

# WHAT IS THE VALUE OF EMOTION IN COMMUNICATION?

## *Implications for User Centred Design.*

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**Abstract:** What is the value of emotion in communication? We evaluate this question by considering the issues of value, emotion and communication in isolation. These issues are then synthesised in the context of technological communication methods (e-mail, chat lines mobile and fixed line telephony) to examine the impact of technology on the transfer of emotional content and to identify the effect on the quality of communication.

## 1 INTRODUCTION

The current pervasive use of computing technology is responsible for a reduction, or at the very least, a limiting of emotional content in modern human-to-human communication. The everyday use of communications technology (i.e. e-mail, chat lines, mobile and fixed line telephony) has changed human communication 'norms', from one of customary emotional content in a sender's message to that of a restricted or limited emotional addendum (i.e. emoticons and 'chat-ese'). To identify the significance of this evolution/adaptation, an investigation into the question of the value of emotion in communications may ascertain whether emotions continue to play an important role in human-to-human communication and, as a consequence, whether emotions have a necessary role in technologically mediated human-to-human interaction.

It would appear that users of communications technology can be categorised into two groups. *Refusers* - those users who do not accept the current lack of emotive interaction in communications technology and attempt to address this need via the use of emoticons, "chat-ese" and the like; and *Acceptors* - those users who are 'agreeable' to a low level of emotive interaction. The supplementary data incorporated by the 'Refusers', for example the incorporation of emoticons into email transmissions,

indicates a lack in the availability of functions/procedures/exhibitions for emotive content in communications technology. Research into the current processes of technologically-mediated communications may give rise to an alternative direction in the way that future communications technologies are designed, with more emphasis being placed on User-Centred design and less on the technological aspects of the design.

To gain a greater appreciation of this title, it is this paper's intention to de-construct the sentence into its component parts – namely its nouns; Value, Emotions and Communications, and to study them, both in isolation to each other and as a total construct. This inductive research methodology was identified by Glaser and Strauss (1967) as Grounded Theory and is appropriate to gain a "...sense of vision where it is that the analyst [researcher] wants to go with the research..."(Strauss & Corbin, 1998) and to "...seek theory that is comparable with the evidence that is precise and rigorous, capable of replication, and generalisable"(Neuman, 1991).

Further, two premises (P1 and P2) have initially been identified from which the research into the question of the value of emotions in communication may be actioned. The first premise may possibly take the form of:

*P1. "Does Emotion enrich human-to-human communication?"*

P1 may possibly be answered through an investigation into the current and past research in the fields of communication, emotion and language combined with an ethical qualitative field study using case study methodology and semi-structured interviews.

The second premise may be structured as:

*P2. "Does Technology, or technologically mediated communication, ultimately attenuate emotional human-to-human interaction?"*

P2 may also be answered, utilising a research methodology which investigates the current research directions in the development of technology-based communications, combined with an analysis of the operational attributes of technologically mediated communications tools.

Subsequent verification of these two premise (P1 and P2) may possibly establish a conclusion such as:

*C: "Technology, or technologically mediated communication, has impoverished our human-to-human interaction."*

This conclusion may ultimately lead to an probable understanding of why it is becoming increasingly necessary for the future development of technology to move towards a User-Centred approach (see Dertouzos (2001)) and away from the current technology-centred design approach.

## 2 WHAT IS COMMUNICATION?

Research within the study of communication, particularly Taylor, Rosegrant and Meyer (1986), has identified four primary 'styles' of communication::

- *Intrapersonal* communication is cited as '...communication within the individual through the processes of thinking and feeling...enabl[ing] people to communicate with themselves...creat[ing] a person's self-concept...' (Dywer, 1999).
- *Interpersonal* communication "...involves the interaction between two people on a one-to-one basis or in a small group..." (Dywer, 1999).
- *Public* communication "...originates from one source and takes place when the organisation [or sender] communicates with a number of receivers [simultaneously]..." (Dywer, 1999).

- *Mass* communication "...contacts the organisation's [or sender's] public [en mass]... usually through the electronic or print media" (Dywer, 1999).

Yet, most definitions of communication within the study of Information Systems pertain to the process of sending data between one or more computing devices - see Mraz (1992), O'Brien (2000) and Coupey (2001). As such, they align with the interpersonal communication style, less frequently with public and mass communications styles and disassociate themselves from the intrapersonal style of communication. This being the case, information systems communication definitions may exclude by their technological 'nature', important characteristics necessary for successful human-to-human communicative operation.

Within the technological performance of communication, the 'Sender' machine broadcasts its information to one or more computing devices, requiring only a returned 'check bit' signal to determine the successful reception (but not processing) of the forwarded or distributed data. Conversely, it is quite possible that human-to-human communication requires more than a nod (the potential equivalent of the machine's returned 'check bit') to determine the success of the communication action.

Watzlawick, Beavin *et al.* (1967) suggest in their book 'Pragmatics of Human Intervention', that "...people cannot *not* communicate - even when we ignore another person [object or event], something is communicated." Hence, within the human performance of communication, the Sender transmits a message subsequent to many and varied preparatory and media-based criteria, as detailed in the diagram below. The subsequent Receiver not only accepts the sender's transmittal, certainly subject to the sender's chosen medium and delivery method, but also has a requirement to understand and process the sender's information. This processed or perceived information is ultimately assimilated into the receiver's internal knowledge base, thereby creating a conceivable situation where sender and receiver share a varying degree of 'transmitted' information in common. As a consequence, the sub-process of cognition or the understanding of the sender's message by the receiver, is quite possibly the most important part of the act of communication - see Frijda (1987), Izard (1993) and Lazarus (1991).

Many researchers, for example Shannon & Weaver (1949) and Gamble & Gamble (1992), include an additional step at this point in their communications models, to allow for the transmission of receiver

feedback to the message sender. This research also accepts the importance of feedback within a communication process. However, in the context of this research, it is viewed as the establishment of another subsequent sender-receiver relation or one-way transmission. Further, it may not be possible to effectively send and receive messages simultaneously without a reduction in both the quality and success in the sent and/or perceived message. Joanne Cole makes such a statement in her 1997 article on 'Last Word Spotting Communication Problems' stating that we can learn more from listening than talking (Cole, 1997). However, to continue down this line of analysis will eventuate in a digression into the merits of 'turn-taking' (see Sacks, Schegloff and Jefferson (1974), Stephens (1987)) within communication processes, which for clarity and brevity sake, this research will not undertake at this stage.

Accordingly, a working definition of communication within the confines of this paper, could presently be stated as:

“any behaviour, verbal, non-verbal or graphic, initiated by a **Sender**, accepted by a **Receiver**, who **Perceives** and is **Changed** by the sender's **Message**.”

## 2.1 Sender

The Initiator of the action of communication. “Communication begins with the sender... who reacts to situations from a unique vantage point, interpreting ideas and filtering experiences through their own perception. Unique... and integral to all the communication [the sender] engages in, is a background of accumulated attitudes, experiences, skills and cultural conditioning and.... differences that influence how [the sender] communicates”(Dywer, 1999). In this paper's context, the sender's requirement is to prepare and send the message effectively.

## 2.2 Receiver

The Object of the action of communication. “...The receiver also acts from a unique vantage point, interpreting the sender's information according to a particular personal perception of the message” (Dywer, 1999). It is also possible for communication to have more than one receiver, but it must have at least one, else communication cannot be actioned. Further, “...on many occasions messages are sent but not received, and in such cases, [it is probable that] no communication has taken place”(Nutting, Cielens *et al.*, 1996).

## 2.3 Perceive

Adler and Rodman (1988) describe “...perception as a three-step process that influences communication. The three steps are selection, organisation and interpretation. *Selection* is the art of attending to certain stimuli in the environment whilst ignoring others... [further], once information is *organised* it is interpreted by referring to past experience, making assumptions, and using expectations and knowledge to interpret the message... [finally], *interpretation* may vary... because individual perception is influenced by experience, attitude and beliefs and a range of acquired skills or expectations”. In this instance, the word perception or perceives is taken to denote the sub-function of processing the sender's message to gain context, merit and value.

## 2.4 Change

Change, in this context, is the movement from one level of awareness to another and this may ultimately be linked with growth - growth of both external and internal knowledge and capabilities. However, “...any new way of doing things generates some resistance by the [receiver] affected” (O'Brien, 2000). Even with resistance in place, it is quite possible that there can be little, if any, understanding or perception without a subsequent change. The receiver will inevitably admit portions of the sender's message to their internal knowledge store through the sub-process of perception, and this act could see as a consequence, the changing of the receiver's knowledge base - the receiver's unique vantage point has been moved, even if ever-so-slightly. The degree of this change however, may ultimately depend on several factors such as; the sender's skill, the medium's inhibitors and the receiver's original vantage point. It would also appear that change may occur inevitably, as Watzlawick, Beavin *et al.* (1967) suggest that “...people cannot *not* communicate...”, hence *any* perception of *any* sender's message has the potential to generate change of varying degree in the receiver.

## 2.5 Message

The Information or Data transmitted from the sender to the receiver. The message is fundamentally a one-way connection between the sender and the receiver(s) - see Shannon & Weaver (1949) for more detail. Prior to the development of technological communication devices, it would probably have been rare for verbal messages *not* to contain non-verbal characteristics as well. Modern communications

technology (i.e. email, chat, mobile and fixed line telephony) has a tendency to restrict and reduce non-verbal communication through its primary focus on establishing a temporary link for textual and verbal broadcasts. Often the message the sender intends is not always the message received, and the lack of non-verbal prompts within technologically-mediated communications possibly adds to the difficulty in 'decoding' or 'perceiving' the sender's message. However, it is worth mentioning that recent developments in video communications technologies may to reduce this disparagement, through the use of transmitted visual clues (i.e. facial and body gestures).

### 3 WHAT IS EMOTION?

It would be plausible to assume that every book a reader has ever perused, contained within its passages references that would likely create an emotional state or response in the reader. Just how an author can elicit an emotional response from a 'known' fictional situation, by readers who may never have experienced that precise 'constructed' situation or chain of events, is at the very "crux of the matter" for emotions research.

It would appear from current and past research that there are two primary separations within emotions research. There is the school of thought that subscribes to what this research will call the "reactionist" methodology and these include; Izard (1990), Zanjone Murphy & Inglehart (1989), Anderson (1989), Harris (1989), Lazarus Kanner & Folkman (1980), Miller & Johnson-Laird (1976), Neisser (1976). The 'reactionists' acknowledge emotions as "...motivational processes that influence cognition and action" (Izard, 1993).

On the other hand, there are what this research will term the "internalists" and these include: Ortony Clore & Collins (1988), Frijda (1986), Hoffman (1985), Scherer (1988), Smith & Ellsworth (1985). The 'internalists' acknowledge "...the possibility of other avenues to emotion...[and] that cognition accounts for virtually all the emotions of human experience or, at least, the most important ones" (Izard, 1993).

Further, there are a few researchers who seemingly move between the two primary differences. Weiner (1985) paper on social-cognitive attribution theory is an example. "...[T]his theory explains the generation of emotions as a function of causal ascriptions [my reactionists], but it acknowledges that certain emotions (e.g. excitement, joy and disgust) are not necessarily, or even primarily,

mediated by perceptions of causality [my internalists]"(Izard, 1993).

This research's approach to the structure of emotion is to identify with Weiner's theoretical position, that some emotions are likely to be as a result of causal ascriptions; fear and anger to name a few. Other emotions, this research theorises to be the result of cognitive activity; for example love, happiness, joy. Although, in positioning this study in the space between the two major schools of thought, it is aligned more towards the 'reactionists' approach to the structure of emotion than the 'internalists'.

A working definition of emotion within the confines of this paper, could presently be stated as;

A valanced response to an action or the incarnation of a cognitive process, either of whose degree's of manifestation can be determined by the eliciting situation, or memory(s) of a similar situation.

#### 3.1 Valanced Response

A Positive or Negative response. Ortony, Clore and Collins (1988) cite an example of the application of a valanced response which I will use to explain the term. "...The writer describes a situation that readers recognise as being *important*<sup>1</sup> to a character in the sense that it has important implications with respect to the goals, standards, or attitudes that the character is known or assumed to have. Then, the character is portrayed as correctly or incorrectly construing the situation as good or bad relative to these goals or standards or attitudes, and typically is described as having, or is assumed to have, a valanced (i.e. a positive or negative) *reaction*<sup>2</sup> to the situation."

#### 3.2 Cognitive Process

It may well be possible that cognitive processes are the 'thought chain' or the 'brain-based calculation' of the emotion procedure. Nosofsky (1987) cites, as a workable example of cognitive process, that "...objects that are perceived or remembered receive some internal representation. Various 'cognitive processes' are then assumed to act upon that representation. The particular [cognitive] processes that operate are task dependent -- they will vary depending on whether subjects are asked to discriminate among objects, identify, categorize or recognize them, supply similarity ratings, make preference judgments, and so forth. Thus, to understand performance in tasks involving similarity data requires not only the specification of an

<sup>1</sup> The authors emphasis.

<sup>2</sup> ditto.

underlying similarity representation, but also the cognitive processes that act on that representation.”

### 3.3 Degree's of Manifestation

The Level or Degree of emotional response. Primarily how strong (or weak) the emotion is expressed as an action, standard or attitude, subject to cognitive processing. The degree of manifestation of an emotion is also quite possibly a catalyst or prompt for the development of similar and probably linked emotions (i.e. happiness → joy → contentment). Ortony, Clore and Collins (1988) cite that “...some of the factors that affect the intensity of emotions are specific to particular groups of emotions...[and] that they affect the intensity of all the emotions...below the point at which they are introduced, so that, although each is central to a distinct class of emotions...their effects are local to collections of emotions.”

### 3.4 Eliciting Situation

The Precursive object, event or attitude to an emotional state or exhibition. Fundamental to the question of why someone behaves as he or she does, according to Heider (1944), is whether the ‘locus of causality’ for that behaviour is in the person (internal) or in the environment (external), or both. Heider was also concerned with ‘perceptions of responsibility’ for outcomes (Fiske & Taylor, 1991). Under many circumstances, it not only matters what caused an event to happen, it also matters who [or what] is responsible for it – see Shaver (1985); Shaver & Drown (1986) for more examples. Further, Ortony, Clore and Collins (1988) cite that there are “...four kinds of evidence to which one might appeal in attempting to understand the emotions. These are the: *language* of emotions, *self-reports* of experience, *behavioural* experience and *physiological*.” Each of these four appellant categories displays a differing aspect of emotion or a different access method to their probable causation.

### 3.5 Memory(s)

Fiske and Taylor (1991) cite in relation to memory that “... all kinds of schemas shape memory into a schema-relevant direction... A shift in schemas allows one to recall details not easily recalled from [an]other perspective... This indicates the importance of a schema on memory... People tend to remember schema-relevant information and forget irrelevant information. Many social schemas are naturally present from the very outset of an interaction, allowing them to affect the encoding of the

information into memory... Under many ordinary circumstances, well-established schemas bias memory toward consistency with one's expectations.” Memory then, in this research's context, could be understood as a powerful shaper of a perceived situation.

## 4 WHAT IS VALUE?

The perception of value may well be one of the most individual and unique cognitions a sentient being can make. It would appear that a contrived notion of some thing's value, similar to emotion, is created and even honed from experience and the knowledge base that the ‘valuer’ has established. This knowledge base would most probably contain elements of cultural bias; perceived uniqueness of the object, method or behaviour; ascribed economic importance; self-perception and worth; perceived usefulness and possibly even an attributed level of desire for the specific object, method or behaviour.

From the philosophical ontological status, value is attributed to “...persons, characters, mental states, actions, inanimate objects and situations using very abstract terms such as “good”, “unjust” and “beautiful”, and more concrete terms such as “courageous”, “cruel” and “crass”, drawn from fields such as aesthetics, ethics, politics and religion” (Routledge, 2000).

It would appear that the ‘theory of value’, certainly within the philosophical practice, has three main traditions; subjectivism, objectivism and Neo-Kantian rationalism. Alan Thomas, writing in Routledge (2000), cites that “...*subjectivism* holds that the only valuable goods are subjective states of sentient beings; *objectivism* claims that while values must be human-related, they exist independently of us; and *rationalism* suggests that value is postulated on the basis of practical reason.”

Further research has also been generated by academics such as Paul Grice in his 1991 book “The Conception of Value”, which establishes a primary ‘value theory’ and draws on Aristotle and Kant's previous research. As does David Wiggins 1987 work entitled “Needs, Values, Truths” which contains several papers presenting the view that moral properties are tied to our evaluative interests and thus anthropocentric, but still are none the less real.

It would also appear that much research considers the term ‘value’ to apply to a set of rules or a methodology for the evaluation of an object, method or behaviour (i.e. Nitsche, Aristotle, Jung, Freud)

with the possible exception of the field of axiology. However, for the purpose of this research, an ontology of rationalism has been adopted, primarily so as to propose a practical-based hypothesis. Subsequently, a working definition of value within the confines of this paper, could presently be stated as;

“the **Cognisant Assignment** of **Worth** to a person, object, method or behaviour.”

## 4.1 Cognisant

See Cognitive Process in Emotion section.

## 4.2 Assignment

A conferring or attributing of some thing to a person object, method or behaviour. Fiske and Taylor (1991) cite in their text ‘Social Cognition’ that “...the ideas of Heider (1944), Jones and Davis (1965), and Kelley (1967, 1972 and 1979) constitute the early and focal theoretical contributions to attribution theory. In many respects, these theories detail an idealized manner in which the social perceiver might make attributions... Sometimes the process of making attributions occurs spontaneously, without the kind of detailed causal analysis that Heider, Jones and Davis, and Kelley describe...[but] moreover, the attribution process appears to be marked by certain persistent biases.” In relevance to this research, the term assignment could be ascribed the meaning of attributing or the endowment of a property to a person, object, method or behaviour.

## 4.3 Worth

It is quite possible that the term ‘worth’ is not unlike the term ‘value’ in that it can contain many differing prescriptive elements such as: importance or esteem; justification (of what is specified); monetary considerations; excellence (perhaps of manufacture or construction); usefulness (as in a tool or methodology); uniqueness (as in an antique or personal item) but it also may include attributes such as interesting, deserving and repayment of investment. However, in this research, the term worth can be described as that which conveys ability or usefulness, specifically in regard to the research question.

## 5 DISCUSSION

Thus far, we have identified that *Value* is in all probability a very individualistic attribute, that is

more than likely conferred in accordance with certain personal bias, and subject to individual cognitive performance, both actual and recalled. *Emotional responses* are possibly a valanced response to some action or cognitive activity and likely subject to external (reactionist) and internal (internalist) causations and even possibly enhanced or diminished by interaction with and between similar groups of emotions (i.e. happiness → joy → contentment). *Communication* consists of senders, whom initiate messages, and receivers who accept and perceive messages, but in all probability one of the binding functions of successful communication is the receiver’s cognitive process or perception of the sender’s message, without which, it is possible that no ‘communication’ can occur.

It would appear that emotions expressed within human-to-human transmission may possibly be instrumental in the preparation of a sender’s message, as well as the receiver’s cognitive processing of a sender’s message – see Fiske (1991). Further, Ortony, Clore and Collins in their study on the Cognitive Structure of Emotions, (Ortony, Clore *et al.*, 1988), cite that “...emotional states themselves can become emotion-inducing events and lead to new emotions...In general, any valanced reaction to an object or event can give rise to emotions, so that psychological states themselves (including emotional ones) are candidates for emotion-inducing objects and events, thus leading to the possibility of chains of additional, new emotions...[which] probably occur in complex sequences much more often than they do in isolation.” Combine this with Watzlawick, Beavin *et al.* (1967) work, which suggests that “...people cannot *not* communicate...”, and it may be a possible that emotions are a ‘foundation’ or even a catalyst upon which human-to-human interaction is established.

It may also be that emotions are a means with which human-to-human transmission is clarified and possibly even placed into context. Certainly Charles Darwin (1872:1965) in his treatise on the Expression of Emotions in Man and Animal considered ‘...from his studies of animals, human infants and human adults...that expressive [or emotional] behaviours communicate information from one... [human] to another about what is likely to happen; therefore they affect the chances of survival of the individual demonstrating the behaviour.’ If this is the case and emotions do play an important ‘clarifying role’ in human-to-human communication, then it could also be that the conveyance of emotions through communications technology may have a subsequently important ‘clarifying role’ to play as well.

Certainly, this line of enquiry will elicit even more questions such as; “What degree of manifestation of emotions should be conveyed through technological means?” “How do you communicate emotions through technological devices?” and possibly even “Is there a current means of communicating emotions through technology and if so, what is it, and is it acceptable, culturally significant and/or exclusive?”

Finally, it may be possible that a continued use of an emotive attenuated communications medium may lead to emotive repression in the user. This is similar to the effect found in artisans whose creative tools become, in effect, an extension of their own personality and body after extended periods of continued use – see Woolgar (1991), Bloor (1976) and Collins (1981). In this instance, the communications technology has not only required the user to work with its specific peculiarities but it may have brought about a ‘unknowing’ change in the level of emotive expression from the user.

Change is certainly nothing new to the human condition – see Charles Darwin (1859:1966) “laws of variation” in his treatise on evolution and adaptation within species for more detail. Every advent of new technology, from the use of fire to electricity, has seen human kind adapt to their usage, albeit at a price. The adoption of fire brought heat, light and increased nutrition from enhanced food preparation to our ancestors but as a consequence saw the emergence of another source of often fatal injury in burns and scalds to limbs and eyes. However the choice was always whether or not to use fire!

The industrial revolution saw the emergence of many varied and specific machines which could and did the work of many people, quicker, often more efficiently, and at times for a better price. However, should a particular spinner wish not to be part of an assembly line of spinners, he/she could simply return to their previous method of producing yarn, hand spinning. They knew when they were not happy with the intrusion of technology!

Now the technological revolution is upon us and technological mediated communications are the ‘norm’ in human-to-human interaction, the question to be asked might be: How would a user know if they are no longer emoting at some previously identifiable level? In fact, should the user have been utilising emotionally-repressive technologically-mediated communications devices during their formative years, would they necessarily know they were not emoting, or worse still, even how to emote?

## 6 CONCLUSION

In this paper we have identified the elements of emotion in communication and commenced to evaluate the value and presence of emotion within modern communications tools. It may be possible that emotion enriches human-to-human communication with context and clarification. It may also be possible that emotion has intrinsic value in human-to-human communication, enabling us to communicate across physical, social and cultural boundaries in a far greater capacity than mere language or dialect will accommodate. If this is the case, then technologically-mediated communications technology may also have a requirement to incorporate emotion within its electronic mediums.

Further, as identified in this paper’s introduction, the proving of two premise may assist in establishing a different approach to developing communications technology(s). One that is more focused on the user’s input and use than technological ability.

*This study is a work in progress.*

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