The significance-effect is a communicational effect: Introducing the DynaCom

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Abstract. The paper presents the concept *significance-effect* outlined in a Peircean inspired communication model, named DynaCom. The significance effect is a communicational effect; the formal conditions for the release of the significance-effect are the following: (1) Communication has to take place within a universe of discourse; (2) Utterer and interpreter must share collateral experience; and (3) The cominterpretant must occur. If these conditions are met the meaning of the communicated sign is likely to be correctly interpreted by the interpreter. Here, correctly means in accordance with the intentions of the utterer. The scope of the significance-effect has changed from knowledge effects caused by technical terms to emotional effects caused by lifestyle values in brands, for example.

The significance-effect is an effect of significance or communication of meaning that occurs whenever some mind or minds become exposed to a sign. The basic idea of the significance-effect is that the more knowledge an interpreter possesses about a given sign, the more information the sign communicates to the interpreter. The background for the discovery of the significance-effect were the following observations: a concept such as *activity* stemming from the knowledge domain *occupational therapy* communicates more precise and structured

knowledge to an occupational therapist than the same concept seems to communicate to someone outside the knowledge domain. The concept semeiosis communicates more precise and structured knowledge to a semeiotician than to someone without prior knowledge of semeiotic. An x-ray picture communicates more knowledge to a surgeon than to a layman. Consequently, it seems that concepts communicate knowledge (1) in accordance to the universe of discourse and (2) in accordance to the collateral knowledge of the interpreter: the more knowledge the interpreter seems to have about a given sign, the greater effect in terms of knowledge communication the sign seems to have upon the interpreter. In this way, the knowledge level of the interpreter becomes reflected in the concept. The significance-effect is observed and described primarily within technical languages within knowledge domains (Thellefsen 2002) but as suggested by Thellefsen and Sørensen (2009) it can be extended to other communities of discourse as well.

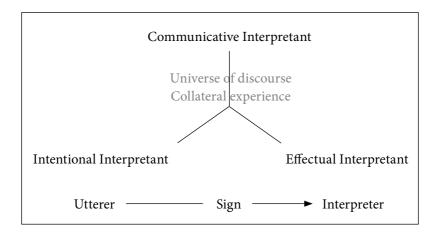


Figure 1. The DynaCom. The DynaCom is a semeiotically inspired communication model. The model is a graphic representation of the elements of communication and the process of interaction. The totality of these elements and their interaction: utterer [addresser], sign [message, code, context, contact], interpreter [addressee], universe of discourse and collateral experience constitute the DynaCom1.

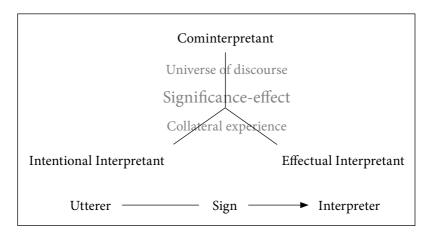


Figure 2. The release of the significance-effect.

Consequently, it seems to be an undeniable fact that the more knowledge an interpreter possesses concerning a given sign, the more knowledge effect the sign has on the interpreter. This is the basic definition of the significance effect (Thellefsen, Thellefsen 2004; Thellefsen, Sørensen, Andersen 2006).

The aim of this article is to define and clarify the significance-effect as a communicational effect of significance and meaning caused by signs upon a mind or some minds. In order to do this, we first address signs as media of communication. Next, we touch upon Peirce's different types of interpretants and after that we introduce our semeiotically inspired model of communication, which we label the Dynacom (short for Dynamical Communication Model).

All communication is mediated by signs

We understand signs in the Peircean tradition as primarily a media of communication. As the Peirce scholar, James Liszka (1996: 89–90),

points out in his work *A General Introduction to the Semeiotic*¹ of Charles Sanders Peirce and we quote in length:

Each communicating agency must be capable of at least the following, which corresponds to the formal properties of a sign: (1) The agency must be capable of being determined by an object. As Peirce suggests, in order for communication to be possible, the form or feature of an object must be embodied in a subject, independently of the communication (LW 196). An agency must be such that an object can establish in it something which can act as a sign of that object. (2) The correlative of this is the capability of the agency to represent the object in this regard. According to Peirce, the essential ingredient of the utterer is the function of standing for or representing the object (MS 318: 79). Simply put, when a person utters a word, or a dog barks, or a bee dances, it acts in that respect as a sign in its capacity to represent the object which has determined that sign. (3) Each agency must be capable of being determined by a sign, that is, of having an interpretant established within it (cf. MS 318: 79). In this context, the utterer is capable of engendering what Peirce calls an intentional interpretant (LW 196), that is, the sign which the utterer is, is in some sense intended or designed for the purpose of communication, and the interpreter is capable of engendering what he call an effectual interpretant, that is, the interpretant can be affected by the sign of the utterer.

The main point in this quote is that all communication is mediated by signs, between an utterer, causing an intentional interpretant and an interpreter engendering an effectual interpretant, which is, as Liszka writes, an interpretant that can be affected by the sign of the utterer. An interpretant is "[...] a mediating representation which represents the relate (the sign) to be a representation of the same correlate (the object) which this mediating representation itself represents [...]" (CP 1.553). And further: "I [Peirce] define a Sign as anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its Interpretant, that the latter is thereby mediately determined by the former" (A Letter to Lady Welby, 1908, SS 80–81). Peirce understood the interpretant as carrying out "the office of an interpreter who says that a foreigner says the same thing which he himself says" (CP 1.553). Therefore, the interpretant is in itself also a sign, a mediating entity. The interpretant offers the

 $^{^{\}rm 1}$ $\,$ Peirce referred to his doctrine of signs as semeiotic (semeion is Greek for sign).

possibility for an infinite or continued semeiosis or evolution of meaning, effect and truth. The interpretant is part of an analogous relation to the sign's relation to the object; this causes a process, which involves that the interpretant itself becomes a sign in a new semeiosis; a new semeiosis where the old sign and its object is the object of a new sign. This process is an infinite regress where signs emerge from other signs, from which still more signs emerge.

Peirce classified the interpretant into different trichotomies. The most general trichotomy consists of the *immediate interpretant*, "which is the interpretant as it is revealed in the right understanding of the Sign itself, and is ordinarily called the meaning of the sign" (CP 4.536); the *dynamic interpretant*, "[...] is the actual effect which the Sign, as a Sign, really determines" (CP. 4.536); whereas the *final interpretant* is defined as "[...] the manner in which the Sign tends to represent itself to be related to its Object" (CP. 4.536). This classification covers all kinds of semeiosis (see Liszka 1996: 26). Dealing with the significance-effect, which we apply to communication between human agents, we use the trichotomy consisting of the *intentional interpretant*, the *effective interpretant* and the *communicational interpretant* or the cominterpretant since this trichotomy explicitly connects to a communicational point of view (compare Johansen 1993: 170). Regarding this trichotomy, Peirce wrote the following in *A Draft of a Letter to Lady Welby* (1906):

There is the *Intentional* Interpretant, which is a determination of the mind of the utterer; the *Effectual* Interpretant, which is a determination of the mind of the interpreter; and the *Communicational* Interpretant, or say the *Cominterpretant*, which is a determination of that mind into which the mind of utterer and interpreter have to be fused in order that any communication should take place. This mind may be called the commens. It consists of all that is, and must be, well understood between utterer and interpreter at the outset, in order that the sign in question should fulfill its function. (SS 196–7)

The significance-effect is connected with the effective interpretant, hence we focus on this division. Peirce used the terms *Sympathetic*, *Percussive* and *Usual* in order to describe the three possible modalities of nature of the *effective* Interpretant (compare CP 8.370). We return

to the essence in Liszka's quote and the interpretants when we address the DynaCom.

The significance-effect as sign-mediation

The significance-effect is the effect of such sign-mediated communication. The significance-effect is interesting for researchers in communication studies because it proves that signs communicate meaning in accordance with the existing knowledge level of the interpreter. The knowledge level is the interpreter's amount of knowledge relevant to a given sign. It shows that all kinds of communication are dynamic; it shows, for example, that scientific communication creates symbolic structures — that is, terminologies, taxonomies and standards — it shows that, within scientific terminologies, some concepts carry more weight, they are more significant, or they are of greater value than others simply because they include, communicate, and maintain basic values agreed on by the knowledge domain. These fundamental concepts form a conceptual structure that we refer to as the fundamental sign — or that which is common in a community, its sense of community (Thellefsen 2002, 2004, 2005a). With the discovery of the significance-effect, we may show that knowledge is organized in accordance with the fundamental sign of any community. However, in this article, we concentrate on the significance-effect and we refer to Thellefsen 2002, 2004, and 2005b for articles defining and discussing the fundamental sign.

The general formal conditions of the significance-effect and the dynamical communication model

One of the main points of the significance-effect is that the knowledge level of the interpreter becomes reflected in the concept. It seems that

signs are able to release and refer to a certain experienced memory in the interpreter. Within scientific knowledge domains, this experienced memory seems primarily to be logically based². Communicating the concept "semeiosis" to an interpreter within the knowledge domain of sign theories will probably cause an interpretant concerning the technical aspect of sign development, that is, semeiosis as a sign development and sign interpretation. In other cases, for example, within the fields of marketing and commercials, signs may be strategically used to awake certain emotional memories enabling us to relate to a given product, and the awakening of emotional memories might eventually persuade us to buy the given product. This kind of significance-effect is not based on rational persuasion but rather on emotional (which we also refer to as aesthetical) considerations. If the sign does awake aesthetical, ethical, or logical effects in the interpreter, it must be because the interpreter shares qualities or values with the sign to such a degree that the interpreter is able to reflect himself in the sign, that is, agree on the premises and conclusion of the argument, or be sympathetic about the values communicated by an utterer. Consequently, the significanceeffect is tied to the subject as a kind of quasi-empathetic³ experience but the effect is by no means solely individual. The significance-effect is developed within the scope of Peircean semeiotic; therefore it is rooted in the same scholastic realism. This means that any communication involves an utterer and an interpreter and in order for the communication to be successful to some degree it must be general. If this is not the case, the utterer cannot communicate to an exterior world and not even to his future self; thus no intelligible communication can take place.

When we say logically based, we understand logic as the third of the normative sciences carrying aspects of both aesthetics and ethics. In terms of signs, aesthetics is iconic, ethics is indexical and logic is symbolic. In this triadic relation, the symbol is an interpretant mediating between the icon and the index. As a normative science, Logic (reasoning) mediates between aesthetics (feeling) and ethics (action). See Sørensen, Thellefsen 2004 for an analysis of the Peircean view of the normative sciences.

³ It is quasi-empathetic experience since the interpreter reflects himself in the sign because he is able to identify qualities in the sign, which he himself contains or desires to contain. He sees himself through the "eyes" of the sign, so to speak.

It is also possible to imagine that a whole group of people, for example, a user group, a group of brand users, or the inhabitants of a knowledge domain become exposed to the same signs, that is a given brand or a given terminology and experience nearly the same social significance-effect. Here, the significance-effect is not tied to the individual, although it is the individual who experiences the significance-effect, rather it is tied to the characteristics of the group of people. In a scientific knowledge domain, the researchers share the same terminology; within a user group, the users share interest in, for example, a particular computer game and, amongst brand users, it is the emotional effects of the brand values, which are shared and maintain the group. Sharing of the effects of values (which we believe is nothing but communication) creates a sense of community; such a sense of community may, if it is strong enough, evolve into a knowledge domain and, along this evolution, a certain use of language may arise, for example, a terminology. So, it works both ways. The users maintain their object of interest and the object maintains its user group; hence, a reciprocal relationship exists. Consequently, we believe that any community is created by communication. Communication creates the community and communication maintains and strengthens the community. Ultimately, it can also destroy the community if the group no longer shares the same set of values and/or sentiments.

It seems possible to extend the significance-effect to other communities of discourse as well. Right now, we are researching the impact of the significance-effect within the framework of marketing, commercial and branding theories, as indicated above.

Consequently, the significance-effect is the interpretative effect caused by a meaning intentionally communicated by an utterer to an interpreter through mediation of a sign. (As indicated above it is important to notice that the utterer does not necessarily have to be an individual; the utterer can e.g. be an organization, part of an organization or a knowledge domain, and the interpreter can e.g. be an individual or a community of any kind). In essence, the meaning communicated is similar to the meaning interpreted. This means that

the interpreter must be able to interpret the message in the right way, which is the way intended by the utterer. This is shown in the following figure (Fig. 1):

According to Peirce, any act of communication depends on an utterer being capable of creating an intentional interpretant, a sign as medium, and an interpreter capable of creating an effectual interpretant. Since the significance-effect is an effect of communication, it also depends on these communicational conditions. Furthermore, the significance-effect depends on collateral experience in the interpreter since the effect occurs whenever an interpreter interprets a sign in relation to the knowledge already existing within the interpreter. Collateral experience is an experience that is not mediated by the sign itself but is an experience parallel to the sign; an experience that precedes the sign. Peirce wrote in a review of Lady Welby's *What is Meaning?* (1903):

All that part of the understanding of the Sign which the Interpreting Mind has needed collateral observation for is outside the Interpretant. I do not mean by "collateral observation" acquaintance with the system of signs. What is so gathered is not collateral. It is on the contrary the prerequisite for getting any idea signified by the sign. But by collateral observation, I mean previous acquaintance with what the sign denotes. (CP 8.179)

Collateral experience or knowledge is prior knowledge necessary in order to interpret any sign or engage in any sign activity. Collateral experience is an experience that is not mediated by the sign itself but is an experience parallel to the sign; an experience that precedes the sign (compare Johansen 1997: 78). If person A says "the Gunners are no. 1", to person B, person B must possess knowledge about who the gunners are, and what it implies that they are no. 1. If not, the sentence is meaningless to person B. As the Peirce Scholar Mats Bergman points out in his article *C. S. Peirce on Interpretation and Collateral Experience*⁴:

First of all, it is important to see that the experience in question need not be directly of the object in question; it is sufficient that the interpreter can make

⁴ C. S. Peirce on Interpretation and Collateral Experience, 2002, p. 8 Available at: http://www.helsinki.fi/science/commens/papers/collateral.pdf

a connection between the object referred to and his or her collateral experience. [...] The claim, thus, is merely that *some* experiential background is needed — it may be quite insignificant in itself, but it must be able to serve as a starting-point for the specification of the object.

In the example stated above, it is necessary that person B is familiar with football, an English football club etc. If person B possesses some experiential background, this will serve as the starting point as Bergman puts it. They need not know everything about the object, in order for the communication to take place.

However, the communication also has to take place within a shared contextual framework, which Peirce named a universe of discourse; concerning which Peirce wrote in *Dictionary of Philosophy and Psychology* (1902):

In every proposition the circumstances of its enunciation show that it refers to some collection of individuals or of possibilities, which cannot be adequately described, but can only be indicated as something familiar to both speaker and auditor. At one time it may be the physical universe, at another it may be the imaginary "world" of some play or novel, at another a range of possibilities. (CP. 2.536)

This universe consists of three universes of experience defined by the ontological character of the objects located within them. The first universe is the universe of possibles: "The first comprises all mere Ideas, those airy nothings to which the mind of poet, pure mathematician, or another might give local habitation and a name within that mind" (CP 6.455). Its reality consists in its capability of being thought or instantiated, not in actually being thought or instantiated. The second universe is the universe of actuals. It is made up of brute facts and things whose reality consists in action and re-action. Finally, in the third universe, everything is located:

[...] whose being consists in active power to establish connections between different objects, especially between objects in different Universes. Such is everything which is essentially a Sign — not the mere body of the Sign, which is not essentially such, but, so to speak, the Sign's Soul, which has its Being in

its power of serving as intermediary between its Object and a Mind. Such, too, is a living consciousness, and such the life, the power of growth, of a plant. Such is a living constitution — a daily newspaper, a great fortune, a social 'movement'. (CP 6.455)

In this universe, we find every form of regularity, law, habit, continuity and semeiosis; this universe mediates between the first two universes and, as such, it is the category of intelligibility — the real *par excellence*, therefore the most important.

It is important to notice that the intentional interpretant caused by the utterer does not necessarily have to be identical to the effectual interpretant caused in the interpreter. In the article 76 Definitions of The Sign by C. S. Peirce, the French Peirce Scholar and mathematician Robert Marty analyses the triadic turn of Peirce⁵. In Peirce's early career, he promoted a distinct global triadic understanding of the sign, that is, that the elements of the sign (representamen, object and interpretant) were linked together in an irreducible triadic relationship. Later on, Peirce distinctively changed his view and promoted an analytical triadic understanding of the sign, which refers to the determination of the sign through the object and the interpretant through the sign/ object. This means that a complete symmetry between the sign (representamen) and the object is not a necessity. That is, the representamen can represent certain aspects of the object. This is important, since we can hardly expect an interpreter to fully understand all intentions of the communication. However, the interpreter will presumably — based on own experiences — understand so much of it that he can act upon the communication. In this way, an element of probability is always involved in communication. Bergman⁶ points out:

Another thing that should be noted is that in communication the object need not be wholly determinate. Peirce gives several examples of this, such as two Englishmen who meet on the train and begin to discuss Charles the Second (CP 5.448 n. 1 [1906]). The shared collateral experience of the travellers —

⁵ Marty, Robert 1997. 76 Definitions of The Sign by C. S. Peirce. Online on Arisbe http://www.cspeirce.com/menu/library/rsources/76defs/76defs.htm

⁶ See footnote 4.

the fact that they are English, for example — ensures that they are talking about the same object, although they may have quite different images of the king in their mind (their immediate objects). It is not necessary that the objects should be identical in every sense; the common reference is actually ensured by the fact that much is left vague. (cf. EP 2:409 [1907])

But since the significance-effect is the correct understanding (in terms of acting on the communication) of an intended communication communicated from an utterer, a Cominterpretant has to occur. If the Cominterpretant occurs, the conditions for the significance-effect have been met. Summing up, the significance-effect is released only when the conditions of the cominterpretant is met (see Fig. 2).

Summing up, we can list the following formal conditions for the release of the significance-effect:

- 1) Communication has to take place inside a universe of discourse;
- 2) Utterer and interpreter must share collateral experiences;
- 3) The cominterpretant must occur.

Conclusions: Some possible consequences caused by the significance-effect

As we have indicated above, we first observed the significance-effect within the scope of technical language, and based on the existence of the significance-effect, the knowledge organisation and knowledge management method: the knowledge profile was developed (Thellefsen 2004, 2005a). However, we believe that the significance-effect can be observed wherever a sign is present and, as semioticians, we believe that signs are identical to communication, meaning that signs always are present to us in some sense. As Peirce wrote in an endnote to the article *Issues of Pragmaticism* (1905; CP 5.448, endnote):

It seems a strange thing, when one comes to ponder over it, that a sign should leave its interpreter to supply a part of its meaning; but the explanation of the phenomenon lies in the fact that the entire universe — not merely the universe

of existents, but all that wider universe, embracing the universe of existents as a part, the universe which we are all accustomed to refer to as "the truth" — that all this universe is perfused with signs, if it is not composed exclusively of signs.

The sign in the communicational process will always be — to a certain degree — open, indeterminate and vague, consequently the interpreter must make an abductive effort (compare CP 5.88; 5.189; Queiroz, Merrell 2005) — put forth a hypothesis — in order to interpret it relative to a certain universe of discourse and a certain purpose among him and the utterer who share the discourse community.

We have expanded our research to the marketing area with primary interest in the communication of lifestyle values through brands and commercials (for example, Thellefsen, Sørensen, Andersen 2006; Thellefsen, Sørensen, Danesi, Andersen 2007; Thellefsen, Andersen, Sørensen 2007). One of the most interesting consequences of the significance-effect as an effect caused by a sign to some sympathetic mind is that we are able to analyse how lifestyle values may cause emotional effects that enable a sense of community amongst the user of the brand. It seems that the brand containing certain lifestyle values can cause emotional effects that attract sympathetic minds. The attraction leads to the development of a community of both actual and potential brand users. This community is much looser than the scientific knowledge domain, however, it is still a phenomenon caused by a social significance-effect. However, our research is still in its beginning. Thus, we will not hesitate to call the significance-effect a communicational effect.

The DynaCom is our modest contribution to a modernisation of the pragmatic semeiotic of C. S. Peirce and shows that there are a great potential in the pragmatic semeiotic, a potential that has the capability of explaining the dynamic structures of communication.⁷

 $^{^{7}\,\,}$ We would like to thank professor Priscila Lena Farias for her valuable comments concerning this paper.

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Сигнификационный или коммуникативный эффект: ознакомление с DynaCom

Статья вводит понятие сигнификационного эффекта (significance effect) в рамки инспирированной Пирсом коммуникативной модели DynaCom. Сигнификационный эффект является коммуникативным эффектом и формальные условия его достижения следующие: (1) коммуникация должна происходить в рамках дискурса; (2) опыты говорящего и интерпретатора должны частично совпадать; (3) должна возникнуть общая интерпретанта (cominterpretant). Если эти условия выполнены, то вполне вероятно, что говорящий и интерпретатор трактуют знак правильно. «Правильно» в данном случае означает «в соответствии с интенцией говорящего». Спектр сигнификационного эффекта достаточно широк: от эффекта знания (knowledge effect) технических терминов до эмоционального эффекта (например, в ценностных оценках, связанных с брендами).

Tähendus-mõju ehk kommunikatsiooniline mõju: tutvustades DynaComi

Käesolev artikkel tutvustab tähendus-mõju (significance-effect) mõistet Peirce'ist inspireeritud kommunikatsiooni mudeli DynaCom kontekstis. Tähendus-mõju on kommunikatsiooniline mõju ning selle vallandumise vormilised tingimused on järgmised: (1) Kommunikatsioon peab aset leidma diskursuse ruumis; (2) Lausuja ja tõlgendaja kogemuses peab olema ühisosa; (3) Peab tekkima ühistõlgend (cominterpretant). Kui need tingimused on täidetud, on tõenäoline, et nii lausuja kui tõlgendaja tõlgendavad edastatud märki õigesti. "Õigesti" tähendab antud juhul "vastavalt lausuja kavatsustele". Tähendus-mõju ulatus küünib tehniliste terminite teadmismõjust (knowledge effect) emotsionaalse mõjuni näiteks brändidega seotud elustiili puudutavates väärtushinnangutes.