differences. Technology as mediator between sender and receiver does change the perception of customer – employee encounters.<sup>130</sup> Unlike “traditional” channels, CMC is ready for multimedia use (text-, audio-, videobased) and can have a different number of senders / receivers (1:1, 1:n, n:m).<sup>131</sup>

Because email and webforms are still the predominant forms of CMC today, messages are mainly textbased. But in terms of flexibility and speed, it is a difference to paper & pencil communication.<sup>132</sup> Texts can easily (and endlessly) be changed and sent virtually real time to the receiver. Often, the length of the messages is not restricted. The degree of formality can vary from very informal to highly formal. Additionally, email allows including multimedia attachments.

Perceived ease of use depends strongly on the ICT readiness / experience of the users. While it will not be a challenge for daily computer users to communicate online, it can be quite difficult for inexperienced persons. However, most users attribute a high ease of use to CMC.<sup>133</sup> Other costs to consider are possibly the connection fees as well as the infrastructure. However, hardly any computer user will buy the devices necessary for online communication for just one single communication act. Moreover, the diffusion of broadband access results in flat rate connection which are fixed cost as well. In contrast to POS, CMC usually does not entail travel costs.<sup>134</sup>

According to the literature, one of the outstanding benefits of CMC is the ubiquitous 24/7 availability of the e-channel, which allows customers to interact independent of temporal and local restrictions, thus providing great flexibility.<sup>135</sup> Another often reported benefit of CMC is “anonymity” (not in the strict sense of the term, but rather as avoidance of a direct confrontation).<sup>136</sup> “Safely hidden behind an impersonal keyboard, consumers now, more than ever before, use electronic mail to contact companies for product inquiries or to voice

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<sup>129</sup> O'Sullivan (2000), p. 428. Also Kiang et al. (2000), p. 384 supports this view. A contradictory perspective takes Viswanathan (2005), p. 483.

<sup>130</sup> See Harms (2002), p. 2. In the context of this research, the role of automated replies (phone and email) are not analysed. Complaints should only be acknowledged automatically, the service recovery process requires individual treatment and can therefore not be automated.

<sup>131</sup> See Flanagan/Metzger (2001), pp. 154, Gräf (2002), p. 74, Kiesler et al. (1985), p. 80, Viswanathan (2005), p. 483.

<sup>132</sup> See for the following Kiesler et al. (1985), p. 80.

<sup>133</sup> See Kelly/Keaten (2007), p. 354.

<sup>134</sup> See Harms (2002), p. 116.

<sup>135</sup> See Gräf (2002), p. 72, Kelly/Keaten (2007), pp. 353, Robertson/Shaw (2005), p. 34, van Dijk et al. (2007), p. 16, Viswanathan (2005), p. 483, Walker et al. (2002), p. 92, Walker/Johnson (2005), p. 84.

<sup>136</sup> See Hong/Lee (2005), p. 97.

complaints.”<sup>137</sup> First of all, the sender has not to face the receiver physically. And then, the asynchrony allows to think about the answer before reacting. As a result, the psychological costs are reduced considerably, in particular for delicate and embarrassing issues. Research analysing the online communication behaviour of shy, reticent persons provides empirical evidence that shyness is lower in online interactions.<sup>138</sup> Moreover, low-and high-reticent subjects use online media similarly (in contrast to offline channels), i.e. CMC can even out behavioural differences caused by shyness.<sup>139</sup>

Following the classification outlined above, CMC is further divided into text-, audio- and videobased types. Today, the most common forms are email and webform, both mainly textbased.<sup>140</sup> Other ways of getting in touch with a company online include chat (textbased with multimedia attachments) or video-conference (videobased).<sup>141</sup>

#### **4.4.1 Webform**

On corporate websites, usually under contact, companies frequently offer a form to get in touch with them. Depending on the degree of structuring, customers are more or less guided. In a low structured solution, customers have typically just a textbox and the fields for their contact data (see figure 4-1). Whereas a highly structured form requires customers to pick a category from the dropdownlist to categorise their inquiries (see figure 4-2). Whether this supports customers in communicating or not, has not yet been researched.<sup>142</sup>

In most cases, it takes some time until the input of such a web form is processed. Accordingly, webforms are an asynchronous interaction mode. As users can rarely attach files, the communication is mostly restricted to textbased messages (written natural language). Sending audio or visual cues is not possible.

Differently to email, senders very often do not send their message to a specific person. The degree of personalisation is therefore low, as well as the extent of conveyed personal feelings. This “anonymity” can reduce the psychological costs of communicating an embarrassing issue considerably. It would be even possible to send a message anonymously. Yet, this would not make sense, as the sender would not receive a reply. As far as online complaining by

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<sup>137</sup> Moore/Moore (2004), p. 1.

<sup>138</sup> See Kelly/Keaten (2007), p. 354.

<sup>139</sup> For similar online communication behaviour see Kelly et al. (2003) in Kelly/Keaten (2007), p. 351.

<sup>140</sup> For the diffusion of email see Markus (1994), p. 505.

<sup>141</sup> VOIP would be another possibility. Due to its hybrid nature, VOIP, however, is here subsumed under the channel phone, see section 4.2, p. 16.

<sup>142</sup> See Gubelmann et al. (2007), p. 4.

webform is concerned, Gubelmann et al. (2007) report that the analysed companies hardly ever received anonymous complaints.<sup>143</sup>

The screenshot shows a webform for 'Lesen.ch' with a navigation menu on the left and a main content area on the right. The navigation menu includes categories like 'lesen', 'hören', 'sehen', 'spielen', 'planen', and 'kultur'. The main content area is titled 'Service: Kontakt, Fragen, Anregungen & Reklamationen' and contains a 'Kontakt' form with fields for 'Vor- & Nachname' and 'E-Mail Adresse', a 'Meine Meldung' text area, and a 'Lesen.ch Newsletter' subscription section with radio buttons for 'ja', 'bereits abonniert', and 'nein'. A 'Go' button is located at the bottom of the form.

figure 4-1: Low Structured Webform.<sup>144</sup>

The screenshot shows a high-structured webform for British Airways. It features a header with the British Airways logo, a search bar, and a navigation menu. The main content area is titled 'Your questions' and includes a 'Help' button. Below the header, there are several sections: 'Your questions', 'Email Us', and 'Help'. The 'Email Us' section contains a form with fields for 'Email address', 'Topics', 'Flight number BA', 'Flight date', and 'Hearing impaired?'. A dropdown menu is open for the 'Topics' field, showing options like 'About my journey', 'BA products & services', 'Promotions & offers', 'Hotels, car hire & sightseeing', 'On Business', 'Any other questions', and 'Website feedback'. A 'Message' field is also present at the bottom of the form.

figure 4-2: High Structured Webform.<sup>145</sup>

<sup>143</sup> See Gubelmann et al. (2007), p. 28.

<sup>144</sup> <http://www.lesen.ch/service/kontakt.cfm?Sub=AnregungKritik> (last access 7 november 2007).

<sup>145</sup> [http://www.britishairways.com/travel/askbainter/public/en\\_gb?source=BOT\\_contactus](http://www.britishairways.com/travel/askbainter/public/en_gb?source=BOT_contactus) (last access 7 november 2007).

#### 4.4.2 *Email*

The other frequently offered online contact possibility is email. There are four different types of email resulting from the two dimensions branding and personalisation. The first category of the branding dimension is a free email address.<sup>146</sup> Here, the domain part corresponds with a domain name not related to the company / person in question, e.g. ...@gmx.net. Access to an email address with such a domain part is not restricted to members of one specific organisation. Thus, it is mostly impossible to know which organisation the sender belongs to. For branded email addresses, the domain part equals to the domain name of the company, e.g. ...@organisation.org. In most cases, the domain name is identical or related to the company / brand / product. As a result, owners of an email address can easily be identified as a member of this very organisation. Moreover, branded email may convey professional use of the Internet and thus create trust in the company's ability / willingness to process online enquiries.

The second categorisation can be made concerning the personalisation of the local part. If the local part is impersonal, e.g. info@..., the sender does usually not know who (in terms of person) will receive the email. In contrast, the receiver can be inferred from a personal local part, e.g. firstname.name@....

Whether emails are perceived to be personal is hard to say based on the available empirical evidence. To the author's knowledge, there is not a single study examining the influence of email type and content on the ability to convey personal feelings. An obvious assumption would be that emails with a personal local part and rather informal style are perceived to be more personal than formal emails with an impersonal local part.

Email is an asynchronous channel, though the speed of message delivery would allow a virtually synchronous exchange of messages.<sup>147</sup> „E-mail is a rapid medium, and even transfers of information that take place over great geographic distances do not take more than a few seconds.”<sup>148</sup> The potential immediacy of the feedback makes email richer as letter / fax, though many researchers still classify it as a relatively lean medium.<sup>149</sup> While it is mainly textbased today, one should not forget that it can be easily complemented by multimedia

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<sup>146</sup> For the distinction between free and branded email addresses see Neale et al. (2006), p. 169. Of course, gmx.net is also a brand. However, not only the employees of gmx have an email address with this suffix, but also private and business customers.

<sup>147</sup> See Büchel (2001), p. 8, Gräf (1999), p. 68, Kelly/Keaten (2007), p. 352, Markus (1994), p. 505, Stauss/Seidel (2004), p. 43.  
Kiesler et al. (1985), p. 80.

<sup>148</sup> Stauss/Seidel (2004), p. 43.

<sup>149</sup> See Markus (1994), p. 505.

attachements. Visual cues in the form of pictures and illustrations are also possible.

In particular for experienced users, email is very easy to use and involves only little monetary cost.<sup>150</sup> In comparison to a letter / fax, less time and effort is required.<sup>151</sup> Introvert, anxious persons also profit from lower psychological costs as they can avoid a direct, potentially embarrassing confrontation.<sup>152</sup> They can think about what to write and are not pressurized into being spontaneous. Additionally, email conversations can be easily stored and retrieved if necessary.<sup>153</sup> But in case more information is required, users have to change channel, e.g. to the website. Similar to letter / fax, email cannot provide the sender instantly with more information.

#### 4.4.3 Chat

Chat is a general term for different types of synchronous online conversations. Usually, it denotes a synchronous, textbased one-to-one or many-to-many communication, often by means of the Internet Relay Chat protocol.<sup>154</sup> Recent technology enables also the use of file sharing and the use of webcams. Possible chat types are:

**chatroom:** In a chatroom, synchronous n:m communication takes place by means of text messages that are sent to receivers in the same chatroom. Often, users have to register before entering a chatroom.

**website chat:** Instead of joining a chatroom, customers click on a website button to get in touch with an employee.<sup>155</sup> The conversations is mainly textbased; depending on the technology, also multimedia attachements can be used.

**avatar chat**<sup>156</sup>: This form is a special case of website chat. Instead of using a chatroom or instant messaging interface, the employee of the company is represented by an avatar. Often, the employee is replaced by artificial intelligence, i.e. machines answer the questions asked.<sup>157</sup>

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<sup>150</sup> See Carlson/Zmud (1999), p. 165, Stauss/Seidel (2004), p. 43.

<sup>151</sup> See Krafft/Bromberger (2001), p. 172, Stauss/Seidel (2004), p. 43.

<sup>152</sup> See O'Sullivan (2000), p. 408, Stauss/Seidel (2004), p. 43.

<sup>153</sup> See Büchel (2001), p. 84, Kiesler et al. (1985), p. 80, Kim et al. (2007), p. 1185, Krafft/Bromberger (2001), p. 172, Markus (1994), p. 506.

<sup>154</sup> See Gräf (1999), p. 68, Gronover (2003), p. 43. For IRC see <http://www.irchelp.org/irchelp/rfc/rfc.html> (access 13.11.2007).

It has to be kept in mind that due to the convergence of media, the line between the different types is very thin. To the author's knowledge, there is no conceptual paper defining / characterising the various forms of chat. Also empirical evidence on individual channel characteristics is rare.

<sup>155</sup> See e.g. [http://www.symantec.com/en/uk/home\\_homeoffice/support/cs/contact\\_cs.jsp](http://www.symantec.com/en/uk/home_homeoffice/support/cs/contact_cs.jsp) (access 12.11.2007).

<sup>156</sup> Another, more elaborate form is visual chat. Here, sender and receiver meet in a 2D or 3D environment, both represented by an avatar. However, this form is rarely used for customer - company interactions today.

<sup>157</sup> See Gronover (2003), p. 45. See e.g. <http://www.helsana.ch> (access 1.11.2007).

While this is a very promising avenue for the future, such tools still are rather crude approximations to human - human interactions.

**instant messaging:** Instant messaging is mostly used as 1:1 communication (but also 1:m is possible) based on a predefined buddy list. Senders mostly communicate with their buddies, chatting with a person not on the list occurs rarely.<sup>158</sup> Users can indicate their status, e.g. available or busy, and with some instant messengers, it is also possible to send asynchronous messages.

**video conferencing:** Recently, many instant messengers have started to offer video conference functionalities. They now offer a viable alternative to conventional video conferencing software. Videobased communication is the closest substitute CMC can offer for face-to-face encounters.<sup>159</sup> Though not all senses can be used, e.g. smell, audio- and visual cues can be transmitted. Thus, personal feelings can be conveyed and statements can be supported by nonverbal actions. Yet, as the communication is mediated by a device, trust cannot be build up in the same extent as in face-to-face interactions.<sup>160</sup>

For customer – company interactions, mainly website chat and its special form with avatars are relevant. In future, probably also videoconferences will be used (given a large diffusion of infrastructure and broadband Internet).<sup>161</sup> Chat is mostly used for specific questions (1:1) or for limited question time (n:1).<sup>162</sup> According to Sauer et al. (2000), a well defined, straightforward problem can be solved faster by chat than by face-to-face contact.<sup>163</sup> Moreover, chat is highly suitable for basic consultations.<sup>164</sup>

## 5 Conclusion

The most popular Internet activity is still email.<sup>165</sup> Accordingly, the majority of companies offers exclusively email or webform to communicate online with their customers. Due to the restriction to email and webform, current CMC is mainly textbased. Consequently, “[...] it is considered a limited medium in terms of information exchange, and unsuitable for carrying

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<sup>158</sup> See Kim et al. (2007), p. 1187.

<sup>159</sup> See for the following Gronover et al. (2002), p. 28.

<sup>160</sup> See Mühlfelder et al. (1999), p. 357.

<sup>161</sup> See Gronover (2003), p. 45.

<sup>162</sup> See Gronover (2003), p. 43.

<sup>163</sup> See Sauer et al. (2000) in Gronover et al. (2002), p. 28.

<sup>164</sup> See Gronover et al. (2002), p. 28.

<sup>165</sup> See WEMF (2005), p. 8.

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out tasks or social functions that require rich, detailed and nuanced communication.”<sup>166</sup> With the ongoing diffusion of internet usage and convergence of different channels, this is likely to be changing. It has to be kept in mind that today, Internet is still a nascent channel.<sup>167</sup> Consumers, and in particular older generations, are not yet experienced in using this medium. With growing maturity and advancing diffusion of the channel, it is expected that new forms of online communication will be offered by companies more often. But also the shift to virtual worlds is a possible move.

Yet, these up-and-coming, promising forms of online communication cannot be effectively used if the basic knowledge about constitutional characteristics and suitable fields of applications remain in the dark. This paper has identified a major need for further research on the theoretical foundations of current online communication forms. Here, a framework for analysing communication channels has been developed and applied to the most frequent communication channels. In a next step, an empirical investigation will be conducted.

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<sup>166</sup> Hian et al. (2004), n.p.

<sup>167</sup> See Dholakia et al. (2005), p. 72, Harris et al. (2006), p. 425, Soopramanien/Robertson (2007), p. 73.

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