

## **Cognitive and linguistic underpinnings of *deixis am phantasma*: Bühler's and Peirce's semiotic**

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**Abstract.** This inquiry outlines Karl Bühler's three kinds of deixis, focusing particularly on his most advanced use – *deixis am phantasma* (deictics to refer to absent referents). This use is of primary import to the semiosis of index, given the centrality of the object and the interpretant in changing the function of the indexical sign in ontogeny. Employing deictic signs to refer to absent objects (some of which are mental) constitutes a catalyst from more social, conventional, uses to more internal, imaginative, ones. Bühler's analogy of mental objects as a "mimesis" serves as the genesis for the claim that static and more dynamic memories, fuelled by affect, drive deictics to refer to more dynamic objects and more dynamic interpretants, into more constructed realities. Peirce's two types of objects and three types of interpretants complete Bühler's deictic framework; they determine advances in deictic semiosis undeveloped by Bühler, and offer rationale for how it is that deictic use extends the semiosis of index.

**Keywords:** Bühler, deixis, imagination, interpretant, Peirce, phantasy

## 1. Introduction

Karl Bühler's concept of index as expressed in his developmental framework of deixis: *demonstratio ad oculos*, anaphoric deixis, and *deixis am phantasma* is sorely underdiscovered; and theories of index,<sup>1</sup> and of deictics<sup>2</sup> in particular, remain relatively uninformed with respect to how apprehension of shifting points of view is paramount to a theory of mind and to a worldview which incorporates human components of discovering and extending knowledge. It is particularly invaluable to inquiry in semiotics, in that it constructs an integrated viewpoint within which affect and logic systematically inform one another. His unitary, holistic approach underscores the artificiality of constructing a worldview based on logic or cognition alone, unimpelled by emotional sources, such as empathy, self-regulation, feelings of accountability, hidden inhibitions, and self-affirmation within a sociocultural milieu. Integral to Bühler's semiotic is the assumption that fantasy and "reality" are indistinguishable. In fact, he insists that fantasy is a primary tool toward situating the self in a more conventional reality, and of infusing reality with new possibilities. Fantasy, for Bühler, is a necessary component to determine postures of mind for others, and for Self. The centrality of fantasy and the imagination in his deictic framework demonstrates the importance of affective and constructed realities to the perception and function of self in a sea of legitimate selves. The place which Bühler gives to affect in his deictic framework emphasizes that perspective-taking skills do not result primarily from cognitive attainments, but from overt and covert verbal play in which children experiment with viewpoints and decide which are legitimate to adopt. These overt or covert dialogues with the Self materialize in monologues, in dialogue between inanimates, e.g., dolls, or in child-to-child play scenarios. Within these fantasy-based scenarios, children construct their worldview as they determine both the legitimacy of two or more conflicting viewpoints, and the authenticity of each in a spatial and temporal framework beyond that of play or fantasy.

Affect, then, transforms real-time cognitions into potentialities in constructed fantasy. Impelled by emotional intelligence, deictic use evolves from a purely single viewpoint to static objects, to one which embraces other points of view from different orientations with respect to objects whose placement can be altered, to viewpoints which have not yet materialized. Bühler's developmental scheme of *demonstratio ad oculos*, to anaphoric reference, to *deixis am phantasma* demonstrates

<sup>1</sup> "Index" will be used in the Peircean sense of that which "[...] represents an object by virtue of its connection with it. It makes no difference whether the connection is natural, or artificial, or merely mental" (CP 8.368 fn23).

<sup>2</sup> A distinction is presumed here between index and deictics. Only some indexes are used deictically – "In addition to indexical qualities, deictics must include a general/symbolic meaning which considers the social and reciprocal role of the referent." (West 2011b: 90)

increased use of fantasy and the imagination as catalysts to the development of index, in that he proposes three levels of pointing. His three levels of pointing illustrate a trajectory of indexical development from the more pure index in which object and deictic sign co-occur,<sup>3</sup> to a mental index in which the deictic sign and object are displaced from one another.<sup>4</sup> Although Bühler's deictic system serves as a useful foundation to explain such displacement, it leaves unsettled applications of deictics in contexts in which the sign and the object are intangible. Peirce's contribution of triadic sign relations – sign, object, interpretant – addresses this “unfinished business”.

## 2. Precursors to *deixis am phantasma*

Bühler's (1990[1934]: 44) insights with respect to deictic use are first found in the linkage between the Greek meaning of “*deixis*/δείξις” (“pointing out”) and its Latin translation: “*demonstratio*”. The marriage of “pointing out” and “*demonstratio*” enriches our understanding of deixis in that demonstrations involve more than physical gestures to physically present referents. Demonstrations transcend spatial and temporal contiguity between the signifier and the signified (between a pointing finger and its object of focus); they refer to absent physical objects and to memories brought about by mental operations. Mental operations themselves can demonstrate, especially to their subject, the existence or non-existence of a proposition, or can construct mental representations of diverse points of view. In reminding us of the import of demonstration to deictic use, Bühler provides a forum to describe children's later development – of their means to go beyond physical and intertextual contexts in space and time to indexes on the mental plane, which most often are displaced from the originating contributory event.

Bühler proposes three types of deixis, categorized by their use, whose advent appears to be sequential in ontogeny: *demonstratio ad oculos*, anaphoric deixis, and *deixis am phantasma*. Although all of these three types of deixis are employed later in development, the onset of each emanates from distinctive sources or motivations. Bühler's sequence of deictic use capitalizes on increasing degrees of social and psychological awareness, which may well rest upon unconscious intersubjective advances. Intersubjective here refers to the sociocognitive competence of

<sup>3</sup> This claim is supported by Peirce's explanation that: “Psychologically, the action of indices depends upon association by contiguity, and not upon association by resemblance or upon intellectual operations” (CP 2.306).

<sup>4</sup> Peirce refers to another function of index, that of conveying information despite whether any physical contiguity is present between sign and object: “Then the question arises is this dual character in the Index, so that it has two elements [...] Its connection with the weather is dualistic, so that by an involved icon, it actually conveys information” (CP 5.75).

anticipating, envisioning, and constructing expressions of reciprocal social, and later intrasubjective role-taking.

*Demonstratio ad oculos* is the earliest use of deixis which employs either gestural indices, or linguistic ones (separately or conjoined). Gestural signs which illustrate this use are dependent on visual access both to the sign and to its object from a Bühlerian perspective. The demonstrative is used to directionalize from Ego's perspective; its use does not extend to other, more static, *origos* whose orientations shift reciprocally or otherwise. Although Bühler does not explicitly include the earliest demonstrative uses in *demonstratio ad oculos*, he implies that early uses of demonstrative are equally dependent on access (visual and auditory) to the sign and the object of focus. Although Bühler does not set forth an explicit definition of *demonstratio ad oculos* within his works translated into English, in contrasting it with the other two deictic uses, he leaves us in no doubt that it relies exclusively on the perceptual, using limited visual devices: "Instead of the finger gesture, other optical or acoustic cues can be used [in *demonstratio ad oculos*], and instead of all of them together, situational indices or conventional aids of interpretation can enter in. But of what has been listed here, nothing can be omitted [...] any deictic word without such guidelines is running blind to its meaning" (Bühler, 1982[1934]: 18). According to Bühler, if these indexes are separated from their objects within the physical or temporal context, they are not interpretable, or are subject to misinterpretation. Eventually, deictics become less dependent on the perceptual context and consist of more varied devices in language and in memory to point out. Deictic development proceeds from "[...] less differentiated [*demonstratio ad oculos*] to richer inventories of form [the other two deictic uses]" (Bühler, 1982[1934]: 17); it appears that the form of the index can be more varied, making less critical the physical connection (spatial contiguity) in space and time between index and its object. In other words, even when deictic words serve as indexes to orientations and places which are actualized at the time of utterance, they are still forms of Bühler's initial use of deixis (*demonstratio ad oculos*).

This is so, since the index "this" or "here" could be misinterpreted apart from its co-occurrence in the physical context. On the other hand, when used in the same spatial and temporal context with their objects, ambiguity is not an issue. Bühler claims that the same orientation between speaker and another disambiguates deictic meaning without addressing how likely this sameness is apart from being in the same place and time. The assumption that Bühler's sameness of orientation translates likewise into sameness of place is a reasonable one, in that monitoring another person's location and orientation with respect to the speaker would hardly have been likely without current technological devices: "The words 'straight ahead' and 'right' in my discourse are unambiguous only by virtue of the fact that the stranger's nose already points in the direction in which he needs to go" (Bühler, 1982[1934]:

19). Hence, both gestures and early demonstrative use are quintessential examples of *demonstratio ad oculos*. In fact, Bühler uses demonstratives to illustrate *demonstratio ad oculos*: “What is decisive is the knowledge that only the naming words characterize their object as a something, distinct from something else, according to the determinateness of what kind of thing it is, whereas according to Apollonius the pronouns [demonstratives] make do with a *deixis* to that something which they attempt to capture” (Bühler 1990[1934]: 135). These early demonstrative uses are more like pointing gestures, and are unlike anaphoric intertextual uses, in that they are not terms which refer intertextually to other terms, nor are they nouns which intrinsically classify. They are restricted to Ego’s point of reference, and to Ego’s capricious notice of a present object.

A later skill, still characterizing *demonstratio ad oculos*, is the means to assume the point of view of another person present to Ego. This is still *demonstratio ad oculos*, because despite its advancement in recognizing social role-taking of different viewpoints, those viewpoints must be present, perceptually apparent. The person’s orientation (while present to subject) either matches or is distinctive from that of Ego (i.e., facing in the same direction, or facing speaker, respectively). This recognition of different orientations enhances, and in turn is facilitated by, the contrastive use of demonstratives referring to near and far space (Tanz 2009[1980]: 87, 125; West 2010: 18, 2011a: 671). Although Bühler’s schema of *demonstratio ad oculos* encompasses some recognition of social role-taking and orientational shifts, it restricts them to Ego’s experience, i.e., cognizance that self can assume listener role and can move about in space to assume different spatial relationships to the same objects. All of these skills and deictics which are incumbent to them depend upon Ego’s direct perception of individual experience. “Seeing” from the reverse perspective, if it is in direct opposition to what Ego sees, constitutes a more advanced skill not afforded by direct experience. Findings from Tanz (2009[1980]: 87, 125) demonstrate that children do not consistently employ demonstratives to refer to an opposing point of view from that of Ego, even when both perspectives are mutually present, until nearly five years of age – hence, this skill exceeds the competencies prevailed upon in *demonstratio ad oculos*. Provided that Ego’s perspective and that of another match, the perceptual experience can define the other’s point of view. *Demonstratio ad oculos* characterizes limited aspects of a more social use, given reliance on perceptual cues in the here and now – the opposing point of view must be observable and non-opposing, such that Ego can see the orientation and share it with respect to the objects and direction of eye gaze.<sup>5</sup> Little, if any, departure from spatial and temporal contiguity between the signifier and the signified is apparent

<sup>5</sup> As cited above: “The words ‘straight ahead’ and ‘right’ in my discourse are unambiguous only by virtue of the fact that the stranger’s nose already points in the direction in which he needs to go” (Bühler 1982[1934]: 19).

in this use. In other words, *demonstratio ad oculos* characterizes those representations (word or gesture) which are bound to the perceptual or situational context.

Bühler's anaphoric deixis exists solely on the linguistic plane – both the signifier and its intertextual signified are present within the discourse. The likelihood of ambiguity increases with amount of intervening text and with diverse third-person referents. Although the former depends on memory and pragmatic cues to connect deictic to antecedent, the latter depends on syntactic relationships between antecedents and the respective anaphoric deictic (Lust et al. 1996: 62). Unlike *demonstratio ad oculos*, anaphoric deixis does not rely on Ego's simultaneous observation of the sign and its object; instead, both the anaphoric deictic and its antecedent object exist in the same dialogue or text, independent of any sensory access. While temporal contiguity between anaphor and antecedent is relatively undisturbed, spatial contiguity is not a necessary component for successful interpretation. In fact, as Lust (1986: 13–14) points out, the anaphor does not constitute a specific, but refers to another referent in the discourse. The textual reference must be in relative temporal proximity within a topic frame (which can translate into spatial contiguity in written texts). In other words, Bühler's anaphoric deixis consists of a linguistic intratextual referent, but not a referent assumed to be within the knowledge base and focus of both participants within a dialogue. He focuses on the former type when illustrating what constitutes anaphoric deixis:

From a psychological viewpoint, any anaphoric use of deictic words presupposes that both sender and receiver *have access to the flow of discourse as a whole*, where parts may be re-taken up and anticipated. This whole must be accessible to sender and receiver, so that a wandering is possible, comparable to the passing of one's gaze over an optically present object. (Bühler 1982 [1934]: 21, italics original)

The “wandering” to which Bühler refers covers the linguistic context of discourse, and not previously shared experiences, which culminate in shared memory and focus, since later in the same paragraph (Bühler 1982[1934]: 21) characterizes the “wanderings” as “immediate memory” or “immediate retention”. Bühler's use of “immediate” indicates a reliance on the surrounding text for anaphoric deixis, as opposed to more temporally remote memories of past shared events. A reliance on the latter, more remote, memory base appears to fit into Bühler's more developmentally advanced mode of pointing: *deixis am phantasma*. Like *demonstratio ad oculos*, there still exists a certain sense of immediacy in establishing contiguity between anaphoric deictic and its referent – reliance on linguistic context.

### 3. Characteristics of *deixis am phantasma*:

Bühler's third category (*deixis am phantasma*) entails the use of a gesture or a word to refer to a tangible object which is displaced from the time and place of the referring act, e.g., pointing to an object which may be associated with a place or time, but which is absent, or has not materialized at that particular time.<sup>6</sup> Bühler admits that the displacement between deictic and object is more attenuated in *deixis am phantasma* than in anaphoric deixis; since in the former, the deictic is decontextualized from its object, while in the latter, both the anaphor and its antecedent are textually present (especially in written texts, given the easy means to review). After observing some abilities in the domain of immediate retention, Bühler asserts, "[...] similar abilities in the domain of no longer immediate but *mediate* retention, that is in the domain of grown-up *memories* and of the constructive *imagination* [...] Let us call this third mode of pointing *deixis am phantasma*" (Bühler 1982 [1934]: 21, italics original). This reference to "mediate retention" indicates a greater dependence on memory to associate the deictic device to its object. *Deixis am phantasma*, then, elevates the function of the deictic to a higher mental plane, since the object of the deictic is beyond observation. The deictic refers not to an object in the here and now, nor to an antecedent in the now, but to a mental image or memory of the object, which Bühler claims can originate in subjective perceptions, and culminate in constructed dreams: "Psychologically speaking, a dreamland is to be found in the Somewhere, with which a linkage to the Here cannot be given" (Bühler, 1982[1934]: 29). The memories or dreams which emerge can be constructed and/or called up while using the conventional deictic to create subjective envisionings or fantasies, especially while awake: "It is not the case at all that the natural deictic aids, upon which the *demonstratio ad oculos* is based, are *completely* missing in *deixis am phantasma*" (Bühler 1982[1934]: 23); and, "He who is led by *phantasma* cannot follow the arrow of the speaker's outstretched arm and pointed finger with his gaze to find the something *out there* [...]" (Bühler 1982[1934]: 23). These deictic forms can be gestural (pointing, eye gaze) or linguistic (primarily demonstrative and locative use). To illustrate the use of deictic signs in this capacity, Bühler cites pointing as the primary device: "We deal here only with situation-phantasmas, with the aid of which 'pointing' is done" (Bühler 1982[1934]: 27). By "situation-phantasmas" Bühler appears to refer to memories which would not materialize but for a physical cue or stimulus in the immediate setting; and the implication is that occurrences of *deixis am phantasma* are a direct consequence of

<sup>6</sup> Harris and Richert's (2008: 541) claim that talking about an entity can essentially bring it into existence further underscores the pivotal role of language in referring to novel, absent, or imagined places and objects.

retrospective memories of observed events (independent of the subject's degree of participation). The memories, or retentions, which constitute "situation-phantasmas" have their origin in recognition of a stimulus within the immediate spatio-temporal context, especially that of the previous location of an object or event. In fact, deictic devices are direct consequences of these "situation-phantasmas".

Bühler's use of "eidetic memory" (vivid visual images of previous experiences) demonstrates the intensity, or emotive force, of the memory to bring about an instance of *deixis am phantasma* – pointing to "nothing". This integral causal connection between mental visual sign and deictic device makes prominent Bühler's tacit assertion that subjective visual images drive deictic demonstrations both in *demonstratio ad oculos* and *deixis am phantasma*. The former makes use of visual access to present objects, while the latter relies upon vivid visual memories of absent objects or events. While the nexus between *demonstratio ad oculos* and *deixis am phantasma* is evident in Bühler's writings, the transition from one to the other and how *deixis am phantasma* develops from retrospective memories to prospective, constructed ones, are less clear. Consequently, some liberty in extrapolating from Bühler's account is in order.

Distinctive sources for the memories which give rise to uses of *deixis am phantasma* are implicit in Bühler's assertions on the topic: Retrospective vs. Prospective events. "Situation-phantasmas" (Bühler 1982[1934]: 27) arise more often at the outset of the use of deictics to refer to mentally represented events; and surface earlier ontogenetically in the phantasmas less dependent on contextual cues. To reiterate, "situation-phantasmas" typically emerge upon sensory notice of an associated place, or other stimulus within that place or time, as in the case of a memory triggered consequent to direct visual notice of a location of a prior poignant event with all of its contextual features (other intracontextual objects and linguistic stimuli). The memory source which gives rise to these phantasmas is retrospective, since perceptual copies of actual events constitute the nature of the phantasma or memory. These memories are situational in that though they are subject to idiosyncratic perception, they represent a relatively static and iconic "picture" of events as observed. One's own experience is the basis for the subsequent mental image. This retrospective orientation is the foundation for providing orientationally-based instructions to others, a skill to which Bühler refers rather frequently: "[...] the one who is leading, and the one who is being led, must have a sufficient degree of harmonious orientation; orientation within an order schema in which the reference object has its place" (Bühler 1982[1934]: 22). When providing instructions, Ego must draw upon personal past experience (static) to offer coherent instructions to another in that same place. Ego must have already visited that place and must have noticed his or her location with respect to other contextually present objects. Although some subjectivity is responsible for the initial perception of the event



and its reconstruction during recall, subjectivity is at a minimum when compared to processes intrinsic to more developmentally advanced phantasmas, in which perspective-taking skills are central.<sup>7</sup>

Other retrospective phantasmas, which are accompanied by deictic indicators, often come unbidden to one's consciousness; and despite the suddenness of the memories' onset, the phantasmas are likely to involve some intentionality on the part of the deictic user. Many vivid (eidetic) memories, although cued by events or qualities of events, are not deliberately accessed; but the subject's response to the phantasma is likely to be deliberate, unless it is repeatedly associated with a particular memory. These retrospective memories in the form of deictically directed phantasmas can be planned, especially when the purpose is a social one – to provide directional information to a speech partner. Bühler alludes to the use of *deixis am phantasma* in its social-orientational function when he refers to the “wanderer”. To provide useful instructions for orientation in a location other than the “here”, the speaker ordinarily imagines the self in the projected location via memories of previous experiences therein, obviating the need for planning to situate the other. The speaker must draw upon memories of his or her location to features within the projected physical environment, which requires orientation of the self incongruent with the current one. Perhaps it is this incongruence which triggers the use of deictics to reify the accuracy of the instructions for the self and/or the “wanderer”. This use of *deixis am phantasma* may be a precursor to graphic representations of the projected space, and may serve as a scaffold to constructing more adequate spatial instructions (Galantucci 2009).

*Deixis am phantasma* is likewise employed to refer to events that have never materialized. Bühler poignantly illustrates the incorporation of prospective forms of *deixis am phantasma*: “The situation changes abruptly, however, it appears, where the narrator takes the listener into the realm of the memorable absent, or fully into the realm of constructive imagination [...] this orientation [between ‘conversation partners’] *in toto* intervenes and is transposed into the ‘imagination space’, to the somewhere-realm of pure imagination and of the there-and-there in memory” (Bühler 1982[1934]: 22–23). These prospective mental events which are constructed by the subject for the listener (perhaps in some cases from adaptations of directly or indirectly observed events) form the basis upon which phantasmas become more developed. With prospective mental representations, subjects can alter actual events in conventional or unconventional and dynamic ways, and can imagine events in places which they have never experienced through observation

<sup>7</sup> Imagined experiences, especially those which supersede a more subjective reality can (perhaps more than observed ones) drive the cognitive and linguistic system to incorporate increasingly diverse points of view (Harris 2000: 186–187), necessary to expansions in deictic use.

or participation. For such imaginings, phantasmas are not as reliant on actual experience and notice of a stimulus in the physical context; and subjects can construct new roles for themselves and others in events which may never be actualized.

Bühler likens the use of *deixis am phanstasma* (from speaker to listener) to devices used in fictional contexts by actors, especially when engaging in monologues, “the speaker and hearer of a visual description of something absent possess the same talent and resources that permit the *actor* on stage to make something that is absent present and which permit the *audience* to interpret what is on the stage as a mimesis of something absent” (Bühler 1990[1934]: 142). The fictional, onstage, account (often monologic) and the imaginative account, rooted in real-time conversational exchange make use of deictics not merely for the audience, or speech partner, but to directionalize the self and emphasize the orientation of the speaker. In other words, directional gestures and directional terms which are devices inherent to *demonstratio ad oculos* resurface and extend their function, from consolidating or making contiguous present objects in their physical or spatial context, to establishing contiguity (temporal and topic relevance) between the location of the speaker, and the absent object or event under consideration. The deictic in the latter case serves to unite the absent or imaginative, as if it were vividly present – an invisible something which, because of its invisibility, calls up the necessity to replace the invisible with a mental image of the intended referent. The spectators, in the context of performed fiction, can mentally image the invisible something indicated by the deictic, without sharing their constructed imagination with the actor – the soliloquy of the actor does not require an interpretation or sharing thereof. Conversely, conversational maxims invite the listener, as a speech partner, to provide a response to validate shared focus. Hence, the spectator can be more passive in revealing the constructed image which emerges from the deictic use, and may feel greater liberty to be creative in such constructions, while the conversational partner is expected to take an active role in topic maintenance. Although the analogy which Bühler proposes between spectator and speech partner demonstrates the pivotal function of deictics to refer to absent or imagined entities, it minimizes the more principal function of these deictics in connecting actual events to constructed ones. While actors on stage use deictic devices to connect a present fictional event with an absent fictional event, a speaker in real space and time employs these devices to make contiguous the real with the imaginative unreal.

*Deixis am phantasma* that refers to a mental representation can be activated from memories of diverse types: static past experiences of events in which the originator has participated, static events which the originator has merely observed, dynamic events with some features of either of the foregoing, and dynamic events which are wholly constructed. The latter two types constitute sources for prospective memories; and those memories that surface in real time may emanate

from some form of dream, be it daydreams, fantasy, or remnants of REM sleep. References to these sources are replete in Bühler's discussion of *deixis am phantasma*: "Let him consider, for example, the difference between being awake with one's senses about one and the familiar form of *transport* (*Entrücktsein*) in dreams" (Bühler 1990[1934]: 143).

Bühler's schema of *deixis am phantasma* includes these retrospective and prospective elements, without explicit mention of any ontogenetic sequence. In Bühler's own words, deictic reference proceeds "from less-differentiated to richer inventories of form" (Bühler 1982[1934]: 17). This "richness" derives from the source of the representation, which in turn influences the nature of the deictic form or kind of representation that the subject chooses to employ. In the case of retrospective *phantasma* ("situation-*phantasma*"), the subject chooses more iconically-based, somewhat static forms which reflect some semblance of replica, often in the form of images of past events. The subject moves to more dynamic "inventories of form" with *phantasmas* flowing from constructed events which are eventually displaced from familiar locations. (Current findings from studies in "working memory" (WM) validate that the developmental progression is from the coordination of static images to the coordination of dynamic, novel ones (Baddeley 2007: 148).)<sup>8</sup> The retrospectively-based *phantasmas*, since they include a dynamic, constructed essence, are driven by idiosyncratic affect, which results in substantive changes in created cognitions, namely, novel *origos*, novel orientations to objects, and novel places for these events to be carried out. Thus, the "glue" which mediates sign and object experiences a transcendence from static, conventional meanings, to dynamic, intrapsychological ones, which, although they may be constructed from conventional meanings issuing from the index-object relation, have incorporated novel intuitions of *origos*, places, and objects. These meanings or effects, which consist of novel intuitions, are driven by preferences and emotions, and culminate in emotional intelligence.

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<sup>8</sup> In Baddeley's explanation and description of the function of the "episodic buffer" in WM, he identifies two types of binding, whereby information is coordinated: static and dynamic. While static binding coordinates co-occurring features of events which are frequent or ordinary, dynamic binding integrates co-occurring features of novel information. Baddeley determines that dynamic binding in WM, as orchestrated by the episodic buffer which assists in integrating features of long and short term memory, requires higher computational demands, since formatting novel features within an integrated episode necessitates distinctive memory formats. Presumably, more mature cognitive systems are more adept at handling the integration of novel episodic features as opposed to the more automatic encoding and organization of features which typically appear together in episodes. The former relies on more conscious WM skills, taking up greater cognitive resources.

#### 4. Application of Peircean sign-theory to Bühler's deictic framework

The developmental nature of Bühler's framework brings greater structure to Peirce's earlier claims regarding the coexistence of index with its object, to his later observations of the semiosis of signs in general, and indexical signs in particular. Bühler's conception of indexical reference from the physical, to the social, to the imaginative demonstrates a layering of the initial import of Secondness in direct experience to its inclusion as a single component with Firstness and Thirdness in social interaction, to the decreased import of Secondness in imaginative and intrapsychological operations. This departure from Secondness (as physically instantiated) allows for expansion of Peirce's Dynamic Object as well as the Dynamic Interpretant. Indexical signs are particularly illustrative of semiosis, in that their beginnings demonstrate the starkest instantiations of Secondness, when compared with the Icon or Symbol.

Given the triadic relationship within the sign, the object has the greatest realization in Secondness; and when the object is Immediate, it necessarily stands in direct spatial and temporal contiguity with the sign. Nonetheless, if the object is of the Dynamic kind, some spatial and temporal attenuation may hold. The attenuation (either spatially, temporally, or both) exists consequent to some Thirdness-based agent, which binds the Dynamic Object to its sign apart from directional features. The Thirdness component often does not rise to the level of a conventionally recognized legisign/proposition, but emerges from subjective, idiosyncratic observations or expectations of how similar objects can constitute those of the same indexical sign. The original place where an object is ordinarily found becomes part of the Immediate Object, but given a displacement between the Immediate Object and its original context, the object's absence pervades and defines that space; and has such an effect on the index as to call it forth. Such is a quintessential example of how Dynamic Objects "affect the sign".

For Bühler, *demonstratio ad oculos* refers to adherence of spatial and temporal contiguity in the referential act, such that index is necessarily concurrent with its object. This early use can be associated with Peirce's notion that index can be used without an interpretant, that is, without a discernable meaning, and early non-contrastive demonstrative or locative use. Pre-linguistic pointing and early linguistic uses of the distal demonstrative "that" constitute indexes without any easily codifiable meaning. Given the lack of perceptual and functional similarities among objects of "that", making the meaning of the indexical sign vague in this use – "that" referring to any object of Ego's focus, regardless of its relative location – the necessity of the interpretant is questionable, particularly when the Immediate Object is co-present with the sign. "That" used in a novel context for any novel object

constitutes an indexical sign which is subjectively employed to refer to any object of speaker's choice – the type and number of objects is infinite, and the speaker's association of "that" to refer to one of a host of objects which do not share similar attributes is not guided by convention.

Were this Immediate Object physically removed from the spatio-temporal context, "that" would not serve as a sign; but "that" remains a sign despite the absence of codifiable meaning. "An *index* is a sign which would, at once, lose the character which makes it a sign if its object were removed, but would not lose that character if there were no interpretant" (1902: B104; CP 2.304). In this early use, which Peirce classifies as "degenerate"<sup>9</sup> (*demonstratio ad oculos*), the pointing finger or distal demonstrative would lose its character as referring to a particular object in the absence of that object, provided that mental representations of that object are not a part of the referring act.<sup>10</sup> This initial use validates Peirce's adherence to spatial and temporal contiguity between sign and object, while allowing for semiosis to continue in ontogeny, when physical contiguity is less intrinsic to the indexical sign-object relation as a consequence of social and intrapsychologically based interpretants.

Bühler's anaphoric/social-situational deixis is an appropriate characterization for the advance to the use of index in joint attentional schemes, and to index's codification of speaker-addressee role-taking and consequent reciprocal orientational relations with proximal and distal objects. Bühler's emphasis on social-situational deictic use underscores the increased role of Thirdness to social experiences in Secondness – in codifying near, as opposed to far, objects from a particular *origo's* perspective (ordinarily that of a conversational participant); the import of Thirdness is evident. Thirdness here materializes as a class of perspectives which relies on social roles. The indexical nature of these social roles is obviated in their inherent reciprocal nature – shifting from speaker to addressee, and the reverse. This social-situational use demonstrates the onset of Peirce's genuine<sup>11</sup> index, in that the demonstrative becomes an indexical legisign at the point in development when

<sup>9</sup> "A Degenerate Index is a representamen which represents a single object because it is *factually* connected with it, but which conveys no information whatever" (EP 2:172, italics Peirce's).

<sup>10</sup> "Degenerate uses are not less indexical than are genuine ones; they merely consist in the most central, or most nuclear, of what characterizes indexicality, namely, Secondness, coexistence between sign and object. Degenerate indexical use actually represents the core of what it means to engage in an indicative act, stripped of the typical perceptions, interpretations, and conventions which later attach thereto, as a consequence of experience and culturally-ascribed determinations. The "purest" use of index, then, is the degenerate form, which, rather than implying inferior status, or a departure from the norm, represents the zero-point of indexical use" (West 2012: 303).

<sup>11</sup> "The Genuine Index represents the duality between the representamen and its object. As a whole it stands for the object; but a part or element of it represents [it] as being the Representamen, by being an *Icon* or analogue of the object in some way; and by virtue of that duality, it conveys information about the object" (EP 2:171, italics Peirce's).

contrastive demonstratives are productive, at approximately 3;0 (West 2010: 12; West 2011a: 671). Because contrastive uses of demonstratives represent a general type (“this”: speaker as *origo* to proximate object; “that”: speaker as *origo* to distal object) and because of their continued designative function, Thirdness is inscribed upon Secondness (experience).<sup>12</sup> For Bühler, situational deixis includes *origos* and objects which are subject to reciprocal perspectives to one another, i.e., speaker can face addressee and have a distinctive perspective, but speaker can likewise take addressee’s conversational role and have an identical or distinctive perspective from the original speaker in the event that orientations to objects are altered; nonetheless, those situations materialize in the here and now. In situational deixis, then, there still exists an adherence to spatial and temporal contiguity between the sign and object which is consonant with Peirce’s core attributes of index, in that index implies the presence of factual information, reference to an individual(s), and the absence of resemblance or law-likeness.<sup>13</sup> The nature of indexical interpretants is still socially motivated, such that speaker and addressee exist in a dynamic conversational relationship, and when they narrate their role in an event spoken about, their orientations to physical objects can change concurrent with orientational alterations to objects within the spatial milieu. Nevertheless, the change is physical, not mental. It requires a movement in orientation of the *origo* to the objects, or of the objects to an *origo* that is stationary. Despite the potential alteration of objects or of *origo* in this social-situational deictic use, the alteration is not primarily mental or intrapsychological. In fact, the transition to envisioning other *origos* in novel places, etc., involves iconic projection, that is, seeing Self in a place other than “here-space”.

Bühler’s concept of *deixis am phantasma* assumes that while temporal contiguity between indexical sign and object is maintained, spatial contiguity can be forfeited, and the deictic use can still refer. In other words, a pointing finger to refer to an absent object appears to violate a core feature of Peirce’s index, yet if the object is a mental image or memory of the physical object to which the pointing gesture is attributed as a sign, the two are temporally contiguous, saving index from annihilation as a sign. The social nature of indexical interpretants for absent objects is the catalyst for the use of index without spatial contiguity with its object. The attempt on the part of the message-producer to direct the addressee to a shared mental construct of the object illustrates the mechanism by which social interpretants motivate the semiosis of index. Children point or gaze toward a location where the physical object might be expected while maintaining joint attention with

<sup>12</sup> Since this line of argumentation is not exhaustive to the inclusion of Firstness in the paradigm, its purpose is not to exclude the import of Firstness.

<sup>13</sup> Cf. Atkin’s (2005: 163–170) and West’s (2012) discussion of Peirce’s indexical attributes.

(sporadically looking toward) another (Saylor 2004: 608–609).<sup>14</sup> This scenario often includes the use of non-contrastive demonstratives. This characterization is a consequence of increased use of mental images as signs in the Piagetian sense,<sup>15</sup> and as a consequence of Bühler's claim that fantasy injects itself into reality, particularly during childhood. This imaginative function triggers further semiosis, but with intrapsychological effects, akin to developing an inner dialogue. The social is still the impetus for idiosyncratic imaginings, especially when indexical signs (directional gestures, demonstratives) function to call up a similar mental image or memory involving a physically absent object in the mind of another, which often is based on shared experience. In fact, the use of index to refer to absent objects would have little purpose without joint attentional schemes.

Peirce's interpretants, in the case of absent objects, represent the very essence of social interchange, since matching meaning to the intended object (covert image) via an indexical sign characterizes their resultative function. The assumption here is that Peirce not merely allows for, but considers, objects to be mental (CP 8.368 fn23). To affect the Self intrapsychologically, as in covert dialogue, indexical signs must consist of mental images of a visual or auditory index. Reference to absent objects reflects an extension of the indexical interpretant from the objects and orientations which are merely perceptual, though expressing distinct speaker orientations or distinct addressee orientations, to a replica of experiences which had been, or a modification of those experiences, or to a novel construction of events never experienced. The two former realizations of indexical interpretant emanate from the act of *deixis am phantasma*, since matching the speaker's memory of the object to that of message-receiver is paramount, relying heavily on shared, hence past, experiences: "If someone wants to show something to someone else, then both of them, the one who is doing the leading and the one who is being led, must have a sufficient degree of harmonious orientation; orientation within an order schema in which the reference object has its place" (Bühler 1982[1934]: 22). Indexical interpretants whose objects are mental constructs demonstrate a heightened degree of affect (Firstness). The eidetic memories which compel the use of indexical signs in

<sup>14</sup> Saylor (2004: 602–603), and Saylor and Ganea (2007: 698) claim that infants recognize absent objects upon sustained gaze toward a physical attribute (colour/shape) of an object after its removal from a child's environment; these mental representations can be held in memory for more than two minutes (Ganea, Saylor 2007).

<sup>15</sup> According to Piaget and Inhelder (1969[1966]: 55), children's means to mentally represent becomes apparent just prior to the emergence of language and "deferred imitation" is the primary indicator of the emergence of mental imagery after which other, more creative mental representations can be developed. Deferred imitation entails reenacting a prior experience which the child observed or took part in at a later time – the memory sustains the reenactment.

a *deixis am phantasma* context are dynamic objects<sup>16</sup> in that they “affect the sign”, rather than the sign affecting them; and their interpretants, if meaning precedes form in development, serve as catalysts to this novel use of indexical signs – index lacking contiguity with object.<sup>17</sup> The affect which calls up the eidetic memory in Firstness gives rise to expanded interpretants for the use of indexical signs, still dependent on social exchange (matching speaker’s eidetic image to one which addressee recalls) while permitting a degenerate index to depart from its earlier spatial contiguity with its object. The effect of the dynamic object on the deictic sign also transforms the function of the sign from social to intrapsychological, since eidetic memories can likewise produce alterations within the mind of the Self, where the dynamic object originates. Eidetic memories as dynamic objects become increasingly networked with other eidetic memories so as to alter the contributing images to form a constructed one – a novel dynamic object.

The dynamic object affects the deictic sign, modifying its character from contiguous, to simultaneous space and time directional instrument, to one which may not adhere to concurrent actualization in space and time. The very nature of the indexical sign experiences a shift to increasingly less dependence on perceptually apparent objects; and index itself may undergo a revolution from overtly present to covert representations of graphic arrays displaced from Self as *origo*, and Self as “here and now”. It is precisely the potentiality present in the indexical sign, and in its Immediate Object (more so than in iconic or symbolic sign), which supplies the opportunity for such momentous degrees of semiosis. The fact that the degenerate Index, without its object, “asserts nothing” (CP 3.361), permits its object to influence its use. Index’s objects need not subscribe to conventions, as is the case for symbols; they can emerge within an individual with “brute force”, and can suddenly and capriciously draw attention to a fleeting thought. The Index, in these cases, might consist in seeming inattention to contemporaneous events consequent to an inner focus on intrapsychologically constructed cognitions, e.g., envisioning self or others in places or times where they are not. With the significant interplay that holds between Index and its Immediate or Dynamic Object, surfaces a shift in the quality of its interpretant. Meanings and effects of deictic arrays (orientation(s)

<sup>16</sup> “...We have to distinguish the Immediate Object, which is the Object as the Sign itself represents it, and whose Being is thus dependent on the Representation of it in the Sign, from the Dynamical Object, which is the Reality which by some means contrives to determine the Sign to its Representation” (CP 4.536).

<sup>17</sup> In fact, Peirce distinguishes the indexical sign as the most likely of the signs (iconic, indexical, symbolic) to be associated with the dynamic object, which is especially so later in development: the “reference of a sign to its object is brought into special prominence” (MS 7, 000016).



between *origos* and their environments) are no longer confined to physical space, nor to what is possible in the physical world, but can encompass orientations not ordinarily possible, and *origos* with status not typically accorded, e.g., an observer of a carousel in a non-gravitational setting. The semiosis of deictic signs can develop exponentially, given the force and degree of effect which governs between the index as a particular sign based in Secondness, and its object, which often defines it. Even the character of Secondness can transcend the physical to imagined existence.

When message-producers dispense with pointing and similar gestural indices to refer to non-present objects or events, *deixis am phantasma* acquires more abstract means of indexing, requiring the message-producer to assume an orientation in a place different from the speaker's actual spatio-temporal location. Bühler proposes that the message-producer can take the perspective of either of two *origos*: that of the self, or that of another, "imaginary wanderer". When describing to another how to orient in a spatio-temporal context other than the actual, the speaker must either envision self in that place, or must shift the point of orientation to a known or unknown traveller, who might have reason to visit such a place. Bühler (1990[1934]: 146–147) illustrates this shift as follows: "[M]ovement of the *origo* [...] [is] a fundamental shift[...] brought about by the transition from the visual field of the monocular being to the unified visual field of a binocular being... Briefly, the perceptual *here* is not always at the same position in the tactile body image[...] Only if one has first properly considered these [properties] will one be able intuitively to understand the seemingly random variety of deictic words and deictic procedures." The message-producer must not merely cognitively shift orientation within another imagined place, but in assuming a distinctive *origo*, must envision the imagined place, together with orientation within such, from the perspective of another. Such goes beyond injecting self into novel contexts and all the potential spatial relations incumbent thereto; instructing another in an absent place requires objectification – seeing with the perceptions of another.

This latter cognitive advance presumes that speaker can anticipate the preferences and affect of another in the imagined space and time. Such preferences may include notice of different objects, or aspects of objects, and tendencies toward particular canonical or non-canonical orientations to objects. As a consequence of greater objectification, the semiosis of index and its interpretants draws further upon Firstness and Thirdness, but with fewer idiosyncratic limitations to what self feels, thinks, and desires. The means to assume the point of view of another within imagined contexts entails the element of Firstness in anticipating a preference or notice disparate from the speaker's own. Such can include any fears, likes, dislikes, and interpretations consequent to individualized perceptions, which Peirce

categorizes as “dynamic interpretants”.<sup>18</sup> Although these emotions are idiosyncratic, they are not subjectively so, and constitute Firstness precisely because they are primarily derivatives of affect. This means to shift *origo* to that of “the imaginary wanderer” likewise illustrates an amplified use of Thirdness, since the effects of another’s potential experience culminate in concepts, propositions, or habits which in turn can be integrated into the conceptual repertoire of the individual creating the orientational instructions. Constructed mental images (not reliant on egocentric information) of another *origo* within imagined contexts can become part of the speaker’s own intrapsychological experience. This increased perspective-taking competence results in continued fomentation of objectification and illustrates how Thirdness contributes to the semiosis of deictic signs. The Peircean concept of the evolving interpretant elevates the use of index from a visual tool motivated by social forces to an internal covert tool whose purpose is intrapsychological change and control. The imagined place, independent of whether it exists or has been observed, does not represent Secondness proper, given that it is not in existential relationship with the speaker-experiencer and, in fact, may not represent a past experience in whole or in part. Instead, the imagined place represents extended Secondnesses whose interpretants are of the “final” sort. Thirdness and Firstness characterize the interpretant of indices involving shifting *origos* (as obviated in deictic use), since possible places, orientations, and perspectives are subjectively constructed (Firstness), and since novel patterns of behaviour and novel limits of behaviour are being established from taking another’s perspective (Thirdness).

## 5. Conclusion

Recognition of the existence of a host of legitimate perspectives as a consequence not merely of observance of different spatial orientations between points of reference and objects, but of the creation of new perspectives in unobserved places through fantasy and imagination constitutes a precursor for appreciation of different cultural and cognitive identities. Short of Peirce’s categorization of the deictic as a sign subject to evolving interpretants from within the sign-object relationship, Bühler’s deictic framework is truncated.

Bühler’s *deixis am phantasma*, which underscores the human mechanisms by which imagination *deixis* can materialize, is instructive in determining how

<sup>18</sup> “In all cases [the Dynamic Interpretant] includes feelings; for there must, at least, be a sense of comprehending the meaning of the sign. If it includes more than mere feeling, it must evoke some kind of effort. It may include something besides, which, for the present, may be vaguely called “thought”. I term these three kinds of interpretant the “emotional”, the “energetic”, and the “logical” interpretants” (EP 2:409).

indexical reference in the absence of the signified is triggered; but falls short of establishing the extent of the deictic continuum into constructed realities as distinct from static remembered ones. It is Peirce's contribution of the dynamic object to indexical sign definition, coupled with his insistence that the interpretant is so integral to the sign (heightening the semiosis of deictic expressions), that accounts for the ongoing process of deictic meaning.

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### **Познавательные и лингвистические подкрепления *deixis am phantasma*: семиотика Бюлера и Пирса**

В статье рассматриваются три вида дейксиса по Бюлеру, при этом особое внимание сосредоточено на *deixis am phantasma* (дейксис, указывающий на отсутствующий референт). Такое употребление дейксиса напрямую связано с семиозисом индекса, учитывая центрированность объекта и интерпретанты в изменении функции индексального знака в онтогенезе. Употребление дейктических знаков для обозначения отсутствующих объектов (некоторые из которых являются ментальными) как бы катализирует переход от более социального, конвенционального их использования к более внутреннему, образному. Используемая Бюлером аналогия ментальных объектов с «мимезисом» служит источником для утверждения, что статические и более динамические воспоминания, питаемые аффектом, приводят дейксис к указанию на более динамические объекты и более динамические интерпретанты, к более конструированным реалиям. Два типа объектов и три типа интерпретант у Пирса окончательно оформляют дейктическую структуру Бюлера; они определяют успехи в дейктическом семиозисе, которые остались недоработанными у Бюлера, и объясняют, каким образом дейктическое использование расширяет семиозис индекса.

### ***Deixis am phantasma* kognitivsed ja lingvistilised tugipunktid: Bühleri ja Peirce'i semiootika**

Käsitluses vaadeldakse Bühleri kolme liiki deiksist, keskendudes neist kõige keerukamale kasutusele – *deixis am phantasma* (deiktikud, mis osutavad puuduvatele referentidele). See kasutusviis on indeksisemioosi suhtes otsustava tähtsusega, kui võtta eelduseks objekti ja interpretandi keskne tähtsus indeksiaalse märgi funktsiooni muutumisel ontogeneesis. Deiktiliste märkide rakendamine, viitamaks puuduvatele objektidele (millest mõned on mentaalsed), moodustab katalüsaatori üleminekul sotsiaalsematelt, konventsionaalsematelt kasutusvõimalustelt sees-

mistele, kujutlusvõimest lähtuvatele. Mentaalsete objektide analoogia “mimeesiga”, mida kasutas Bühler, annab alust väiteks, et staatilisemad ja dünaamilisemad mälestused, mida toidavad afektid, panevad deiktikuid osutama dünaamilisematele objektidele ja dünaamilisematele interpretantidele, konstureeritumatele reaalidele. Peirce’i kaht tüüpi objektid ning kolme tüüpi interpretandid täiendavad Bühleri deiktilist raamistust, need määratlevad arenguid deiktilises semioosis, mida Bühler ise välja ei arenda, ning pakuvad välja põhimõtte selle kohta, kuidas deiktikute kasutus avardab indeksisemioosi.