Abstract: This review article of Frederik Stjernfelt’s *Sheets, Diagrams, and Realism* (2022) argues that Peirce’s theory of iconicity with its subdivision into the image-diagram-metaphor triad must not be reduced to diagrammatic iconicity. The foundation of the triadic subdivision of the icon is not in Peirce’s diagrammatic logic but in Peirce’s cenopythagorean categories. A focus is on misinterpretations of Peirce’s concept of thirdness in the firstness of the icon. The paper argues that not only metaphors, but also comparisons, analogies, analogic arguments, and examples belong to the third class of icons.

Keywords: C. S. Peirce; iconicity; Stjernfelt; metaphor; image; diagram

1 Sheets, diagrams, and realism

Under the framework title *Sheets, Diagrams, and Realism in Peirce (SDRP)*, Frederik Stjernfelt (2022) unites in this volume eighteen papers originally published in various journals and edited volumes between 2011 and 2021, followed by a new chapter entitled “Limited Individuals and Unlimited Aims Peirce’s Philosophical Anthropology.” The book has a twice triadic structure. Its title announces the triad *Sheets, Diagrams, and Realism*, but the headings of its three sections announce a different triad: I “Propositions” (chs. 1–6), II “Iconicity and Diagrams” (chs. 7–11), and III “Semiotics and Metaphysics” (chs. 13–19).
The collection is published as vol. 6 in the renowned book series *Peirceana* edited by Francesco Bellucci and Ahti-Veikko Pietarinen – proof enough that Stjernfelt has found recognition as one of the internationally leading scholars in Peirce studies, although this is not entirely new since two of Stjernfelt’s previous books, *Diagrammatology* (2007) and *Natural Propositions* (2014), had already catapulted him into the first league of Peirce scholars.

*SDRP* is carefully edited and almost error-free (except for pp. 133, l. 31; 141, l. 1, 243, l. 28; 267, l. 36; 332, l. 15; 339, l. 27; 398, l. 19; 407, l. 15). However, it must not go unmentioned that the third branch of Peirce’s philosophical trivium is *speculative rhetoric*, not “sp. rhetorics” (pp. 43, 245). The book has 367 notes and sixteen pages of references to the literature cited. Sixty-two illustrations serve to exemplify the creative potential of Peirce’s semiotics for applied studies in diverse domains of the print media. The index of no less than 360 names offers a surprise because right after “Descartes, René,” it dedicates the next entry to the devil himself in the line “Devil, the.” Unfortunately, the book lacks a subject index, which should be a must in any book dealing with so many topics. Not very reader-friendly, its notes are formatted as endnotes (pp. 385–424) instead of as footnotes.

The title *SDRP* is only partially self-explanatory for readers who are not already specialists in Peirce studies. *Diagrams* were already the topic of Stjernfelt’s book of 2007, which makes the earlier study a precursor of the present one. Section II and chs. 8, 10, and 11 have “diagrams” in their headings. Chapters 1–5 deal with propositions, dicents, and assertions, thus taking up the general theme of Stjernfelt’s book of 2014 on Peirce’s doctrine of dicisigns, but Stjernfelt always succeeds in shedding new light on his topics and in demonstrating convincingly the great potential of applying Peirce’s semiotics to diverse fields of research in multimodal communication (which is in the focus of ch. 5).

Realism, the second self-explanatory keyword in the title of *SDRP*, is one of Peirce’s great philosophical themes, as is generally known. For Peirce, realism was a question of metaphysics, which may explain why Stjernfelt subsumes eight chapters (chs. 12–19) under the general heading of “Semiotics and Metaphysics,” although only ch. 12, “Peirce as a truthmaker realist” deals with realism proper. Other chapters of section III are on such diverse topics as the development of Peirce’s semiotics from the 1860s to 1908 and on interconnections between Peirce’s semiotics and the thought of philosophers and linguists such as Kant, Hegel, Husserl, Cassirer, Hjelmslev, or Ingarden.

But what are sheets? The third keyword in the title of *SDRP* is an abbreviation of “sheet of assertion” (SA) or “phemic sheet.” In Peirce’s diagrammatic logic, an SA is a writing surface, such as a sheet of paper or a blackboard, on which a so-called graphist (the logician) inscribes logical graphs representing assertions valid in a real
or fictional universe, the so-called universe of discourse. Only ch. 6, “Sheets in the wild,” deals with sheets explicitly, but it does so in an entirely new fashion. Instead of logical assertions proper, it deals with the creative potential of applying the principles of Peirce’s Existential Graphs to what Stjernfelt calls “sheets in the wild,” modes of presenting verbo-visual information that “fulfill an overlooked function in many media from paintings, posters, billboards, movies to the internet – to fuse signs into propositions, to combine propositions into conjunctions, facilitating the quick, often quasi-automatic cognitive processing of truth claims” (p. 110). In seven analyses exemplifying forms of text–image interaction in the print media, such as an eighteenth century newspaper woodcut, anatomical charts, book cover pages, or a movie poster for the film Gone with the Wind, this chapter shows convincingly how text and image interact in ways similar to how logical subjects and predicates are represented graphically in Peirce’s existential graphs.

2 Iconicity: the term and the question of its degrees

Readers interested in new insights in Peirce’s theory of iconicity will find the title of section II, “Iconicity and Diagrams,” promising, but iconicity in general (apart from its subclass of the diagram) is only the topic of a subchapter of ch. 9, which examines the concept of iconicity (pp. 162–163), and of two subchapters of ch. 8, one dealing with the image-diagram-metaphor trichotomy and the other with Stjernfelt’s distinction between operational and optimal iconicity (pp. 131–138).

Stjernfelt confirms that Peirce, although he introduced the concept of icon to modern semiotics and although his theory of iconic signs has found much recognition in logic, linguistics, and literary and media studies, used the term iconicity itself only twice in his writings. It is absent from the two volumes of the Essential Peirce, from the seven published volumes of his Writings, and the volume of his correspondence Semiotics and Significs published in 1977. In the four volumes of the New Elements, one finds it once, namely, in a text on the logic of numbers of c.1987. In the eight volumes of Peirce’s Collected Papers, it occurs only in a single footnote quoting a passage from MS 300 of 1905. In both occurrences, the term serves to express the idea of the suitability of a diagram to represent its object. In 1897, it expresses the idea of “the capability (not “palpability” - as Stjernfelt quotes it on pp. 262 and 400) of being represented in a diagram” (NEM 2: 595), and in 1905, the topic is the heavy line in Peirce’s Existential Graphs, whose “iconicity” is discussed as its suitability to represent the idea of continuity (MS 300: 39–41). None of the two occurrences implies the notion of a scale from a minimum to a maximum degree of iconicity.
In view of the marginality of this term in Peirce’s writings and its absence from so many passages in which Peirce introduced, used, and defined the icon and the iconic, it is by no means “a widespread urban legend,” as Stjernfelt claims (p. 162), that the concept of iconicity, in modern semiotics, originated in Charles Morris’s interpretation of Peirce’s icon-index-symbol triad (pp. 162, 400, n. 145). For, in contrast to Peirce’s writings, the concept of iconicity and its degrees is so central to Morris’s theory of signs, that the founder of behaviorist semiotics dedicated a very detailed definition and several passages to in his *Signs, Language, and Behavior* of 1946. His definition was the following:

An iconic sign… is any sign which is similar in some respects to what it denotes. Iconicity is this a matter of degree. Spoken language contains some sounds which are clearly iconic (“onomatopoetic”); the extent of its iconicity is a difficult matter to determine … Visual signs often show iconicity to a very great extent, though of course a visual sign need not be iconic. Photographs, portraits, maps, roadmarkers, models are iconic to a high degree; dreams, paintings other than portraits, musical scores, moving pictures, the theatre, rituals, pageants, the dance, dress, play, and architecture are iconic in varying degrees. (Morris 1955 [1946]: 191–192)

To illustrate his conception of degrees of iconicity, Morris elaborated further:

A portrait of a person is to a considerable extent iconic, but it is not completely so since the painted canvas does not have the texture of the skin, or the capacities for speech and motion, which the person portrayed has. The motion picture is more iconic, but again not completely so. A completely iconic sign would always denote since it would itself be a denotatum. (Morris 1955 [1946]: 23)

The idea behind Morris’s definition is very simple. Take the example of prints of photographic images: the more pixels are used to print the photo, the higher its iconicity will be, and the degree of iconicity increases still more in a three-dimensional iconic representation. The three-dimensional sculpture of the king of England in Madame Tussaud’s Wax Cabinet is more iconic than the monarch’s best photo.

Despite, or perhaps just because of, its simplicity, Morris’s conception of degrees of iconicity had much influence on twentieth century visual semiotics. Always inspired by Morris and never by Peirce, several authors have proposed scales of iconicity, especially for pictures in the print media (cf. Nöth 2000: 197). The reasons why Peirce’s theory of iconicity was largely ignored in such studies is not only that Peirce used the term only once in a footnote of his CP but also because the idea of a scale from a lowest degree in a bad photo to the highest in a perfect 3D model is largely incompatible with Peirce’s definition of the icon and its manifestations from pure iconicity to metaphors, not least because the perfect photograph, to which
Morris ascribes a particularly high degree of iconicity, is not even an icon at all for Peirce. It is an index since a photo is causally affected by the object it represents, whereas an icon, as Peirce defines it, remains unaffected by its object and merely “represents whatever object it happens really to resemble” (CP 5.75, 1903).

Stjernfelt does not only prove that Peirce used the term iconicity twice before Morris, but also argues that “the idea of ‘degrees of iconicity’ [was … ] central to Peirce’s introduction of the notion” (p. 400). Where are the arguments that justify this claim? Only in a brief subchapter on “Operational vs. Optimal Iconicity” (pp. 136–138), does Stjernfelt suggest an answer insofar as the term “optimal iconicity,” introduced and defined there, implies that an optimal icon is one that ranks highest in iconicity. However, Stjernfelt applies this concept only to logical diagrams when he postulates an “optimality principle” of iconicity, quoting, in support of it, the following argument from Peirce’s CP 4.433, c.1903: “A diagram ought to be as iconic as possible, that is, it should represent relations by visible relations analogous to them” (p. 138).

This definition serves well to illustrate a decisive difference to Morris’s conception of a scale of iconicity. While, according to Morris, iconicity increases with the number of details represented in the icon, it decreases with the number of details in Peirce’s scale of logical iconicity, as Stjernfelt shows. Indeed, a logical diagram is the more iconic the less lines it needs to represent the relations between the objects of its universe of discourse. Iconicity in this sense is a measure of semiotic economy. But does the principle of economy serve to measure the iconicity of ordinary diagrams, too? A map of Europe, for example, restricted to representing its countries and their capitals is more economic in its lines than a map that shows the provinces of the various countries and their capitals, too. The more detailed a map is, the more informative it undoubtedly is. Do the additional details make it less iconic?

Another argument to sustain Stjernfelt’s claim that “the idea of ‘degrees of iconicity’” was “so central to Peirce” (p. 400) might be Peirce’s early theory of similarity, according to which “resemblance consists in a likeness, which is a sameness of predicates,” and which concludes that, “carried to the highest point, resemblance would destroy itself by becoming identity” (W 1: 79, 1862). This theory of degrees of resemblance seems to anticipate Morris’s above-quoted claim that “a completely iconic sign would… itself be a denotatum” (Morris 1946: 23). However, whereas Morris attributes the highest degree of iconicity to the sign that represents its own denotatum, Peirce argues that it would “destroy itself” as a sign. Can a sign that has destroyed itself in its semioticity still be an icon?

The same semiotic constellation is thus interpreted in opposite ways by Morris and Peirce. The sign hypothetically identical with its object ranges at the top of
Morris’s scale of iconicity, but the criterion of identity is absent from Peirce’s thirty-three definitions of the icon (Peirce 2014), for, as Peirce points out, “identity is essentially a dual relation” (CP 1.446, c.1896), hence a matter of secondness, whereas an icon is a “Representamen by Firstness” (EP 2: 273, 1903). But resemblance is a dual relationship, too, albeit only one of degenerate secondness (CP 1.365, c.1890). The resemblance between an icon and its object is not a phenomenon of genuine secondness because sign and object do not form a dyad by causal or semiotic necessity (as in the sign–object relation of an index or a symbol). Comparandum and comparans form a pair only because the comparing mind associates one with the other, for, as Peirce reminds us, “any two objects in nature resemble each other, and indeed in themselves just as much as any other two; it is only with reference to our senses and needs that one resemblance counts for more than another” (CP 1.365, c.1890).

When we turn from iconicity as resemblance to iconicity relating to the image-diagram-metaphor triad, we are faced with a problem that remains bracketed in SDRP. Does the degree of iconicity increase or decrease in the categorical order of the three subclasses of the icon? Are metaphors more iconic than diagrams, and diagrams more than images, or vice versa? Only one Peirce scholar has proposed a solution to this question. In her paper “From pure icon to metaphor: Six degrees of iconicity,” Santaella (1996) argues in favor of an increasing order of iconicity from image to metaphor. A pure iconic qualisign is less iconic than a hypoiconic sinsign, and there is an increase from image to metaphor since the image, qualisign, or pure icon of Peirce’s triad is a mere possibility, not yet actualized in semiosis, whereas hypoicons, hypoiconic diagrams and metaphors are actual signs (sinsigns), which means that iconicity increases gradually from pure icons to metaphors. Santaella interprets the qualisign as the lowest degree of iconicity because “when Peirce said that ‘[a] possibility alone is an Icon purely by virtue of its quality; and its object can only be a Firstness’ [CP 2.276], he was reducing the notion of icon to the extreme limit of something that springs up in the mind, […] as a mere possibility of emergence” (1996: 206). However, this argument describes the gradual increase of semioticty from the first to the third of Peirce’s three subclasses of the icon, not least because diagrams and metaphors presuppose or include images as qualisigns, whereas the opposite is not the case. The qualisign, thus defined as the threshold phenomenon where signs begin to acquire actuality, is certainly the phenomenon of the lowest degree of semioticty, and from this threshold on, signs increase in semioticty until the highest degree of semioticty is reached with the symbol, the sign that Peirce recognizes as genuine, whereas indices, and icons are only recognized as degenerate signs.

Does the increase in semioticty from the icon to the symbol imply that iconicity increases from the qualisign to the metaphor? It seems that the opposite is the case,
and that iconicity decreases from the image to the metaphor. Although Peirce does not say so explicitly, his notion of the “pure icon,” which refers to the qualisign or the icon at the threshold of semioticity, suggests that iconicity is highest when the icon is pure. If only this mode of iconicity is pure, all other icons must be impure, and iconicity must decrease when the purity of the icon decreases.

In sum, Peirce’s sporadic references to the term iconicity do not mean that the founder of modern semiotics had a concept of degrees of iconicity in any way similar to Charles Morris’s. Peirce’s theory of the qualisign as a “pure icon” suggests that iconicity is highest when semioticity is lowest. If this interpretation is correct, Peirce’s reflections in this regard do imply a theory of degrees of iconicity, but this implicit Peircean theory is based on premises opposite to those implied in Charles Morris’s more popular tenet that “iconicity is a matter of degree.”

3 Diagrams before and after 1903

Section II of SDRP, “Iconicity and Diagrams” subsumes five chapters under its heading, whose titles are (7) “How do Pictures act,” (8) “Dimensions of Peircean Diagrammaticality,” (9) “Iconic Logic,” (10) “Diagrammatic Problem Solving,” and (11) “Schematic Aspects of an Aesthetics of Diagrams.” The section title suggests that these five chapters do not only deal with diagrams but also with the other two classes of icon, the image and the metaphor, but none of them does. This programmatic neglect of the other two modalities of iconicity does not help to dispel the concern expressed by Jean-Marie Chevalier in 2015 that Stjernfelt’s writings on iconicity suffer from an “exaggerated focus on diagrams” (2015: 47).

Stjernfelt defends himself against such allegations with the following argument: “The notion of Diagram is the only among the three terms of the trichotomy to receive thorough discussion in Peirce’s work – so the determination of ‘Image’ and ‘Metaphor’ as technical terms in his classification of signs has not much more than this brief quote to build upon” (p. 133). The present paper aims at showing that Peirce – pace Stjernfelt – had a much more elaborate conception of the image-diagram-metaphor trichotomy than the quote of 1903 reveals.

The point of departure of Stjernfelt’s account of iconicity is Peirce’s diagram and the thesis that it is not only the most important semiotic concept of Peirce’s diagrammatic Logic of Existential Graphs but also the “centerpiece of a Peircean epistemology” (Stjernfelt 2000). In a subchapter of ch. 8 entitled “From the 1885 ‘algebra of logic’ to the 1903 image-diagram-metaphor trichotomy,” Stjernfelt reminds his readers that Peirce divided the icon triadically (p. 133) only from 1903 on. Hence, before 1903, his use of the term could not yet have referred specifically to the second member of the image-diagram-metaphor trichotomy.
Before 1903, Peirce refers to diagrams differently. Sometimes “diagram” was a synonym of “icon,” as in the formulation of 1885 according to which “the diagrammatic sign or icon… exhibits a similarity or analogy to the subject of discourse” (W 5: 243). Sometimes the diagram is a kind of icon among many others, as in the definition, “Icons comprehend all pictures, imitations, diagrams, and examples” (W 5: 379, 1886), or in the following exemplification of icons: “Such is a photograph, a figure in geometry, or an algebraical array of symbols which by virtue of the ‘rules’, or permissions to transform… are analogous to the objects they represent” (MS 1147, c.1901–1902).

In his early writings on icons, Peirce refers to diagrams more frequently than to pictures, images, let alone metaphors, and this may explain why some of his early definitions of the icon seem to be tailored to fit the diagrammatic icon rather than other kinds of icon. This may be the true of Peirce’s early characterization of the icon as a sign whose “great distinguishing property … is that by the direct observation of it other truths concerning its object can be discovered than those which suffice to determine its construction” (CP 2.279, 1895).

In a subchapter of ch. 11 on “Diagram inferences,” Stjernfelt offers convincing evidence in support of the argument that the direct observation of diagrams may lead to the discovery of new truths. Among his examples are road maps, in which “you may trace possible routes from one location to another – thus inferring a piece of information which was only implicitly present in the diagram” and “topographical maps, [that] seem to have an indefinite amount of information which may be inferred from them” (p. 200). However, a map is only partially a diagram; it is a universe of discourse composed of a diagram combined with indices and symbols. Just like any other icon, a pure diagram cannot convey any information at all without the support of an index: “An icon… conveys no information, nor does it put the mind into a position to acquire information” (MS 142: 3–4, 1899–1900; cf. Nöth 2012). When the map informs a driver that there are three possible routes from A to B, only the lines representing the routes constitute the diagram, whereas A and B, the names of cities, are indices. However, when icons combine with indices, they are no longer diagrams but dicisigns. However, in Peirce’s system of ten major sign classes, dicisigns are not among the three classes of the icon because icons can only be rhemes. Icons are either qualisigns, iconic sinsigns, or iconic rhematic legisigns. Peirce classifies dicisigns either as indices or symbols (CP 2.254–263, 1903), although they may evoke an icon in their interpretant.

SDRP does not address the question whether images or metaphors can convey information in the same way as diagrams can in dicisigns, but examples Stjernfelt presents in ch. 6, “Sheets in the Wild” show that and how pictures need indices and symbols to become informative. While Stjernfelt demonstrates convincingly the validity of the above-described “great distinguishing property” of icons of Peirce’s
1895 definition of diagrams (p. 163), he refrains from testing its validity for pure images and metaphors.

Images in the sense of Peirce’s iconic qualisign, the first subclass of the image-diagram-metaphor trichotomy, that is, signs that “partake of simple qualities, or First Firstnesses” (CP 2.277, 1903), are hardly “constructed” at all, as the definition of 1895 (quoted three paragraphs above) stipulates, since “a mere image” can barely serve to reveal “other truths concerning its object,” being defined as “a vague form” that “makes no distinction between its Object and its Signification” and that exhibits “the two as one” (MS S46, n.d.). It is therefore questionable whether Stjernfelt’s conclusion that the “criterion of being an icon is simply whether such ‘other truths’ may be inferred from it” (p. 164) is valid for Peirce’s pure images, too. Metaphors, other “parallelisms in something else,” examples, and arguments by analogy may very well be interpretable in terms of this “great distinguishing property,” but this applicability remains to be demonstrated in a comprehensive theory of iconicity.

No doubt, Stjernfelt’s book testifies convincingly to the great potential of Peirce’s theory of diagrams, and after his opus magnum, Diagrammatology, Stjernfelt has become the Peirce scholar who has explored this potential most and best. SDRP is an advance in Peircean semiotics. Occasionally, however, Stjernfelt does not agree with Peirce.

One such disagreement can be found on p. 139, where Stjernfelt declares, “A diagram is a Type that is instantiated in Tokens.” With this interpretation, Stjernfelt reduces Peirce’s ten classes of signs to nine because if all diagrams are types, and hence legisigns, there is no more room for Peirce’s second class of the ten, the “Iconic Sinsign [e.g., an individual diagram],” that are defined as “any object of experience in so far as some quality of it makes it determine the idea of an object” (CP 2.255, 1903). It is true that Stjernfelt takes iconic sinsigns into consideration when he mentions the instantiation of diagrammatic legisigns in the form of tokens (sinsigns), but the class of the iconic sinsign does not only consist of replicas of iconic legisigns. There are also genuinely iconic sinsigns, which represent singular objects. Consider a floorplan of the Oval Office on the first floor of the West Wing of the White House in Washington DC. It is a diagram that certainly does not represent a general object.

In the same context, Stjernfelt asks why and how the criterion of generality, which Peirce applies so often to symbols only, should also be applicable to icons, and in particular to diagrammatic legisigns. Indeed, diagrams are icons, and Peirce denied that icons could evince generality, when he wrote, “The icon has no generality, because it does not analyze the character it exhibits. There is thus no more generality in the icon than there is in the object” (W 5: 379, 1886). However, this was in 1886, and the insight that icons may also represent general ideas is of 1903, which means that Peirce formulated a new insight in 1903 and abandoned the claim of 1886.
This new insight must not be confounded with the insight that a diagram “obtrusively involves conventional signs,” as Stjernfelt quotes Peirce from the Lowell Lecture of 1903 on p. 140. Although is true that diagrams often interact with verbal and nonverbal symbols, this does not mean that diagrammatic legisigns owe their character of a legisign to the symbols attached to them. Icons can be legisigns even if no symbol is attached to them at all. Traffic signs for pedestrians or bicycles are well-known examples of such iconic legisigns.

In ch. 8, Stjernfelt distinguishes between generic and degenerate diagrams (pp. 131, 146, 174). Peirce’s theory of degeneracy, which distinguishes between genuine (not “generic”) and degenerate signs, is also a topic in ch. 14 (pp. 242, 277). Readers acquainted with Peirce’s ethics of terminology expect that Stjernfelt’s degenerate diagrams have to do with Peirce’s theory of genuine and degenerate categories, but this cannot be since this theory is not applicable to icons. Icons, according to Peirce, can be neither genuine nor degenerate. They can only be pure or impure (as hypoicons). Only signs of the third and second categories, symbols and indices, have genuine and degenerate forms. Icons have none because they are phenomena of firstness. Stjernfelt uses the term “degenerate” in the sense of ‘simplified’ (p. 147), but a degenerate index, for example, is not a simplified index. It is an index whose secondness does not constitute a phenomenon of genuine secondness. For example, demonstrative pronouns are genuine indices because they refer to singular objects, whereas relative pronouns are degenerate indices, “for though they may, accidentally and indirectly, refer to existing things, they directly refer, and need only refer, to the images in the mind which previous words have created” (CP 2.305, 1901).

4 Images

Stjernfelt’s argument that Peirce’s concept of the image as a subclass of the icon had not much more than a “brief quote to build upon” (p. 133) deserves to be examined in light of the twenty-four references to the image that can be found in the Collected Papers alone, together with the Peirce’s quasi-synonyms of the image, the “qualisign” (thirteen times in the CP) and the “pure icon” (six times).

“Pictures,” in the title of ch. 7, may make the readers expect a chapter on icons of the image kind since for Peirce’s concept of a “pure picture” is a quasi-synonym of his concept of the image. As Peirce explained already before 1903, a “pure picture” is one “without a legend” that “only say[s] ‘something is like this’” (CP 8.138, 1901), which comes close Peirce’s definition of icons that are neither diagrams nor metaphors, but “which partake of simple qualities, or First Firstnesses” (CP 2.277; EP 2: 273, 1903). As early as in 1896, Peirce gave a description of this kind of icon,
which, detached from any indexical context, is a sign because of its mere qualities, such as “reminiscences of sights, sounds, feelings, tastes, smells, or other sensations, now quite detached from the original circumstances of their first occurrence”:

The deliverer makes signals to the receiver. Some of these signs [..., i.e., images] are supposed to excite in the mind of the receiver familiar images, pictures, or, we might almost say, dreams – that is, reminiscences of sights, sounds, feelings, tastes, smells, or other sensations, now quite detached from the original circumstances of their first occurrence, so that they are free to be attached to new occasions. The deliverer is able to call up these images at will (with more or less effort) in his own mind; and he supposes the receiver can do the same. (CP 3.433, 1896)

Its title, “How do pictures act? Two semiotic aspects of picture activity,” shows that ch. 7 cannot be concerned with pure icons or images since images as first firstnesses cannot act at all; they can only suggest. For Stjernfelt, by contrast, pictures can act, and they may be highly informative when they can identify their objects of reference. They may even be threatening, when those that are identified by them have reasons to conceal what they did (pp. 123–130). Pictures, thus conceived, act as dicisigns, but dicisigns, as discussed above, are not icons, although they may include an iconic element.

The first example of a picture studied in this chapter is one that shows a faithful portrait of the silk manufacturer Joseph-Marie Jacquard of 1839, a silk print produced by a machine put in motion by no less than 24,000 punched cards (p. 125). A portrait representing its sitter in 24,000 details is hardly a sign that partakes of “simple qualities.” In how far would it have differed from the print of a photograph of 24,000 pixels, had photography and digital print already existed in 1839? Hence, does this silk print not rather belong primarily to the class of signs “whose relation to their objects consists in a correspondence in fact” (W 2: 56, 1867) and which “appeals to individual recognition” (MS 484: 5, 1898) than to the one which “represents its object by virtue of a character which it could not possess did the object not exist” (MS 142: 3–4, 1899–1900) – in short: is it not an index?

Despite its similarity with the sitter, a faithful portrait is not a sign in which firstness is predominant. Instead, it is predominantly a sign of secondness, being factually determined by its object. Since it is possible to identify the sitter by means of this sign, “it is not a pure Icon, because I am greatly influenced by knowing that it is an effect, through the artist, caused by the original’s appearance, and is thus in a genuine Obsistent relation to that original” (CP 2.92, 1902). By means of the Latinisms “obsistent,” i.e., ‘resistant’, and its derivatives, “obsistance” or “obsistential,” Peirce often characterized the index, as a sign of secondness, in its strength to resist any weakening of its strong factual connection with its object, a connection which is weak in a predominantly iconic sign.
The second picture presented in this chapter, a press photograph, is not even an icon at all, but an index according to Peirce’s definition of a photo, that is, a sign due to “the effect of the radiations from the object [which] renders it an index and highly informative” (CP 2.265, 1903). The third, a contour map of Manhattan with a pointer to indicate north, is classified by Stjernfelt himself as a diagram. (Can diagrams be subsumed under the class of pictures?) “Iconic Logic,” the title of ch. 9, is equally concerned with diagrams only, since logical icons are by definition diagrams.

Diagrams are usually distinguished from pictures. Peirce highlights the “sensuous resemblance” of the latter, which he finds absent in the former: “Every picture (however conventional its method) is essentially a representation of that [i.e., the iconic] kind. So is every diagram, even although there be no sensuous resemblance between it and its object, but only an analogy between the relations of the parts of each” (CP 2.279, 1901).

Above, we saw that Stjernfelt finds Peirce’s theory of the diagram more convincing than his theory of the image. With respect to the semiotic validity of the concept of the image, Stjernfelt is divided. On the one hand, Peirce’s definition of the monadic character of the image finds his approval insofar as “images use ‘simple qualities, or First Firstnesses’, that is, monadic relations such as ‘is red’, ‘is round’, an idea which fits nicely with the brief contrast description of diagrams as representing by means of ‘relations, mainly dyadic’” (p. 133). On the other hand, Stjernfelt questions whether images, qua representations, can really be conceived as monadic. Since iconicity is defined according to the criterion of the relation between the sign and its object, images should be phenomena of secondness, according to Stjernfelt they “could not work [as signs] with one entity only; they must also display the basically dual sign-object structure; if not, they would cease to be signs at all” (p. 134).

Peirce can justify his conception of the image hypoicon and its hybridity between firstness and secondness with nondualist arguments that invalidate Stjernfelt’s concern that “three different issues are confused in the Image-Diagram-Metaphor triad” (p. 135). First, the image is neither a phenomenon of pure firstness nor one of genuine secondness, but a hybrid phenomenon that can only reach firstness by asymptotic approximation. The notion of a pure icon is a mere hypothesis, but some images, those of the highest degree of Peircean iconicity, come closer to a pure icon than others, whereas hypoicons are always unable to fulfill the criteria of pure iconicity. Whenever he uses the expression of the pure icon, which is nothing but an image in Peirce’s definition of 1903, Peirce expresses himself in a hypothetical mood: “A pure icon, could such a sign exist, would present to us a pure sense-quality, without any parts nor any respects, and consequently without positive generality. But in fact, there is no pure icon; and we apply the name icon to any sign in which the force of resemblance is the dominant element of its representativity” (MS 484: 4–5, 1898).
A pure icon would no longer be similar to anything since it is a sign only because of its own qualities, “For a pure icon does not draw any distinction between itself and its object. It represents whatever it may represent, and whatever it is like, it in so far is. It is an affair of suchness only” (CP 5.74, 1903), and yet it is not a sign that represents nothing at all. Instead, the pure image represents pure forms: “No pure Icons represent anything but Forms; no pure Forms are represented by anything but Icons” (CP 4.544, 1905). However, the forms represented by a pure icon are not the forms of something else; they are forms inherent to the sign as such.

Above, we saw that Morris conceived of the icon of the highest degree of iconicity as one that is identical with its denotatum. In Peirce’s writings on what he calls the pure icon, there is a much-quoted passage that seems to say something similar: “So in contemplating a painting, there is a moment when we lose the consciousness that it is not the thing, the distinction of the real and the copy disappears, and it is for the moment a pure dream – not any particular existence, and yet not general. At that moment we are contemplating an icon” (EP 1: 226, 1885). The difference between the two conceptions of the highest degree if iconicity is more important than the similarity between them. For Morris, that sign has reached the highest degree of iconicity which is materially identical with its object. For Peirce, identity between sign and object is the imagination of a mere possibility.

5 Metaphors, similes, parallelisms, comparisons, arguments by analogy, and examples

What Stjernfelt questions most in Peirce’s triadic subdivision of the icon is that metaphors should be phenomena of thirdness in the firstness of the icon. “This is not the case, however, and it would indeed be a strange analysis of Metaphors,” Stjernfelt declares (p. 133). Stjernfelt dismisses Peirce’s triadic subdivision of the hypoicon altogether as “confused” and “fishy” (p. 135). One of the reasons why he is unable to see clearer than Peirce is that he expects that the triad of firstness, secondness, and thirdness in the firstness of the hypoicon should be interpreted in terms of “adicity relations” (p. 133), i.e., as logical relations between predicates and arguments, which can only be monadic, dyadic, or triadic in Peirce’s logic. However, this interpretation is not applicable to Peirce’s phenomena of firstness, such as icons, because only symbols evince adicity or valency relations. Of course, icons can represent relations, monadic, dyadic, or triadic ones diagrammatically, but the thirdness in the firstness characteristic of a metaphor is not the thirdness of a trivalent relation, as in the trivalent verb to give (“a gift from groom to bride,” p. 134). Neither is an image a representation of a monadic valency (such as “– is red”; p. 133) nor is a diagram the
representation of a dyadic valency (such as “– sees –”). The firstness, secondness, and thirdness of the valency of verbs is not a firstness, secondness, and thirdness in firstness. It is a firstness, secondness, and thirdness in the thirdness of the symbol. Only symbols, not icons, can represent intransitive, transitive, or ditransitive relations in predicates.

The key to understanding why Peirce saw a triadic categorial constellation in metaphors lies elsewhere, namely in his triadic conception of a “parallelism in something else” (CP 2.277), which is applicable not only to metaphors but more generally also to other parallelisms, such as comparisons, analogies, analogical arguments, and even mere examples (see Brüning and Lohmann 1999; Misiewicz 2020; Vaught 1986). To draw from the observation of two things the conclusion that they are alike, thirdness in the form of memory of judgments is needed to weld the two things into one thought:

What does it mean to say that two thoughts are alike? It can only mean that any mind that should compare them together, would pronounce them to be alike. But that comparison would be an act of thought not included in the two observations severally; for the two observations existing at different times, perhaps in different minds, cannot be brought together to be compared directly in themselves, but only by the aid of the memory, or some other process which makes a thought out of previous thoughts. (CP 7.332, c.1873)

5.1 Thirds of comparison

Peirce develops his theory of thirdness in judgements of comparisons when he discusses “thirds of comparison” in CP 1.367 (c.1890). This theory is not entirely new, being rooted in the tradition of classical logic, grammar, and rhetoric, where a comparison used to be defined as triadic relations between a *primum*, a *secundum*, and a *tertium comparationis*. As Lehmann (2005: 157) explains, “To compare a *primum comparationis* (PC) with a *secundum comparationis* (SC) means to select a property of the PC which the SC has to a certain degree, too, and to indicate the relevance of this property to the PC relative to its relevance in the SC. This property is the *tertium comparationis* (TC).”

Peirce’s thirds of comparison are not genuine thirds but “thirds degenerate in the second degree,” that is, “intermediate types [which] serve to bring out the resemblance between forms whose similarity might otherwise escape attention, or not be duly appreciated” (CP 1.367, c.1890). The degeneration of a phenomenon of thirdness in two degrees approximates it to a phenomenon of firstness, which is the domain of the iconic and of mere possibilities (neither facts nor laws). This is what Peirce means when he concludes, “Triadic relations of Comparison are those which are of the nature of logical possibilities” (CP 2.234, 1903).
When Peirce defined the metaphor as a “parallelism in something else”, to distinguish it from images and diagrams in 1903 (CP 2.277), it was already apparent that this broad definition should not remain restricted to metaphors proper but was meant to include other semiotic forms, such as similes, other parallelisms, comparisons, arguments by analogy, and even mere examples, which Peirce added later as thirdnesses in the firstness of iconicity (see below).

5.2 Analogies and arguments by analogy

With reference to Peirce’s definition of diagrams as icons “which represent the relations, mainly dyadic, or so regarded of the parts of one thing by analogous relations in their own parts” (CP 2.277, 1903), Anderson (1984: 455), in a much-quoted paper, interprets analogies together with diagrams as phenomena of secondness in the firstness of the icon. However, the occurrence of the adjective “analogous,” in this context, is insufficient evidence to sustain Anderson’s argument. In 1885, for example, Peirce defined the “diagrammatic sign or icon” as a sign “which exhibits a similarity or analogy to the subject of discourse” (W 5: 243, 1885). Too often does Peirce also use the concept of analogy without distinguishing it from the ones of resemblance, similarity, and even “likeness.” There is no evidence that Peirce disagreed with Aristotle’s definition of the “metaphor by analogy” and his definition of likeness in terms of analogy, which states the following:

Likeness should be studied, first, in the case of things belonging to different genera, the formulae being ‘A:B = C:D’… and ‘As A is in B, so is C in D’ (e.g., as sight is in the eye, so is reason in the soul, and as is a calm in the sea, so is windlessness in the air). Practice is more especially needed in regard to terms that are far apart; for in the case of the rest, we shall be more easily able to see in one glance the points of likeness. We should also look at things which belong to the same genus, to see if any identical attribute belongs to them all, e.g., to a man and a horse and a dog; for in so far as they have any identical attribute, in so far they are alike. (Aristotle, Topics, 108a, bk.1, ch. 17)

Some scholars in the field of linguistics even argue that analogy and iconicity are synonyms: “The notion of iconicity between language and reality is identical with analogy, for the simple reason that iconicity is explicitly defined as ‘structural similarity’, which is also the definition of analogy” (Itkonen 2005: 7), but such interpretations ignore Peirce’s further distinctions between images, diagrams, and metaphors as subclasses of the icon.

For Peirce, the relation between the primum and the secundum of a comparison is a parallelism no different from the one on which metaphors are based. Notice that his complete definition of the metaphor stipulates “a parallelism in something else”
This “something else” is the tertium of comparison. Notice also that Peirce does not use the term parallelism as it is defined in classical rhetoric, where metaphors are tropes, whereas parallelisms are figures, in which the repetition of a syntactic pattern is explored to suggest the similarity between two forms. What Peirce has in mind when he attributes a parallelism between a primum and a secundum of a metaphor is nothing but the analogy of Aristotle’s analogical metaphor.

Peirce also used arguments by analogy as a rhetorical device in his own scientific writings. For example, in his paper “Some consequences of four incapacities,” he interprets the parallelism between a primum and a secundum as a metaphor, when he argues, “To say that it [i.e., a thought in itself] is composed of other thoughts and feelings, is like saying that a movement upon a straight line is composed of the two movements of which it is the resultant; that is to say, it is a metaphor, or fiction, parallel to the truth” (CP 5.289, 1868). The example also shows that Peirce did not care to distinguish between a metaphor and a simile, because for rhetoricians, his example is one of a simile, that is, a trope that connects the primum and the secundum with the verb phrase “is like.”

Another example of how Peirce explores the parallelism between a primum and a secundum is in his review of a book by Josiah Royce. Peirce wrote to Royce, “Underneath your logic which I cannot approve there is a nearly parallel stream of thought perfectly sound and in fact without doubt this was really what has kept you straight so that – of course, I am saying what seems to me – the affirmatory clauses of your conclusions are approximately right” (CP 8.117, 1902). In both examples, “parallelism” refers to a pair of similar arguments of which Peirce approves one as true, while he disapproves the other as false.

In 1868, Peirce interprets a parallelism explicitly as a metaphor in a sense which is again the one which Aristotle, in his Poetics (ch. 21; 1457b1–30), had classified as the metaphor by analogy. Analogy is also one of the criteria by which Peirce defined iconicity as such, for example, in the above-quoted definition of the icon as a sign that “exhibits a similarity or analogy to the subject of discourse” (CP 1.369; W 5: 243, 1885).

What remains to be emphasized with Peirce is that the parallelism inherent in a metaphor does not merely constitute a dyad, as the term parallelism suggests, but a genuine triad. A metaphor is a sign with two objects, the object represented by the literal meaning and the one represented by its figurative meaning. One sign with two objects forms a triadic constellation. The sign constituted by a metaphor also fulfills Peirce’s classical criterion of thirdness, which is mediation. As a sign, the metaphor mediates between two objects, the literal and the figurative one. Since the sign of a metaphor is the same for both objects, the mediation consists in its suggestion of a similarity that might otherwise have remained unnoticed.
“Metaphor” is a very broad concept in Peirce’s vocabulary. In his theory of iconicity, metaphors include forms of likeness such as analogies, parallelisms, similes, as well as examples. In his paper “What is a sign?” of 1894, in a subsection under the title “Likeness,” he gave the following account of the likeness inherent in analogies:

Photographs … belong to the second class of signs, those by physical connection. The case is different, if I surmise that zebras are likely to be obstinate, or otherwise disagreeable animals, because they seem to have a general resemblance to donkeys, and donkeys are self-willed. Here the donkey serves precisely as a probable likeness of the zebra… The reasoning of mathematicians will be found to turn chiefly upon the use of likenesses, which are the very hinges of the gates of their science. The utility of likenesses to mathematicians consists in their suggesting, in a very precise way, new aspects of supposed states of things. (EP 2: 6, 1894)

5.3 Examples

The manuscript of Peirce’s above-quoted definition of the metaphor as the third class of the hypoicon, the “Syllabus” of 1903, has an unpublished variant, quoted by Strub (1994: 210), in which Peirce defined this class of the icon not as a “metaphor” but as an “example.” The passage from this variant manuscript deserves to be quoted in full since it gives further evidence that Peirce was not so much interested in metaphors proper than in forms of similarity that include similes and resemblances inherent in parallelisms. It also shows that Peirce did not change his mind fundamentally when he substituted “metaphor” for “example.” This is the quote: “Icons may be distinguished, though only roughly, into those which are icons in respect to the qualities of sense, being images, those which are icons in respect to the dyadic relations of their parts to one another, being diagrams or dyadic analogues, and those which are icons in respect to their intellectual characters, being examples” (MS 478, “Syllabus,” microfilm frame no. 1222, 1903).

The variant example instead of metaphor, both of the same year, does not mean that Peirce intended to change his conception of thirdness in firstness. Peirce’s broad concept of parallelism had always considered metaphors, examples, and analogies as mediators between two ideas. As early as 1865, in his tenth Harvard Lecture on the Logic of Science, he formulated his theory of exemplification as mediation as follows: “If… I describe the Russian Plague [i.e., the Russian plague epidemic of 1770–1772, WN] by giving an example of it, I determine the example mediately” (W 1: 377, 1865).

The close connection between examples and metaphors is also apparent when we consider how the exemplum (Quintilian) or parádeigma (Aristotle) were defined
in ancient rhetoric. According to Lausberg (1998: §§400–410), they were treated as a subclass of the simile, whose characteristics were the same as the ones of the metaphor: similarity (simile, hómoion) between a primum and a secundum, as well as a tertium comparationis.

The iconic character of the exemplum is also apparent in a definition by Demoen (1997: 126) in a different context: “The essence of the exemplum lies in an appeal to a similar or illustrative incident (the illustrans) which is not intrinsically connected with the matter under discussion (the illustrandum).” Thus, when Peirce defined metaphors as icons, he apparently meant both metaphors in the narrower and in the broader sense. As Gumpel points out, both are closely related from the perspective of iconicity: “Derived from Greek ‘icon’, the simile indeed ‘iconizes’ or ‘pictures’ the comparison it bears” (Gumpel 1984: 222).

The “intellectual character,” which means an element of thirdness in firstness, mentioned by Peirce in the above-quoted passage of 1903, is reminiscent of the fact that exempla, in ancient rhetoric, were considered rhetorical methods of supporting an argument. Called locus a simili (Lausberg 1998: 187), this method is one of three rhetorical forms of argumentation, the two others being argumentation by deduction (locus a maiore ad minus) and by induction (locus a minore ad maius). This rhetorical triad has strong affinities with Peirce’s logical triad of the three modes of reasoning, abduction, deduction, and induction.

6 Reconstruction of the categorial foundations of the image-diagram-metaphor trichotomy

We are now in the position to reconstruct the categorial foundations of Peirce’s theory of iconicity and defend the image-diagram-metaphor trichotomy against the charge that there is “something fishy” about it (p. 135).

First, we have to consider the dyad of the sign and its dynamical object, upon which Peirce’s distinction between symbol, index, and icon is based (Figure 1). To consider only the sign and its object reduces the sign-object-interpretant triad to the dyadic relation of representation, defined as “a relation of one thing, – the representamen, or sign – to another – the object” (Peirce 2021: 121, 1903). A dyad constitutes a phenomenon of secondness, but in the secondness of the sign-object relation, the three categories reappear as phenomena of firstness in secondness (icon), secondness in secondness (indices), and thirdness in secondness (symbol), according to the characteristics of each of the three categories.
Peirce characterizes the mode of representation that defines the icon as follows: “I define an Icon as a sign which is determined by its dynamic object by virtue of its own internal nature. Such is any qualsign, like a vision – or the sentiment excited by a piece of music considered as representing what the composer intended” (CP 8.335, 1904). Thus defined, the icon is a sign in which the presence of its object, and with it its representative function, is so reduced that it approaches a monadic form, without being able to become a genuine monad. Peirce described this approximation of the icon to a monad in the following definition:

An *icon, likeness, or image* is a representamen whose representative force depends solely upon characters which it possesses *materialiter* [footnote: that is, as the sign is really, not representatively... ] and which it might equally possess though its object had no existence. For example, a geometrical figure of a triangle is an icon. For though no representation can take place without an object and an interpreter, yet it is the character which the shape has, in the sense in which anything really has characters, which makes it an image of any strict mathematical triangle that there may be. (MS 491: 1; Peirce 2021: 121–122, 1903)

To emphasize the predominance of firstness in the secondness of the iconic sign in its relation to the object, Peirce substituted, from 1900 on, the former criteria of resemblance or similarity for criteria emphasizing the monadic character of the icon. Three of such definitions after 1900 in which this new conception is apparent are the following ones:

1. The *icon*... represents its object by virtue of a character which it would equally possess did the object and the interpreting mind not exist. (MS 142: 3, 1899–1900)
2. An *icon* is a sign which would possess the character which renders it significant, even though its object had no existence. (CP 2.304, 1902) Or:
3. An *icon* is a representamen which fulfills the function of a representamen by virtue of a character which it possesses in itself, and would possess just the same though its object did not exist. (CP 5.73, 1903)
6.1 Image

In the pure icon, the pure image or qualisign, the absence of the object is felt most, but no icon can ever reach a state of pure firstness, without any vestiges of an object, as Peirce admits: “A pure icon, could such a sign exist, would present to us a pure sense-quality, without any parts nor any respects, and consequently without positive generality. But in fact, there is no pure icon; and we apply the name icon to any sign in which the force of resemblance is the dominant element of its representativity” (MS 484: 4–5, 1898). Pure iconicity can only be reached by asymptotic approximation. The sustained sound of an oboe, for example, comes close to a qualisign in which a dynamical object is absent. The sound does not pretend to represent anything but itself. Such a sign forms almost a monad, but it is not entirely devoid of secondness because this sign cannot be a pure quality; it still carries the marks of its performance in time and space, which are marks of secondness.

Hypoicons exemplify the class of “ordinary” icons, which represent some object, however vague or merely suggestive the representation of it may be. Sign and object form a dyad, but the characteristic of the relation between the two constituents of this dyad, resemblance, is not a phenomenon of genuine secondness but one of degenerate secondness, as shown above. This is a further characteristic that diminishes the impact of secondness in the firstness of the icon.

With the image-icon-metaphor trichotomy, Peirce introduces once more the three categories into the firstness of the icon to account for three other diminishing degrees of iconicity, the image being most, the metaphor least iconic. The image exemplifies a phenomenon of firstness, the diagram secondness, and the metaphor thirdness in firstness. Since this is the point where Stjernfelt refuses to follow Peirce in his triadic scheme, it is necessary to go into detail.

The reasons why Peirce conceives of the image, qualisign, or pure icon as a phenomenon of firstness in the firstness of the icon were already expounded above. The pure icon is a self-referential sign, which pretends to represent nothing but itself. A diagrammatic representation of the relation between this icon and its object relation is Figure 2. The form of the image (solid line) approximates the one of its object (broken line), coming close to indistinguishability:

![Figure 2](image)

**Figure 2:** The dyad of sign and object almost merging to form a monad, without ever becoming one, in the approximately pure icon.
Figure 2 shows how Peirce resolves the alleged conflict between the firstness of the icon and its secondness as a representation. The alleged conflict dissolves in the continuity between secondness and firstness, representamen and object, in an iconic sign “by virtue of a character which belongs to the sign in its own firstness, and which equally would belong to it though the object did not exist” (MS 914: 7, n.d). Stjernfelt seems to deplore this conflict when he interprets it as the cause of a semiotic “problem” due to “two competing criteria,” which make Peirce’s triadic subdivision of the icon into image, diagram, and metaphor questionable (p. 134). However, what Stjernfelt considers problematic is the fundamental principle of Peirce’s doctrine of categories, the omnipresence of all three categories in all phenomena, although to different degrees. None of the three categories is ever totally absent in any phenomenon so that the categorial determination of a phenomenon is always a matter of the predominance of one of the three categories.

6.2 Diagram

A diagram represents its object abstractly, typically reducing the multimodal features of the object to points (vertices) and lines. Peirce characterizes a diagrammatic icon as the representation of “the relations, mainly dyadic, or so regarded, of the parts of one thing by analogous relations in their own parts” (EP 2: 273; CP 2.277, 1903). How a diagram can be interpreted as representing dyadic relations can be illustrated by the example of the map of France, which has often been represented in the form of a hexagon.

A satellite photo of France (Figure 3) gives an idea of the object of the hexagonal diagram, which is the territory of France, if we disregard that this photo is itself a sign, just as any other photo is a sign. The shape of a hexagon results from drawing straight lines in a map of France between six cities at the corner points of the French territory. Why can Peirce argue that the relations that constitute a hexagonal shape as in this diagram are “mainly dyadic”?

To answer this question, it is necessary to take a look at Peirce’s logic of relations, according to which all relations more than triadic (tetradic, pentadic, etc.) can be reduced to triadic, dyadic, and monadic ones. A hexagon, a rectangle, but also a triangle exhibit “mainly dyadic” relations because all lines of each of these polygons serve only to connect two points (vertices). The fact that a vertex can also be considered to represent a triadic relation because it represents a connection with two other vertices does not diminish the “mainly dyadic” character of each line. The fact that each line of a polygon connects two points independently of all other vertices of the polygon testifies additionally to the predominantly dyadic character of the lines and hence of a diagram made up of lines that form a polygon. The adverb “mainly” in Peirce’s definition of the diagram is important insofar as it does not exclude the
Figure 3: The territory of France (dynamical object) represented diagrammatically as a hexagon. Its six vertices are the loci of six cities. Together, they form the diagram of a hexagon. The connecting lines between the vertices of the hexagon represent the “mainly dyadic relations” between them (Diagram: Priscila Borges; Map: Google Earth; Landsat / CopernicusData SIO, NOAA, U.S. Navy, NGA, GEBCOGeoBasis-DE/BKG (©2009)IBCAO. Access Jan. 2024).
possibility of relations of a higher order. The hexagon diagram of France, for example, can also be considered as containing several triads, as Peirce recognizes (EP 2: 364, 1905), such as the triangles formed by connecting each of the three loci of Dunkerque–Brest–Lauterbourg, Hendaye–Brest–Banyuls-sur-Mer, and Menton–Banyuls-sur-Mer–Lauterbourg. However, this analysis would not be one of genuine triads in which a third constituent is essentially independent of the others. A triangle only combines the three, a hexagon the six genuine dyads of the lines that connect their vertices.

6.3 Metaphor, simile, example, and argument by analogy

Figure 4 represents the *primum*, *secundum*, and *tertium* as the characteristics of the object of metaphors, comparisons, and arguments by analogy. The subclass of icon to which these rhetorical figures belong, the metaphorical icon, exhibits thirdness in

![Diagram](image)

**Figure 4**: Peirce’s hypothetical argument by analogy “zebras are self-willed because donkeys are self-willed” (EP 2: 6, 1894) as an example of Peirce’s thirdness in the firstness of the icon. O₁: *primum* c.; O₂: *secundum* c. O₃: *tertium comparationis* (Diagram: Priscila Borges).
firstness because sign and object constitute a triadic relation. A first and a second object (the primum and the secundum) interact with a third (the tertium), which mediates between the two.

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