Semiotics of Photography
— On tracing the index

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Semiotics of photography - On tracing the index

Introduction

In the first part of this treatise, we suggested that semiotics, apart from fixing the nature of the pictorial sign, should be able to tell us something about the way signs may differ, while still being picture signs: how, for instance, the photographic sign is different from the drawing and the painting. With this aim in view, we have been looking at the impressing number of analyses produced so far inside pictorial semiotics, trying to establish, first, to what extent the presuppositions of the analyses, as embodied in the models, differ between the diverging picture types; and second, how far the results of the analyses are heterogeneous, even when the model is identical to begin with.

Of course, there is no difficulty finding divergences in semiotics, neither between the models used nor between the results obtained; but what interests us is to discover to what degree such differences may be correlated with the real diversities of pictorial kinds, those differences, that is to say, which are not merely extrinsically projected unto the objects analyzed as a result of the assumptions accepted as a matter of course by the diverse schools and traditions of semiotics, nor, if they are intrinsic, of such a kind that they may only characterize individual pictures, being unique or, as Eco and the scholastics would have said ineffable. For what we need are such properties as are intrinsic to the objects analyzed, and which are sufficiently general to characterize some sub-categories of that particular sign category, the picture sign, itself a subdivision of iconical signs (Cf. Sonesson 1989,III).

As we shall see later, the results of our inquiry were not those we had hoped: most text analytical approaches to the semiotics of pictures turned out to be lost in particularities, either because they explicitly set themselves such a goal, thus pursuing an end which is less semiotical than art historical; or because the analysts happened to be fairly ignorant of the requirements which must be imposed on a method designed to produce results which are susceptible of being generalized (cf.
Sonesson 1989, I.1. Following the example of Barthes, who, in analyzing the Panzani picture were at the same time studying a photograph, an advertisement, and a magazine picture, most semioticians also choose to analyze pictures which are at the same time members of different categories, and this makes it impossible to establish to which one of the categories the distinguishing features should be assigned. Furthermore, when the analytical methods really are devised to yield a generalizable result, both the initial assumptions and the results would seem to be invariable, at least as far as picture types such as photographs and paintings are concerned.¹

In fact, however, the case of photography is peculiar, as least as it is described in system analysis and, to some extent, in the experimental studies. Some early semioticians, like Barthes and Moles, still admitted a straight-forward motivational link joining the two relata of the pictorial sign together, and thus felt the need to demonstrate the exceptionally strong character of this motivation in the case of photography. Eco, on the other hand, treated the case of photography as being on a par with other pictures; and Lindekens formulated such an argument explicitly, even employing experiments to prove his case. Lately, a third movement has distinctly emerged suggesting the peculiarly of the photograph to be its indexical nature. This is the argument of at least three excellent monographs on photographic semiotics, those of Vanlier, Dubois, and Schaeffer; and the same thesis is hinted at in the works of Rosalind Krauss, Delord, and others. In fact, even Peirce himself mused over this idea in some passages of his prolific but fragmentary work.

Indeed, this at first seems an exceptionally satisfactory solution, believing, as we do, that the photograph is a particular construction variant of the pictorial sign function: the photographic sign would differ from other picture signs, which are mainly grounded in icons, by being based on another one of the three

¹ As noted in our first part, we distinguish the constructions types, those picture categories which differ in the way expression and content are related in the sign, as for instance photographs using compact surfaces to stand for the parts of perceptual objects, and outline drawings using contours and pigments to represent the edges of objects in the perceptual world; the means/ends categories, which are characterized by their (socially intended) effects, as publicity pictures, news pictures, caricatures, and so on; and the channels divisions, which derive their identity criteria from the social channels in which they are circulated, as for instance picture postcards, posters graffiti, and so on. Of course, many real-world categories suppose a cumulation of such distinctions, as is notoriously the case with art objects. It should be noted that all these categories are functional, which is fairly obvious in the case of channel divisions and means/ends categories, which derive, in two different ways, from the places occupied by the classes of pictures in the social network. These are extrinsic functions; but from the Prague school point of view, there are also intrinsic functions, such as the sign function, on which our construction types are variations; and to Hjelmslev, the sign function is the essential function. In this part, we will mainly consider one construction type, the photograph; but in chapter III.4., we will also turn to a few means/ends categories and channel divisions the slots of which are commonly filled by photographs.
elementary signs types, the index; and this would bring the issue of photography very much to the core of sign theory.

But if we take the idea as far as Vanlier and Dubois has done, we may wonder if there is still something left to account for the common picturehood of the two sign types; in fact, the photographic sign would not really be a variant of the picture sign, but of an altogether different nature. Moreover, even if, following Schaeffer we take a somewhat more conciliatory stance, declaring the photograph to be an indexical icon, this solution may not really be one: for we are left to account for the differences between photographic indices and all the other indices of which the world is profused, and of which some may happen to be picture signs other than photographs (and we noted some of them already in Sonesson 1989, I.5. ). In particular, if, as Krauss claims, postmodern painting transfers the indexical principle of photography to other arts, then we should have to explain why these works are so far from resembling photographs.

This sets some of the tasks of the following part. In the first chapter, we will make a survey of photographic semiotics generally and then have a critical look at the contributions stemming from system analysis, to which a few experimental works will be added. The second chapter is concerned with text analysis, first by reviewing and reworking an analysis of a photograph by Cartier-Bresson which Floch has studied, and second, by scrutinizing two very different photographs, by Henri and Man Ray, of which Krauss has made an identical but very superficial (our too deep) interpretation. At the same time, we will pursue the methodological strain initiated already in the preceding part. Then, in the third chapter, we will take up for discussion the curious thesis of Krauss and Dubois, according to which Duchamps and the postmodernist painters have somehow taken over the indexicality principle of photography. All through our discussion, we will attend to a few of the means/ends categories and channel divisions which are known to make use of photographic pictures.

III.1. Semiotical approaches to photographic specificity

The first chapter of this essay on photographic semiotics will start out with a general survey of what has been accomplished so far in this domain. We will then add a note on what has now become the four methods of semiotics and also take the opportunity to consider the findings of experimental semiotics. Then we will pursue the question of the indexical nature of photography, as it has been studied
Part III. Photography – Tracing the index

recently in a number of excellent monographs, whose only deficiency, on the face of it, is that deriving from the typical character of system analysis: that they use the photographs included merely as illustrations (as Floch 1986:c11f has pointed out). However, in a few cases at least Dubois (1983) has attended more closely to the photographs, suggesting that they tend to include also more depicted indices than other pictures (though he is not very clear about this distinction). Thus, at the end of this chapter, we will also turn to appraise this thesis, confronting Dubois’s indexical types with the taxonomy developed in Sonesson 1989,I.5.. Moreover, we will take both these taxonomies with us, employing them in the text analyses of the following chapter.

III.1.1. A short history of photographic semiotics

Like most other particular strains making up the history of pictorial semiotics, this one begins with Barthes. In fact, Barthes’s earliest text treating of pictures (apart from the more casual glosses of Barthes 1957) is a short text (1961) entitled "le message photographique". It is true, however, that already the first line of the article denounces its concern with press photographs more particularly. Also Barthes second article on pictorial semiotics, a real classic of the domain, "La rhétorique de l’image" (1964a), is about a photograph, the one showing Panzani spaghetti and other kindred products offered for sale in the shape of a market goer’s still life (cf. Sonesson 1989,II.1.).

Both these articles introduce the Saussurean, or more exactly Hjelmslevian framework of Barthesian semiology, the first being somewhat closer to the source, at least as far as the notion of connotation is concerned (op.cit.). While the first presents us with a series of rather general reflections, resulting from the attempt to apply the Hjelmslevian model of a two-layered semiotic system to pictures, the second is, at least apparently, a regular text analysis concerned with one particular photograph, defined both as to its means/ends category (publicity) and, somewhat more loosely, its channel division (magazine picture). Even the first of these texts (1982:11) proclaims the famous Barthesian paradox, according to which the photograph is a message deprived of a code (but the term "photographie" alternate in the same paragraph, as if this were the same thing, with the more general term "image"; and this conception is formulated in reference to the more peculiar

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2 In Barthes 1964a (see Barthes 1982: 34f) the photography, as a message without a code is actually opposed to the drawing, which is supposedly three times coded. It is a curious fact that Barthes’s acceptance of a convention theory as far as (all?) pictures which are not photographs are concerned is never noted in the literature, where Barthes is often supposed to be a defender of naive analogism generally... Interestingly, convention is here not identified with the presence of features, double articulation, and the like, as even Eco
phenomenon "photographie de presse"); and this is perhaps the only idea which Barthes would still accept in his last book (1980), which is also concerned with photographs (but mostly with a more private photographic genre, family portraits) and which is no longer a book of semiotics (also cf. Delord 1986).

Another idea of Barthes, which emerges in the second article (1982.30f) should be noted here: the idea that no picture contains information in itself or, alternatively, that it contains so much contradictory information that a verbal message is needed to fix its meaning (cf. Sonesson 1989,II.1.). It has been noted (by Schaeffer 1987:99) that it was because of his having mainly studied strongly organized communicational contexts, as the advertisement and the press photograph, that Barthes became convinced of the leading part played by verbal language even in the understanding of pictures; but neither art photography nor scientific photographs would seem to be determined linguistically to a comparable extent, though their interpretation certainly require them to be inserted into some more general background frame, that it so say, assimilated to a selected set of interpretational schemes defined by the particular Lifeworld (see part II; also cf. the notion of a "savoir latéral" according to Schaeffer 1987:87ff and passim); but there is no need for these to be linguistic in nature.

Interestingly, even a student of press photographs like Lambert (1986) has voiced his doubts on the subject of this kind of linguistic determination. In the case of one particular picture, he shows that it is really the text which is redundant given the picture, rather than the other way round. Indeed, although the caption of this picture (fig.1) informs us that one blond girl was elected Miss England, and that two dark-headed girls came out second and third at the election, the picture tells us otherwise; and even though the arrow points to the girl on the far right, we have no doubt that the winner is the girl in the middle (Lambert 1986:43ff). How, then, does this happen?

According to Lambert (p.45), "la photographie est trop précise, sa mise en scène trop parlante", but what does this mean? In fact, the dark-headed girl is placed at the centre, and she even stands a little in front of the other two, covering them partly with her shoulders and one arm which is lifted so as to touch her head. These are all gestual indications, present equally in the normal perceptual world. And then of course there is the fact of the dark-headed girl being the one who wears the crown. This is a traditional symbol, found also in our real sociocultural
Lifeworld. Again, the text may actually be of some help also, but in an curiously oblique way: the caption proclaims the girl having a differently-coloured hair to be the winner, and on the photograph there is actually only one individual to the species dark-haired, but two to the species blonds, however much such gentlemen as write the captions may prefer the latter.

![Fig.1. News photograph from "France-soir", taken from Lambert 1986:44.](image)

It should be remembered that Prieto (1975b:193ff) also objected to Barthes’s peculiar brand of linguistic determinism in the Panzani article, pointing out that the Panzani picture was really much more informative than the verbal text (but then he included the depicted texts on the tin cans in the picture). Lambert (1986:173f) later would seem to make a similar, general point, but in a rather confused way. It is certainly true, in any case, that pictures give us much less linguistic information than verbal texts, except in those cases in which the picture itself contains the reproduction of written messages; but the picture contains much more of that information, which, as suggested by our remarks on the Miss England photograph, is
assimilatable to the kind of information present in the perceptual world. It is clear, however, that to Barthes and to many of his followers, information itself is conceived to be something which is verbal in nature. But this is not the kind of information intended by the psychologist Gibson, when he claims pictures permit us to pick up the same kind of information as is also present in the real perceptual world (cf. Sonesson 1989, III.3.).

These two articles of Barthes’s, and in particular the latter one, were at the origin of two diverging developments inside semiotics: on the one hand, pictorial semiotics, at first mainly preoccupied with art works, and notably paintings (see part IV); and on the other hand, the semiotics of publicity, which, besides the pictorial aspects, also attends to verbal and other components of advertisements, but which has in fact been to an appreciable degree concerned with pictures, which, as it happens, are most of the time photographic pictures (for an excellent critical survey, cf. Pérez Tornero 1982). Until recently, pictorial semiotics has had little to say about photographs; but the semiotics of publicity has been at least obliquely concerned about them.

As a result, most of the analyses pertaining to concrete photographs must so far be searched for inside the domains of the semiotics of publicity, which has also, until this day, been largely derivative on Barthes’s achievement, continuing to thrive on his somewhat fragile theoretical contribution. This constitutes a problem, for what is confused in Barthes’s works tends to become even more so in that of his followers, and they also inherit his exclusive attention to the content side of the pictorial sign, or more exactly, the extra-signic referent and its ideological implications in the real world, even to the point of ignoring the way in which the latter are modulated in the sign. Much of this would be true of the contributions of, for instance, Dyer 1982, Fausing & Larsen 1980; Nordström 1975a; 1983; Peninou 1966-68; Porcher 1976; Thibault-Laulan 1976; Vestergaard & Schrøder. Nevertheless, they should not all be put on the same level: the work of Peninou has the innocence of the early days, that of Porcher contains some important observations, which are unfortunately never developed (cf. Sonesson 1989a,I.2.6 and III.4.1. ); Dyer is suggestive, but superficial in his effort to list photographs corresponding each to a

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3 What we try to accomplish in this section is, as the title, says, a short history of photographic semiotics. The only other such attempt we know of is found in Nöth 1985:427-428, and although the survey is well-informed and well-written like most parts of Nöth’s handbook, it is extremely short, and it fails to note some of the important problems, and the contributions to their solution; but it is true that most of the latter were published fairly recently, at a time when Nöth had possibly finished redacting his book. Therefore, we will concentrate on writing the history here, and leave most of the comments for later sections. However, we will not abstain from pinpointing the methodological character of the works, as well as the models employed, since this will be of importance later.
different rhetorical figure; whereas Nordström, who relies exclusively on Barthes 1964a and Eco 1968 for his full semiotical education, manages to be more confused, to contradict himself more, and to take the picture for reality more than any other.

Somewhat more original in their approach to publicity photographs are, in different ways, the works of Floch 1981a, 1986d, which attend very closely to the plastic organization of the picture plane, in addition to the usual ideological-narrative analysis; Langholz-Leymore 1975, whose purely ideological analysis is inspired in a logically reviewed version of Lévi-Strauss’s mythological model; Millum 1975, who gives scrupulous attention to all the minute details of the depicted world, including cloths, hairdo, and postures; Nöth 1975; 1977, who discovers the common publicity mechanism according to which contiguity is exchanged for similarity; and Williamson 1978; 1986, who has many interesting examples demonstrating that also factorality may be so exchanged But, although this latter group steers free of at least part of the confusions of the Barthesian model, it remains a fact that the photographic nature of these pictures is never thematized; and to the extent that any generalized conclusions are drawn, we are left ignoring, just as in the case of Barthes’s own work, if they are meant to apply to publicity generally, or to photographically mediated publicity only.

This same Barthesian model, largely extrapolated (and, in the case of connotation, sadly misinterpreted) from the work of Hjelmslev, also re-emerges in the publications of at least two writers more exclusively concerned with photography. In his remarkable exposition of the model Burgin 1982 in some respects goes beyond Barthes to his sources, and so manages to be more correct in his interpretation than Barthes himself, at least in the sense of avoiding to slip into such nonsensical examples of connotation as are found in Barthes’s articles. Also Webster 1980 in one of his chapter gives a good introduction to what Barthes, in his early work, conceived of as pictorial semiotics, but just as most of the writers quoted above, he introduces even more conceptual muddle in the Hjelmslevian terms. In any case, neither Burgin nor Webster has anything new to contribute, some twenty years after Barthes’s articles were written, not even as far as the application of the model to concrete photographs are concerned.

We have even seen the beginning of a study of pictorial genres other than publicity where the picture slot is also often filled by photographs. One important such genre in present-day society are news photograph. After Barthes pioneering, but rather abstract contribution, the first to direct his attention to the peculiar way in which daily events are reconstructed through the mediation of the photographs
appearing in newspapers would seem to have been the Englishman Hall (1974),
associated with the Birmingham group of cultural studies, who obligatory adds a
Marxist tinge to the Barthesian framework. Hartley 1982 summarizes much of this
conception, but it attends more closely to the verbal part of the news. More
thorough attempts at analyzing particular news photographs, so as to display their
constructive mechanisms, are found in some passages in Fiske 1982, which is
otherwise an introduction to communication studies; and Gauthier 1979, which
also includes the analyses of a few equally photographic advertisements and
magazine covers. Both Fiske and Gauthier compare differently cut versions of a
photograph representing the same event which has been published by different
newspapers. The contributions of Nordström 1976 could have been very
interesting, since it is a whole book concerned with the analysis of a single news
photograph; unfortunately, Nordström wastes all this space telling us why he does
not like the depicted persons, which he could have done much better if he had not
insisted on embroiling himself in the Barthesian terminology (There is nothing new
either in the considerations given to news photographs in Nordström 1986, to
which we will return below). Gubern 1974 contains some acute observations on the
nature of photography on the occasion of the publication of some news
photographs. As for Hård af Segerstad 1974, who only refers to a few exponents of
pictorial semiotics in a note, he develops his own theory of pictorial interpretation,
which includes important observations, though the conceptual framework appears
to be partly inconsistent.

There are also a few more recent books, which go further in the sense of
building a general theory, which partly goes beyond news photographs to attend
to photographs and pictures generally. Lambert 1986 is still very dependant on
Barthes’s conceptions, but is convincing in his demonstrations of the ways in which
photographs apparently depicting trivial daily events concomitantly function to
convey the basic values of Occidental society and of the French nation. Defending
the idea of a pictorial language against Barthes, Lambert claims photographs contain two levels of signification apart from their analogical surface: the "effets de réel", which contribute the illusion of reality, and the mythographic layer, which conveys enduring social values, by means of symbols, relations to other pictures (baptized "intericonicity"), or some simple rhetorical figures, like comparison and antithesis. Lambert’s attempt to distribute these functions in relation to the signifier and the signified, and to connotation and denotation (for example p.167ff), certainly changes completely the meanings even of the first couple of terms; but the model may be valid anyhow, as far as it goes, if we take it as is has been presented on earlier pages of the book.
Lambert’s book derives all (or most) of its materials from the first pages of the French newspaper "France-Soir", but it is of course difficult to know how signifi-
cative the news-items discussed are for the bulk of first pages, let alone those of
this single newspaper. Another first page is the simulated one of the advertisement
for the cigarette brand "News", analyzed in Floch 1981a ; and we have discussed
elsewhere (cf. Sonesson 1989a.II.3.4. ) which particular features of the advertisement
are responsible for inducing  the reference to a first page of a news paper, in
particular to the renowned English newspaper "Times". It is precisely to the first
pages of this latter publication that Espe & Seiwert 1985  have turned in a more
thoroughly controlled study of this hybrid pictorial and verbal genre.

The second important contribution is that of Vilchez  (1983a;1983b)  who
employs concepts taken over from Greimas, Lindekkens and many other
semioticians in his efforts to come to terms with the ways in which everyday
information is pictorially transmitted, in the press as well as in television; but his
later book (1987), which is more exclusively concerned with press photographs,
looks to cognitive psychology and sociology for its theories and methods, and it
also includes a number of empirical studies, of the type common in sociology,
which treat, among other things, of the differing ways in which photographs are
organized on the pages of some well-known Spanish newspapers.

Another important means/ends category in which photographs are promi-

nent is that of propaganda, often manifested in the channel division known as
posters, more particularly of the out-door type, and also as review pictures, perhaps
mainly masquerading as news photographs. Apart from the latter type, propaganda
photographs have been largely ignored so far. Gubern 1987b:180ff is concerned
with posterns, but almost exclusively of the publicity kind, and the few political
examples included are mostly drawings.  Also Nordström 1986  wrote a book-

length study of propaganda, which also includes photographic examples,  but
although (following upon my criticism of his earlier work, and even literally
reproducing part of my criticism, without indication of source, in the lexicon part of
the book) it does not abound as much as before in its abuse of semiotical concepts,
the book does not contribute anything which goes beyond the generalities visible to
any semiotically innocent eye, neither in the trivial remarks on Nazi propaganda,
nor in the attempt to discover hidden propaganda in a news-item concerned with
the supposedly Russian submarines parading along the coasts of Sweden. In fact,
propaganda, photographic or not, is a sadly neglected chapter of pictorial semiotics,
and we have particular reasons to regret this, if, as would seem to appear from our
considerations in the first part, propaganda, more than information, is the determining force of so-called information society.

Pornography, another social use to which photographs are commonly put, and certainly of the outmost importance for the understanding of some of the basic symbolic mechanisms regulating contemporary society, has received curiously sparse attention, no doubt because, as a pictorial genre, it is still considered "maudit", in spite of the face that nobody can any longer avoid encountering at least its softer forms, in the shape of placards announcing men´s magazines in the streets. That pornography, together with a few other "perverted" pictorial kinds, are more significative than most others for the understanding of contemporary ideology, is affirmed in Gubern´s (1989) book on these genres; but unfortunately for us, the images actually considered in the book are mainly filmic images. There are some marginal remarks on pornography in Barthes´s (1980) post-semiotical treatise of photography, but as may be expected of the Barthes of this late period, they are not of much consequence, for anyone beyond Barthes himself. A straight-forward treatment of sexualist ideology as manifested in men´s magazines, is found in the article by Casalis 1975, which, although it involves the Hjelmslevian connotational language in the usual misrepresented way, does contain some acute observations on the mechanisms of sexual thematization. Winship 1980 (and to some extent Williamsson 1986 ) tracks down sexual meanings as they are used in advertisements to transfer social attraction and value to commercial products which themselves may be deprived of them. Also the work of Orfali 1983 is relevant here, since it is as much concerned with Zucca´s photographs as with Klossowski´s drawings; in this respect, as in the others, we have already remarked above on its theoretical interest, as well as on its drawbacks (cf. II.1-3-9).

Another pictorial genre, which is of particular interest, since, contrary to most pictures, it involves a "syntax" (in the sense of Barthes 1961; also cf. Schaeffer 1987:96 ) even at the level of immediately discernible units (which Mounin denies for pictures generally, even in the case of traffic signs): the photo novella. Unfortunately, however, we can only note two contributions here, the first of which, Sempere 1976, is entirely absorbed into the narrative aspects of the genre, and the ideological values conveyed by the latter, and this to the point of treating the photographs (partly reproduced in the book) as completely transparent. As for the contribution of Chirollet 1983, it is certainly a much more systematic treatise, attending to the peculiarities of the photonovellistic temporality, to the ways in which it differs from the cinema, as well as to its artistic possibilities, but it is also
curiously unmindful of the photographs themselves, to the point of containing no illustrations!\footnote{According to Ramírez 1981:220ff, who treats the comic strip and the photo novella together, both these are multi-layered connotational systems, in which the multiple expression planes are constituted out of the entire sign of each lower level. This is of course nonsense: Ramirez confuses the compound sign occurrence with connotational language, just as Larsen and Floch do when they identify Barthes’s rhetoric with Panofsky’s iconology (cf. Sonesson 1989a,II.1.3.), and analogously to the way in which Barthes, in a quite different context, take the probabilistic organization of the medical symptom to indicate double articulation (cf. Sonesson 1989a,1.1.2.). A few brief, mainly historical remarks on the photo novella may also be found in Gubern 1987a:253ff.}

We have not, so far, mentioned all pictorial categories in which photographs are prominent, but we have probably listed all of which studies have been made. One single exception may be artistic works, which have apparently only been considered by Floch, to whose analyses will will turn further below. Many photographic kinds have thus been ignored: but this only points to the young age of photographic semiotics.

Next to Barthes, the single most important figure in the semiotics of photography is (or has at least been until recently) René Lindekens (1971b, 1973, 1976a, 1979a), whose early death, a few years ago, was an unrepairable loss for pictorial semiotics. Although his first book (1971b) is explicitly concerned with photography, whereas the second one (1976a) claims to treat of visual semiotics generally, both really discuss questions pertaining to the basic structure of the pictorial sign as such (e.g. conventionality and double articulation), and both use photography as their privileged example. It is to demonstrate the conventionality of pictures, and the way they are structured into binary features, that Lindekens (1971b; 1973) suggests on the basis of experimental facts (and common sense experience) the existence of a primary photographic opposition between the nuanced and the contrasted: indeed, as the nuances of a photograph is augmented, contrast diminishes, and vice versa; but the same publication (1971b) also turns to experiments involving geometric drawings having the function of brand marks to discover the different plastic meanings (which Lindekens calls "intraiconic") of elementary shapes. In fact, Lindekens would seem to argue for the same conventionalist and structuralist thesis as applied to pictures as the early Eco (1968), but while the latter tend to ignore the photograph as the most embarrassing apparent counter-example, Lindekens from the beginning attacks its frontally – though not necessarily with more success (cf. Dubois 1983:31ff and, in particular Schaeffer 1987:32ff).

There are indeed good reasons (and we will return to some of them below) not to go along with most of Lindekens’s arguments, but his contributions have al-
ways been stimulating, and have posed important problems for later researchers to resolve. In at least two respects Lindekens is exemplary. He has employed all the three methods of semiotics which we have distinguished above (and to which we will return in the next section): system analysis and experimental tests, which enter a fruitful symbiosis in his two books, but also text analysis, although oddly enough, he appears never to have recurred to the last method as far as photographs are concerned (with the exception of a few studies in publicity), and thus we will encounter those of his works which employs this method only in the next part. In the second place, he theoretical baggage is complex: Hjelmslevian semiotics, of which he has a much more solid knowledge than Barthes, which just an inkling of the Greimas school approach, in spite of the fact that he wrote his thesis for Greimas; phenomenology, which unfortunately affected him in the subjectivist misinterpretation due to Sartre and the existentialists generally; and experimental psychology. Much of his last work (to which we turn in part IV), however, is less synthetical, and much more dependant and text analysis.

Most of Lindekens’s basic tenets, on the other hand, may well turn out to be unjustified. Thus, for instance, the conventionality of pictures, and their structuring in binary features is argued for by Lindekens (1971b; 1973) mainly using the fact that in a photograph nuance diminishes as contrast is augmented, and vice versa, so that one of the factors must always be untrue to reality; or, as it is put elsewhere (1971b:93; 1976a:29) that the best rendering of contour and details is not obtained at the same time as the correct contrast. This certainly shows that, under the present technological conditions, photographs will never be able to reproduce integrally the reality photographed, but that, anyhow, may not came as such a big surprise. There are two reasons, however, why this does not tell us anything about the binary structuring of photographs: first of all, Lindekens derives this observation from his considerations of the photographic substance, that is, as Lindekens understands it, the nature of the photographic emulsion (cf. II.1.3.7. above), which means he is studying factors which are not pertinent, not part of the expression form of the picture. Of course, contrasts, details and nuances are also perceptual facts, so perhaps the argument may be restated in terms of percepts, which are indeed pertinent factors. It remains untrue, however, that the kind of dimension thus erected is in any sense equivalent to the oppositions the elementary units of linguistics: a phoneme is either voiced or unvoiced, but a picture, and in fact any single point of a photograph, must be nuanced to some degree and contrasted to
some degree. Only the extremes would seem to exclude each other (cf. Sonesson 1989, I.3.4.).

As a matter of fact, Lindekens (1971b:178ff) also takes his experiment a little further, to show that the interpretation of a photograph is influenced by its having been made more or less contrasted or nuanced in the process of development. Interestingly, in quite different quarters (more precisely, in the group associated with the German architectural semiotician and psychologist Martin Krampen), Espe (1983a, 1983b) has taken up the same study independently, showing interesting interactions between factors, but with the general result that an identical photograph may carry very different affective import for being differently contrasted. As a consequence the evaluation is often projected onto the subject matter, so that the girl appears more or less beautiful, the landscape more or less melancholic, and so on. It seems probable that the common source for Lindekens’ and Espe’s experiments is the more casual comparison made by Gombrich (1960) of two differently contrasted photographs showing the same landscape that Constable painted in Wivenhow Park, viewed from an identical vantage point.

Although apart from Lindekens’s pioneering contributions very few experimental studies have been made in pictorial semiotics, the little there is of it which concerns photographs should be recorded here. Espe is in fact responsible for most of it. Indeed, later studies of his (1984; 1985a; 1985b) are concerned with the different semantic effects of black & white and colour photographs, and with the effect of viewing position on the interpretation of subject matter. The latter problem has been experimentally investigated independently by Bengtsson, Bondesson & Sonesson in an unpublished study, which employs photographs taken from three different angles of vision but at an identical temporal phase of a variety of affective facial displays, and was conceived as a criticism of the rather naive use of photographs in the study of such displays, in for example the work of Ekman.

5 The arguments against Lindekens presented by Schaeffer 1987:41ff are more anecdotal, as are also those of Lindekens’s arguments his turns against. We have dealt with the contradictions of the ethnological and psychological evidence in Sonesson 1989a, III.3. As for the points we have tried to make above, it should be noted that Lindekens (1976a:81f) later observes, that the trait “nuancé/contrasté” is only a potential iconeme, as long as we are not acquainted with the entire pictorial system, which sounds as an advance criticism of the use to which the opposition is put in the work of Vilchez (1983:45ff), which we have discussed in Sonesson 1989, I.3.4. Unfortunately, Lindekens then goes on to claim that the extent of variation possible inside an iconeme can only be determined through the work of chemical and optical analysis; which is true as far as irrelevant variants are concerned, but a countersense if the determination of the limits of variations is meant — for, as Lindekens (1976a:76f) himself observes, we are concerned with the equivalents of phonological, not phonetic traits!
We will now proceed to the appraisal of a more recent, in fact contemporary phase of photographic semiotics, which involves the capital contributions of Dubois, Vanlier and Schaeffer. They are all concerned to establish the peculiar nature of photography, in opposition to other kinds of pictures, and thus tend to neglect the similarities joining all pictorial signs together and opposing them to all non-iconical signs as well as to non-pictorial iconical signs (Cf. Sonesson 1989a,III for these notions). They all, together with Brög, Delord, Krauss, and Maldonado, argue for the essentially indexical nature of pictorial signs, and in this respect the hark back to some of the fundamental intuitions of Charles Sanders Peirce.

But when we now at last turn to works attentive to the peculiarities of the photographic sign, we must start from a very different way of conceiving these peculiarities, still heavily indebted to the Saussure/Hjelmslev/Barthes-tradition, though taking exception to some of the basic assumptions contained in Barthes´s work, at the same time as it tries to spell out the purportedly more radical implications of some other part of the same presuppositional frame. It will be remembered that although Barthes used a linguistic model in his two famous articles, he denied that photographs were arbitrarily contrived, like verbal language, even claiming that the photographic signifier and signified were mutually tautologous. This paradox posed for later researches the question whether photography constituted a language.

A case in point is Lambert (1986:165f), who tries to turn Barthes against himself, observing that although the latter through all his publications has denied the status of a language to photography, the simple fact of his having confronted it with the tool kit of semiotics has contributed to the impression that it is indeed a language. We shall not quarrel here over the exact import of the term "language" (even Metz´s distinction between "langue" and "langage" may not be enough); what is at issue here is really Barthes´s idea that photographic denotation does not need a code, whereas its connotations (which should most of the time actually be called ideological implications; cf. Sonesson 1989a,II.1.) are culturally coded, that it to say, determined by social conventions. To all appearance, then, Lambert protests that also the Barthesian denotation is coded.

However, if we now review Lambert´s own analyses, and the model of the press photographic sign he proposes, we will discover that he nowhere offers any real criticism of its analogical character (even the quotes from Eco and Lindekens on p.166f are moderate in their iconoclasm), but in fact accepts it as a given, adding only a supplementary layer of illusionism ("effet de réel") and a set of mythographic implications, which, as we noted above, may derive from a symbol, a rhetorical
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figure, or an intericonicity. The character of illusionism remains unclear: in part it may be caused by analogy itself, and perhaps from the tendency of man living in a photographically dominated society to exaggerate its fidelity to reality. As for mythography, it really only takes place in the depicted world (even in the case of intericonicity, since it is the depicted situation which is similar), not even, as far as Lambert’s analyses goes, in the way the world is reflectively reproduced in the sign; thus, in the terms employed by Enel (quoted in Ramírez 1981:189), it concerns the system of the real objects, not those of the picture or the verbal text - or, in other terms, it concerns Barthes’s connotations, which, even to Barthes, are culturally coded.6

In fact, most semioticians after Barthes has criticized him for elaborating a rhetoric of the referent, not, as the title of his essay promises, a rhetoric of the picture (see for instance Lindekens 1971b: 231ff). Since Costa (1977;1981) certainly agrees with this criticism, he must rest his claim for a particular language of photography on different arguments, and indeed, he maintains (in 1977:69ff) that the technical aspects of photography, susceptible of offering the elements of a lexicon, have been largely ignored so far. This is certainly not quite true, for even Barthes’s original list of connotations would seem to include some technical effects.

Actually, the list of connotations which Barthes (1961:14ff) proposed (trick photography; the pose; the object; photogeny, that is, blur for space-time; aestheticism, i.e. the suggestion of artisticalness; and syntax, the putting together of various images) has been differently commented upon, to begin with by Barthes himself (ibid.), who admits that only the last three are properly speaking connotations, since only these modify the sign instead of reality; and Lindekens (1971b:236ff) takes over this distinction, claiming the first three modifies the continuum, that is, perceived reality, whereas the last three intervenes in the discontinuous, which, in this case, is the code of analogy itself. According to Ramírez (1981:175), none of them, except for tricking and photogeny, are peculiar to photography, since they are found also in the theatre, paintings, the photo novella(!), the cinema, etc., but there are other photographic effects, connected with the confection of the negative and its ulterior treatment, and with the details of the positive process (op.cit.:172ff). In fact, some of these effects are present in Barthes’s model, for in the second essay (1964a:35), we are told that "les interventions de l’homme sur la photographie

6 Enel’s model has been formulated for the analysis of publicity, which, most of the time, involves photographic elements. The distinction between the system of real objects and the system of the picture is undoubtedly much less straightforward in the case of paintings and drawings, but it does exist, as discussed in Sonesson 1989a,III.1.3..
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(cadrage, distance, lumière, flou, filé, etc.) apparentiennent toutes en effet au plan de connotation”. Schaeffer (1987:93ff) takes exception to most of Barthes connotations: only one procedure will do, aestheticism, which should be taken in a wider sense, so that photogeny only becomes a variant of it. As for the Barthesian syntax, it depends on narrative and other extra-photographic codes.

As far as this discussion (which is not really one, since most of the authors ignore each other) is couched in terms of connotation, it is certainly meaningless: for it is not only true, as Schaeffer (1987:94) points out, that the first three procedures, not involving the photographic sign, cannot be connotations, but neither can the other three, or any other intervention pertaining to the photographic sign, at least if Barthes is right in his description of the structure of the latter. Indeed, according to Hjelmslev’s definition, repeated by Barthes and all his followers, a connotational language is a language the expression plane of which is another language; and a language, according to Hjelmslev, irreducibly involves two strata, the expression plane and the content plane. But Barthes claims the primary, analogous sign of photography does not depend on any code for its interpretation, and that signifier and signified are tautologous, which, according to Hjelmslev’s criteria, would make them into one and the same, and photography into a symbol system, which, as far as Hjelmslev has thought about the matter, is not among those units capable of being the carrier of a secondary language (for a more explicit argument, cf. Sonesson 1989a,II.1.4. and II.4.

However, we will not insist on this argument here, for our authors are obviously the victims of an inadequate terminology. Of course, the argument is not unimportant: it implies we cannot know what is really meant by claiming these photographic effects are connotative. We may suspect, of course, from the kind of argument used (some of which are quoted above) that connotative to some authors mean that which is not directly involved in the identification of the object (perhaps of that particular type of object), to others that which carries ideological and/or emotional values, to a third group that which is intrinsically photographic, or, more generally, inherent in the sign character of the sign; and to some, I am afraid, it may even mean all this and a lot more at the same time (cf. Sonesson 1989a,II.

Costa is of course not aware of all the comments quoted above, some of which were made after the composition of his texts. The signs of his specifically photographic language, which, as he rightly observes (1977:77), are signs only to the extent that they are interpretable to the receiver, are such things as the geometrical shapes produced by the light directly entering the objective, the luminous stars caused by the headlights of a car, rhythmic lines resulting from the
movement of the camera, the decomposition of movement as made by Marey, perspectival deformations of the kind created by Brandt, chemigrammes, negativization, photographism, and so on (There is a long list in 1977:78ff ). The list as such it not very new; what is original is the claim that these procedures constitute a language, to the extent that a photograph may contain both analogical and non-analogical signs, where those of the second type are present in the photograph without being present in reality (1981:133f). Again, while the analogical signs are taken to be denotative, the second category of signs are assimilated to connotation (1977:77).

There is a suggestion of this peculiar language already in Barthes (1961:16f), who, under the title of photogeny, would like to include numerous techniques, which he feels are urgent to study, in order to establish the vocabulary of photographic language. It is to this suggestion, contained in a phrase, that Schaeffer (1987:97ff) reacts, pointing out that no such lexicon could be found, for, to begin with, these procedures are few in number, and in addition, most of them (Barthes’s example, the blur, being exceptional in that respect) do not convey any particular message, beyond the mere intentionality of the intervention (that is, "cette photo est telle parce que je l’ai voulu comme telle (donc: parce que je suis un bon photographe, un artiste)"). While Costa does not address any of these arguments, he tries to answer, avant la lettre, a variant of the first; for even if Schaeffer is right in thinking that there are very few photographic procedures, we may yet have to accept that they form a language of their own, if it can be shown that they occupy the greater part of the surface of the single photographic image.

Indeed, Costa (1977:73ff; 1981:126f) presents a photograph (which he apparently takes to be representative of all photographs) divided into a series of small squares, which, according to his account, contains only 4,8% of denotation, that is to say, picture squares permitting the identification of the object, and 95,2% of free creativity (fig.2). Unfortunately, there are numerous problems with this argument. First of all, there is really nothing to assure us of the typical character of this photograph; in fact, we would naturally suspect most photographs to contain much less of free space for creativity. More importantly, it is certainly not true that in this particular photograph only the squares delimited by Costa serve the identification of the ballerina. No doubt, when these squares are left out, as in fig.2a., it is impossible, and almost impossible, to identify the motive of the photograph; but once they are replaced in their context, the interpretation which they suggest is transferred and confirmed by the rest of the shape. This is the procedure we called resemanticization in Sonesson 1989a,III.4.3., where we illustrated in with drawings; it accounts for the nature of all pictorial parts being somewhere in between the
nature of first and the second articulation found in verbal language. In the present case, the squares marked out by Costa certainly are most heavily weighted semantically, as far as the identification of the person as a person and as a girl is concerned; but on the lower intentional level on which she is also a ballerina, the indication can only stem from the squares which, according to Costa, do not serve identification.

Interestingly, Espe’s (1983a; 1983b) experimental tests were motivated by a desire to refute Barthes’s conception of the photograph as having an expression plane which is tautologously related to its content plane, that is, a lacking a code. Experimental subjects were presented with three types of motives: things (teapot), landscapes (tree) and persons (a girl), in four degrees of brightness, and were asked to evaluate them on 24 scales. Four of these scales turned out to account for 48% of the variation, viz.: a) antipathy; b) calm vs tension (excitement); c) lack of stimulation; d) potency vs weakness. Of particular interest is the fact that the same degree of brightness may have diverging effects on different motives: thus the teapot and the landscape receive a more positive evaluation (more homely [vertraut] and clean, but also more sterile) in the light gray version than in the white one, but the opposite is true of the girl (more contaminated [verseucht], terrifying,
From his results, Espe concludes that there are rules of condification in photographs, although the units determined by these are not similar to phonemes, since the motive as such remains unmodified.

At this point, it is important to inquire into Espe’s understanding of the distinction between denotation and connotation, and of his notion of motive. Actually, Espe (1983a:93f) is explicit about his preoccupation being with “affective meanings”, and this interest is also clearly embodied in the terms dominating his 24 scales (at least those mentioned in the article). Now we know (from Sonesson 1989,II.1. and II.4. ) that the Hjelmslevian notion of connotation, invoked by Barthes, does in no sense involve affective meanings, and that, although many of Barthes’s so-called connotations are of doubtful legitimacy, they are not merely emotive reactions. In fact, connotation in Hjelmslev’s sense is a secondary content resulting from the choice of a particular expression, to the exclusion of all other possible ones, to stand for a given primary content, or of a particular variant, to the exclusion of all other possible variants, to realize the expression invariant (Cf. Sonesson 1989a, II.1.2. ). Therefore, the selection of one degree of brightness among many possible ones may carry a connotation, which primarily simply says “choice of the degree X brightness”, but which may in turn imply other values with which it has been culturally invested, or even, in a case like brightness, which are themselves “natural signs” (though of
course not iconical signs) for biologically grounded reactions. However, such a connotation can only exist if the choice is seen to be one, that is, if the secondary layer of content is perceived to be distinct from the first one.

But this is precisely what Espe seems to claim: the motive, he tells us, remains unaltered in the process. But earlier he has also informed us that his experimental subjects were not aware of the difference of brightness, the result being somewhat different when a direct evaluation was made. This brings us to the question what Espe means by motive. No doubt the girl is always recognized as a girl, the tree as a tree, and the teapot as a teapot. But if, with the subtraction of one degree of brightness, the girl photograph receives higher values on the scale for contaminatedness, terrifyingness, and dirtiness, we may wonder if this does not mean (as Espe’s own formulations seem to suggest) that it is the girl which is judged more contaminated, terrifying and dirty. And in that case, the motive, from being a clean girl, is transformed into a dirty girl, and so on. The point may be made clearer by invoking own own study of angles of vision (Bengtsson, Bondesson, & Sonesson): here the motive were different emotions, and we did indeed discover that an identical moment of an expressive moment were assigned to different emotions when presented from different vantage points. Thus, the perspective chosen on the actor could completely change the motive perceived, that is, the emotions believed to be expressed by the actor.

This shows that there is no connotation here, for the emotional values are projected directly onto the motive, and incorporated into the primary content. As for Espe’s basic hypothesis, according to which photography is codified, in the

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7 "Natural sign" should here be taken in the old meaning, as that which has not been culturally instituted, and which may have more affinities with what we would now call an indexical sign than with the iconical ones. Thus, Dégerando talks of the "natural sign" which consists in one animal observing the flight of another one of the same species and following the example. For discussion, see Sonesson 1989a,III.1.4. The point here is that we may be "naturally disposed" to react in particular ways to differing degrees of brightness. The fact that different motives developed with the same degree of brightness are differently interpreted would seem to throw serious doubts on at least this simple variant of the "naturalistic" hypothesis, but there are of course ways in which it may be amended.

8 In our own study (cf. Bengtsson, Bondesson, & Sonesson), concerned with angles of vision, we also varied the experimental procedure somewhat, obtaining differently distinct results. In the first case, photographs depicting three different actors in the course of expressing four different emotions photographed at the identical moment from three angles of vision, were shown in random order. In the second case, the three shots taken from different angles of vision at the same moment and extracted from the mimic sequence of one and the same actor were mounted together on a frame. The result was much clearer in the first case. This may be similar to the two procedures employed by Espe (though this remains somewhat uncertain), but I am not sure Espe is right in describing the latter experimental situation as being the most realistic one. In fact, most of the time we perceive single photographs, may be just one photograph published by a newspaper, which has been selected from an extensive series of pictures taken of the same event at the same occasion. It is indeed rare that we are called upon to compare different photographs, in particular those which show an identical object at an identical time and place.
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sense of not reproducing tautologously the reality to which it refers, is is actually reinforced by our argument.

In fact, the error of the approaches considered so far would seem to be the attempt to locate the conventionality of photography in some particular part of its vocabulary, or of the photographic surface, when in fact it is the whole process by which the image is mediated which is conventionally overdetermined. Ramírez (1981: 170ff) and Gubern (1974:50ff; 1987:156ff), when considering the factors by which the photograph differ from perceived reality, would seem to get closer to this essential insight into the conventional aspects of photography. We will return to consider these factors in later sections.

We must not turn to quite a different point of view that may be taken on photography, according to which the photographic image is essentially a trace left behind be the object. One of the pioneers of semiotics, Charles Sanders Peirce (1931ff), already claimed that the photograph should be considered an indexical sign, rather than an iconical one, that is, a sign based on the contiguity subsisting between the expression and the content, not on their similarity.9 At least, this is how he has often been read. But if we attend a little closer to his wordings, we shall see that he actually only claims that the photograph is an index in one respect which apparently permits it to remain an icon when considered from other points of view. This is certainly how he has been understood by the orthodox Peirceans of the Stuttgart and Perpignan schools; and it is also, as we shall see, Schaeffer’s interpretation.

The first semiotician of recent time to insist on the indexical aspects of photography may well have been Maldonado (1974; 1979), who introduces the notion of "hard icon" in his argument against Eco’s conventionalist theory of pictures, which he accused of being "idealistic", and of undermining science, which largely depend on certain kinds of pictures. In fact, "hard icons", according to Maldonado, are signs which, in addition to bearing resemblance to that which they depict, are related to them as traces to that which produced them, as are X-ray pictures, hand impressions on cave walls, "acoustic pictures" made with the aid of ultrasound, silhouettes, configurations left on the ground by people who were out walking in

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9 it should be noted that it is quite intentionally that we here avoid Peirce’s own terms, representamen and object (to which a third one, the interpretant, should be added), in order not to introduce more confusion than is necessary. In any case, it is quite certain that the object is not the referent: that distinction would rather correspond to the one between the immediate and the dynamic object. Also, the interpretant is not the content, though it is more difficult so say what exactly it is. Cf. discussion in Sonesson 1989a,III.1. On the adequate characterization of the index, see also op.cit.,I.2., as well as most of the sections below. The formulation above only serve to introduce the issue.
Hiroshima at the moment of the explosion of the nuclear bomb, thermograms, pictures made with “invisible light” to discover persons hiding in the woods – and ordinary photographs. The real contiguity between the picture and its referent is here taken to guarantee the cognitive value of the picture.

In the work of such strict followers of the Stuttgart school as Brög (1976; 1978a; 1978b; 1979b) and Schmalreide (1981) photographs are classified according to their different relationships to the object, as well as far as the other two Peircean trichotomies are concerned. Unfortunately, it is difficult not to find this approach largely empty of content, not only because the Peircean trichotomies are based on such slippery notions to begin with, but also because the assignations to different sign categories are not justified in the taxonomic discourses of the Stuttgart school. It must be recognized, however, that these authors have never doubted that the photograph, as well as other sign, may be iconical and indexical at the same time.

A very different writer is Rosalind Krauss. In her analysis of Nadar’s autobiography (Krauss 1982), she has tried to demonstrate that what holds together the anecdotes recounted there by the famous pioneer of photography is the fascination for the contiguity between the motive and the picture imposed by the very mechanism of photography. In other texts, however, she has argued that indexicality, introduced in the art world by photography, has continued to fascinate contemporary artist, from Duchamps onwards, and is characteristic of the new movement called postmodernism. We will turn to an evaluation of this connection later (in III.3. below).

Delord’s (1986) book is written in a rhapsodic style recognizable from the later work of Derrida, which makes it difficult to know what he is really driving at. At times, however, he is certainly out to criticize Barthes’s conception of photography, among other things for its psychologism (p.21ff); and at other moments, he clearly means to suggest that the photograph is semiotically speaking an index (p.32ff, p.36ff, p.125ff), but at this last occasion (p.128f), he also warns us from thinking that it is just that. But of course, Delord is already aware of the work of Dubois.

Indeed, it remains for us to consider the work of Dubois (1982b, 1983), as well as that of Schaeffer (1983a, 1983b, 1986, 1987) and Vanlier (1982a, 1982b, 1983), who more or less at the same time have focused in an explicit way on the specificity

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10 To judge from the title, this is the exclusive subject matter of Delord’s (1981) earlier book, which is unfortunately out of print.
of the photographic sign, all concluding, more or less following the suggestion of Peirce, that it is essentially and index. There are important differences between these authors, however; and while they may well have began their studies independently, Dubois (1983) already comments critically on Vanlier’s (1983) book, which he has read as a manuscript; and Schaeffer (1987), while admitting to the coincidence of the general conceptions, marks his distance to numerous points of the earlier writers.

Since most of the later sections of this chapter will be concerned with a detailed critique of the fundamental work accomplished by these three semioticians, it will not be necessary to enter more thoroughly into the body of these works here. Suffice it to indicate for now in a sweeping manner the principal differences between the texts and the conceptions. Thus, Vanlier’s book has the character of a philosophical essay, with little indications of sources, and his notion of indexicality (split into the untranslatable opposition between "indice" and "index") is not strictly bound up with that of Peirce; indeed, that "indice" which he discovers in photography is actually, in the most literal sense, a mere trace, and he usefully characterizes the peculiarities of the photographic trace. The book is illustrated with photographs of the artistic kind, but there is little, or very passing, commentary of these photographs in the text.

Also Dubois is exclusively concerned with art photography. His book, however, contains more complete scrutiny of a number of photographs, notably in the later chapters, but these photographs are hardly being analyzed; in part, they are the subjects of a text classification (cf. III.1.2. below) according to the different kinds of indexicalities they contain (cf. III.1.4.). Contrary to Vanlier, Dubois is concerned to place himself in the recent history of photographic semiotics, which he differentiates in one iconical phase, a "symbolic" one, and then an indexical one, of which his own work is a part. We will make use of this historical conception later (in III.1.2-3.). He also is more preoccupied with stating his relationship to the Peirce tradition, though he may not be all that immersed in its ambience. There is more of explicit argument and discussion of earlier theories here than we found in Vanlier’s essay, and Dubois also attends to some indexical qualities in painting, and, as we already noted, to indexicalities which are depicted in the sign, rather than going into its making.

The best, and most systematic, work is that of Schaeffer, but then is has also profited from the experience of the earlier writers. Schaeffer takes a less extreme stand than Vanlier and Dubois, arguing that the photograph is an indexical icon, or, in other cases, an iconical index. His book is organized in short passages, each con-
cerned with a limited theme, and presents elaborated arguments, addressed to particular theoretical texts. It contains interesting critical observations on the writings of Barthes, Eco, and Lindekens, and also to some extent of that produced by Vanlier and Dubois. Contrary to these latter writers, Schaeffer claims that a correct understanding of photography most result from a study, not of art photography, nor of photojournalism, but of scientific and documentary photography. He presents a characteristically system analytical taxonomy of photographic kinds, which is a cross-classification according to the relative indexicality or iconicity of the representamen, the relative temporality or spatiality of the interpretant, and the thing or state structure of the object (1987:72). His Peirce reception, like that of Dubois, is much more faithful than that of Vanlier, but some doubts on its correctness subsists, as we shall note later. Although Schaeffer’s book contains the reproduction of twelve photographs, they do never enter essentially in the arguments. In fact, even the taxonomy mentioned above is purely system analytical, with no incursions into text classification.

The last writer we shall consider here has a curious position in our story, for while, on the one hand, he is more or less the only one to have accomplished real text analytical studies as applied to photographs, he at the same time denies the pertinence of the quest for photographic specificity. Floch (1986c:11) rightly objects to the practice of using photographs simply as illustrations which is that of Vanlier’s and Dubois’s books, which instead get lost in the generalities of photographicity. But Floch’s own alternative seems contradictory, and, on at least one interpretation, is seriously flawed. On one hand, he states as his task to account for the particularities of a given photograph, (1986c:11); and on the other hand, he claims semiotics should define other categories which cross-cut such as are socially accepted, like "picture", "art", and "photography" (1984a:11; 1986c:12f). Both these opposed alternatives to a study of photography and other socially accepted pictorial kinds are explicitly present in Floch’s text, but it is not at all clear how they could be reconciled. And while the first interpretation seems to make nonsense of semiotics as a science, the second appears to opt for a positivistic approach of the most gratuitous kind.

Let us have a closer look at this conundrum then. Semiotics, according to Floch (1984a:11) is incapable of telling us anything about sociocultural categories such as "photography". Instead we should attend to the particular properties of the given photograph. This is a legitimate claim as far as it is an argument tending to favour a text analytic method over those of system analyses and experiment. But if it means that a particular photograph should be not only the objected studied, but...
the object of study, of a semiotic investigation, it would seem to deprive the
semiotic approach of its peculiarity, making it just another method which may be
used inside art history, communications studies, and so on. That is, if the semiotic
object of study is not specificity (of pictorality, of pictorial kinds, or whatever), then
semiotics itself will lose its specificity. We may still argue for semiotics on the
grounds that it builds models, that it uses certain constellation of methods, etc. (cf.
Sonesson 1989a,I.1.), but in any case, its originality certainly comes out diminished.

According to the other interpretation, semiotics is admittedly geared to the
study of general facts, but these facts or not of the kind designed by terms like
"photography" (and "picture", "publicity", "art", etc.). These latter terms serve to
label categorizations of semiotic resources which are merely socio-cultural, that is,
historical and relative ("le découpage socio-culturel donc relatif et historique des
moyens d´expression"; 1986c:13 ); but if we want to understand how, in a particular
photograph, meaning comes to be, we must instead apply ourselves to the develop-
ment of a general theory of discourse, which includes all kinds of discourses,
besides visual ones also architectural, linguistic, and so on (ibid.)

It is difficult to understand why merely socio-cultural division blocks
should be despised, for in all their historical relativity, they are probably the only
ones we have.11 Indeed, as we pointed out (in Sonesson 1989a,I.4.) following Prieto,
who himself quoted Saussure, semiotic objects only exist for their users, that is, they
have only the kind of existence that they are accorded by their use in a given social
group; and thus, once we pretend to go beyond sociality, there is nothing left to
study. It is true that Floch´s master Greimas, following his master Hjelmslev, has
argued that a semiotic theory should be arbitrary — but also adequate; and we have
already (ibid.) noted the paradoxes of this pronouncement. There is a risk, then, that
we are faced here with that kind of gratuitous thinking which makes Goodman
substitute a picture concept of his own making for the one commonly employed
which he finds incoherent – when the real task is to account for the peculiar
systematicity of the common Lifeworld notion of a picture (cf. Sonesson

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11 Floch (1986c:12) even compares the study of semiotic specificity with the quarrel over the possibility of art
in photography which raged in the eighteen hundred fifties. But these are really very different questions, on
two counts. To begin with, the questions are different, because, in the first case, we only want to characterize a
category ("photography"); in the second case, we are concerned to relate two socially given categories ("art"
and "photography"). Secondly, "art" is a notoriously difficult category to define, because it is differently
delimitated, though the ages, and in different social groups; but nothing of the sort is true of
photography. When Floch (1986c:13) claims that to describe these social division blocks is "au mieux,
expliciter un système connotatif", this only goes to show that he does not know what connotations are, for only
only semiotic systems and their parts may connote, in Hjelmslev`s sense (cf. Sonesson 1989a,II.4.).
But, as we shall see, there may actually be a somewhat more interesting sense to Floch’s argument.

Floch (1986c:12) actually rejects the doctrine of signs in favour of another study, that of

“les formes signifiantes, les systèmes de relations qui font d’une photographie, comme de toute image ou de tout texte, un objet de sens. La sémiotique structurale qui est nôtre ne vise pas à élaborer une classification des signes, ni selon les conditions de leur production, ni selon les rapports qu’ils entretiennent avec la ‘réalité’/ - - - / L’image photographique peut être techniquement une empreinte; mais qu’importe en l’occurrence: ce sont les formes de l’empreinte qui font d’elle un object de sens possible, et c’est à partir du moment où l’on s’intéresse à ces formes qu’on ne peut se contenter de parler de la photographie en général.”

There are a number of things to note here. First, we will not enter the quarrel over signs again (cf. Sonesson 1989, I.2.5.), for if even Peirce admitted something could be an icon from one point of view, and an index from another, signs do not have to be atomic units, be may be relations, of which many are want to go together, and the only requirement is that there is a distinction of content and expression. In the second place, it is curious that Floch should claim the old epithet “structural” for his (and Greimas’s) conception of semiotics, for nothing could really be more contrary to the spirit of structuralism (that of Saussure and Hjelmslev, notably), than the idea, presupposed here and vindicated by Greimas, that content and expression may be freely combined, so that, in the present case, the same sense may be produced in different pictorial genres.12 Thirdly, however, there may really be a place in semiotics for a study of “significant forms” which cuts across the divisions of photography and painting, and even of visual and other discourses.13

There may actually exist other pictorial categories than those which are explicitly recognized in our culture; and there may thus be similarities, for instance between a photograph and a painting; but it is not to be understood why we should study these at the expense of the former categories, which are certainly primary on a social level. Later, in chapter III.2., we will in fact take account of some similarities which may occur between photographs and certain hand-made pictures, but the exceptional existence of such similarities does in no way diminish the importance of characterizing the socially received categories.

12 In a structure, as we noted in Sonesson 1989a, I.3.4., the parts interact and so mutually modify each other, or even create each other, as is the case of the phonological oppositions. Thus, if the semiotic function is structural, as it certainly was to Hjelmslev, content and expression cannot be freely exchanged and recombined, as the Greimaseans think.

13 The latter is more doubtful, in any case. For instance, if we define iconicity as “un effet de sense de ‘réalité’” (Floch 1984a:12), we may be able to find it also in verbal discourses; but admission to this definition, we have already given up the peculiarity of iconicity, and we have deprived ourselves of the possibility of discovering that there is a peculiarity of pictorality, inside that of iconicity (Cf. Sonesson 1989a,III.).
Part III. Photography – Tracing the index

But, of course, the fundamental issue here is to find out what Floch is really doing in his text analyses, but this is not quite easy, for in actual fact, each one of Floch’s studies appears to be somewhat different. Thus, there is his analysis of the advertisement for the cigarette brand "News", which basically involves a photograph, and which, in the only directly analyzed variant, is a photograph of other photographs (1981a); here, Floch himself claims to be using the same approach as employed beforehand on Kandinsky’s semi-abstract painting "Composition IV", and although there are in fact important differences between these two analyses, which we have noted elsewhere (see Sonesson 1989a,II.3.), the basic operations pertaining to expression and content of the iconic and the plastic layers are identical. However, the resulting similarities are so general, that they could hardly be said to delimit any peculiar kind of discourse, which cuts across the divisions of abstract painting and photography. In both cases, as in many others, Floch discovers a plastic organization in terms of binary contrasts, in particular that between continuity and discontinuity, and mounted on the Lévi-Straussian proportionality.14. If these are not properties of all discourses, as Floch perhaps thinks, then at least they do not seem capable of defining new categories of discourses, simply because they are too abstract.

None of the other analyses, all concerned with what must, at least post festum, be qualified as artistic photography, are as complete as the "News" analyses in the range of methodological operations applied. Another analysis, which however comes close to account for a picture totally, though with much less explicit formalization, is the one concerned with Cartier-Bresson’s "Les arènes de Valence" (1984c). Yet this analysis would seem to ignore many important aspects of the photograph, in particular as far as the plastic layer is concerned, which is precisely why we have chosen to sketch our own analysis of this picture in the beginning of chapter III.2. Although Floch does point to the similarity which this photograph holds with a collage, which would make it into a false photo montage, he does nothing to establish this category as having its locus on a deeper level. Nor does he attend to the difference between the photograph and a collage, and for obvious reasons.

14 In view of the question concerning the generalizability of binary contrasts, which we formulated in Sonesson 1989,II.2., is interesting to note that Floch (1986:26) actually claims that it is because visual messages are not naturally resolvable into discrete parts, that he has chosen to centre his interest on such pictures as are organized around binary contrasts of value, colour, shapes, and so on. This would seem to imply that Floch would recognize the existence of pictures which are not binarily built, but it does not answer the query whether those features which are discovered by means of binary contrasts in some pictures are then thought to be projectable to pictures lacking contrasts. Cf. discussion above in part II, and in III.2. below.
The other photographic analyses are undoubtedly more heavily focused, for rather than aiming to account as completely as possible for one unique photograph, they are clearly designed to illustrate particular conceptual issues. Thus, when Floch (1982b) occupies himself with Doisneau’s "Fox-terrier sur le Pont des Arts", he is out to inform us about the meaning of "iconicity" to the Greimas school, which turns out to be a question of make-believe, and the analysis is consequently entirely on the iconical level, and, even more narrowly, purely narrative. As for Floch’s (1984a:21ff) study of Boubat’s "Nu", it deals with the nature of contrasts, and it thus of general interest to pictorial semiotics, rather than contributing to the establishment of any new demarcations between pictorial kinds. For, although unlike Lindekens’s "contrasted vs nuanced", Floch’s contrasts are not peculiarly photographic, they do not define categories.

More to the point are two others analyses. In the first of these, Floch (1986c:85ff) tries to convince us that one photograph by Stieglitz and one by Strand, taken to epitomize the respective œuvres, may be opposed to each other as are the Baroque and the Classical, according to the five terminological couples which Wölfflin applied to paintings. These comparisons are problematical for numerous reasons, and we will turn to consider them in the next part, when we proceed to review the semiotics of painting. The second analysis is concerned with Brandt’s "Nude" (1986c:113ff), which Floch (p.117) compares to Matisse’s cut-outs, without pursuing the analogy any further. It so happens that we have elsewhere attempted an analysis of some aspects of Matisse’s cut-out "Nu bleu IV" (cf. Sonesson 1989,III.5.2.), and that we had independently been stroke be the similarities between this cut-out and Brandt’s "Nu"; this will therefore give us occasion to attend, in III.2.3., to the similarities of the two pictorial kinds, but also to their differences.

In conclusion, then, Floch’s analyses fails to establish any new division blocks of visual discourses, nor do they seem to serve our purpose of defining socially received picture categories; but they do seem to contain some suggestive analogies, which may serve as a point of a departure for our later analyses.

For the section to follow, however, we intend to stay strictly inside system analysis, and, after making a few terminological and classificatory remarks in the next section, we will turn to a close discussion of the indexical nature of the photographic sign, since there can be not doubt that, for the present, the indexicalist theory of photography is the most thoroughly developed one, which is not to say the correct one.
III.1.2. A note on the four methods of semiotics and the three approaches to photography

We have agreed that it is the business of semiotics to ascertain general facts about objects endowed with meaning, in our case, about pictures, a task which includes both determining how pictorial meanings differ from other signs and significations, and what kinds of meanings are contained inside the limits of variability set by the texture of the pictorial sign. Semiotics, then, is a nomothetical science, a science directed at the elucidation of rules and regularities attendant on each and every case of signification.

In the present case, this is to say our object of study is the system underlying all extant pictures, as well as those about to be produced. In linguistics, the system is often understood at the lists of elementary units available and the rules for their combination, but this conception is, for obvious reasons, much less promising in the case of pictures. Rather, pictures and pictorial kinds may have to be conceived as rules of transformation applied to the visual world (cf. Sonesson 1989a,III.4-5. and III.3. below) The essential point here, in any case, is that generalities, rather than individual characteristics, are our subject matter. No doubt, we cannot expect these generalities to be as general as in the case of linguistics, at least not on this early stage of study, for each single picture clearly involves a formidable number of meshed mechanisms of transformation, thus depending on its belongingness to a construction type, a means/ends category, and a channel division, in addition to the properties stemming from its motives, and the manner and with is has been apprehended. But at least as a distant goals, we are directed at generalities.

Yet our study may possibly begin from particulars. Indeed, we have distinguished before the three semiotical approaches characterized by system analysis, text analyses, and experiment, and we shall now add a fourth one, text classification, which must be situated somewhere in between system analysis and text analysis.

System analysis, it will be remembered, turns directly to the system or, rather, the intuitions we have as users of the system; and we have suggested that the most rigorous variant of this kind of analysis, the only one that qualify as an actual method, is what Husserl's calls imaginary variations, though in the case of social phenomena as those with which semiotics is mainly concerned, imagination
may actually be less free, indeed bounded but the limits of structure (cf. Sonesson 1989, I.1.). Peirce’s triple trichotomies, whatever one may think of his originary intuitions, undoubtedly offers such a structure.

Text analysis, on the other hand, takes its point of departure in a text, that is to say, in a singular occurrence, which, as in our case, may be a picture, and employs it to derive the rules of the system; but of course, in order to be in any sense reliable, such a method supposes the application of the procedure to a series of texts, which, on account of other evidence (most from system analysis), may be supposed to have something in common15, and in such a way that the results of the latter analyses are continuously projected back to the earlier ones to adjust the earlier results.

Experiment, again, supposes the construction of artificial texts, the belongingness to the system of which is determined by the judgments of native system users; or else the creation of partial texts, which are to be completed in accordance with the rules of the system by the native users of the system. Although redescribed from the point of view of semiotics (this analysis of the semiotical methods being itself an instance of system analysis), semiotical experiments hardly differs from psychological and sociological ones, although the emphasis is on the system underlying behaviour, rather than on the individual or the group involved.

Text classification is similar to system analysis in its developed form in that it is based on a intersection of two or more conceptual series, the compatibilities of which are tried out in the analysis. But these compatibilities are not tested on a purely conceptual basis, but by spotting actual examples, in our case, of pictures, answering to that particular constellation of features defining each single case. The result of a text classification is thus a series of analyses of pictorial texts, but unlike what occurs in real text analysis, there is no attempt to account completely for the given picture, but it is characterized only to the extent that it realizes that particular constellation of features which is contained in the conceptual series defining the cross-classification (cf. Sonesson 1989b; 1989d ).

We intend, in the following, to classify all the contributions to photographic semiotics we know of from the point of view of the methods employed. Of course,

15 Of course, here, as in Sonesson 1989a, I.1., we are extrapolating from the structural method in linguistics, but later on we will have to reconsider this characterization; and we should notably have to inquire into the value of a contrastive method, like the one employed be Wölfflin, and by Floch following him in the analysis of a photograph each by Stieglitz and Strand, and which would seem to suppose that we take our point of departure in texts which precisely do not have something in common (but oppositions suppose commonalities, cf. Sonesson 1989a, I.3.2-3.)
few of the writers on our theme has as clear a methodological consciousness as the one sketched out here, some of them may not use a method at all in the proper sense, and still others seem at least some of the time to deny certain of the presuppositions which we have taken as basic (for instance Floch, as discussed above in III.1.1.). However, we will try to locate the different contributions according to the methodological goal to which they appear to aspire implicitly.

At the same time as is summarizes the essential points of our last section, the taxonomy which will be presented below shall serve as an introduction to the section to follow, in that it takes account of what may be termed the basic epistemological conceptions projected onto the photographic sign by the respective authors. In fact, according to Dubois (1983:20ff), the first semiotical theories tended to look upon the photograph as a mirror of reality, or, in Peircean terms, a icon; then came that most famous generation of iconoclasts who tried to demonstrate the conventionality of all signs, claiming even the photograph to present a coded version of reality, or, as Peirce (according to Dubois, at least) would have said, a symbol;\(^\text{16}\) and finally the photograph was seen for what is really is, an index, a trace left behind be the referent itself.

The authorities quoted by Dubois from the first period are in fact largely pre-semiotical: Baudelaire, Taine, Benjamin, Bazin, but also Barthes. Most of the minor classics of semiotics are mustered for the part of the symbol loving team: Metz, Eco, Barthes (once again!), Lindekens, Groupe µ, and so on. In the part of the daring moderns, we find, apart from Dubois himself, such writers as Bonitzer, Krauss, Vanlier, and Peirce of course, but also already Barthes, Benjamin and Bazin, when viewed from another angle of vision.

It is easy to add more examples from our own list to at least the latter two groups, and this we will do in the following. We do not subscribe, of course, to Dubois’s unilineal story of progress; but his distinctions do furnish us with a handy classification of the relevant epistemological attitudes, which will then serve as a background for the subsequent discussion.

Before we proceed to the more general conclusions, a few remarks are in order. This classification is obviously a all respects a simplification, but some of the more jarring attributions have been individually signaled. Thus, the works of Costa and Lambert have been ranged in the symbol case, although these authors really

\(^{16}\) In this section we will be using the term "symbol" in Peirce’s sense, but we avoid it elsewhere, since the term has a very different acceptation in the European intellectual tradition generally. Cf. Sonesson 1989a,III.6. on this issue.
take over the conceptual premisses of Barthes’s model, according to which the
relation of depiction itself is essentially transparent, but Lambert highlights the
ideological over-determination of the referent, which is underplayed in at least the
later publications of Barthes; and Costa focus on the technical effects as a separate
information channel. Indeed, apart from Lindekens and Floch, there really are no
unqualified supporters of the symbol position.

<table>
<thead>
<tr>
<th>Epistemology</th>
<th>Icon</th>
<th>Symbol</th>
<th>Index</th>
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</thead>
<tbody>
<tr>
<td>Method</td>
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<tr>
<td>Experiment</td>
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<tr>
<td>Text classification</td>
<td></td>
<td>Bengtsson et al.; Brög 1983a, b; 1984; 1985a, b. Lindkens 1971b</td>
<td>#Dubois 1983; #Sonesson 1989a</td>
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</table>
Although we have placed Schaeffer in the index case, this is only because this is that part of his thesis which appears to be (comparatively) new, for he actually insists equally on the contribution of iconicity. Peirce himself certainly seem to consider the photograph an icon as well as an index, and Brög, like other orthodox Peirceans, searches the sign, as a matter of course, for all the possible sign characters. Reservations must be made, from quite a different point of view, as far as the indexical text classifications are considered: Dubois is entirely, and Sonesson is mostly preoccupied by the differentiation of depicted indices, that is, such indices as are conveyed through the photographic sign, instead of being coexistent with it.

On the more general level, we cannot fail to observe that all experiments and most text analyses start out from a conventionalist stance, whereas indexicalist epistemology and conventionalist together accounts for most system analytic works. In addition, indexicalists have contributed no text analyses, and experiments are entirely due to the conventionalists. There is really no text classifications applied to photography, for those listed really pertain to depicted indices, as we noted above. Thus, there is at least a suggestions that different methods have furnished evidence for distinct models.

Before we enter the discussion of photographic indexicality, in the next section, it will be convenient to establish a rough categorization of the pictorial construction types, and to give photography a place in that taxonomy. Sonesson 1989a followed the psychologist Gibson in admitting a primary distinction, among those signs which are markings on surfaces, between photographic and chirographic pictures, that is, literally, pictures produced by the workings of luminosity on the surface, and pictures the markings of which are made by hand. According to Espe 1983b, however, graphics, which comprises all kinds of manipulations of two-dimensional surfaces, is really of three kinds: photographics, chirographics, and typographics. Like the term photographics, that of typographics here retains is ordinary sense, but it could perhaps also be conceived to mean, more broadly, the production of markings on surfaces by the use of standardized implements. In the latter case, we could transform Espe’s little taxonomy in a cross-classification of the following kind:

<table>
<thead>
<tr>
<th>elements</th>
<th>standardized</th>
<th>free variation</th>
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<tbody>
<tr>
<td>productive link</td>
<td></td>
<td></td>
</tr>
<tr>
<td>contiguity</td>
<td>typographics</td>
<td>photographic</td>
</tr>
<tr>
<td>similarity</td>
<td></td>
<td>chirographic</td>
</tr>
</tbody>
</table>
This brings us in the cognitive neighbourhood of another classification, proposed by Gubern (1987b:46f), 17 which distinguishes between chirographic pictures, such as drawings, and technographic pictures, which is a group comprising photography as well as pictures produced by the cinematographic camera and the video, and which should also, I think, include what Gubern (1987a:73ff) elsewhere terms synthetic pictures, that is, pictures produced by means of a computer. 18 It is not actually the same classification, however, for although they are not hand-produced, neither photographic nor cinematographic pictures, nor all synthetic pictures are created using standardized elements, as is the case with typography; indeed, is is one of the remarkable feats of desktop publishing that it de-standardizes typefonts, permitting them to the varied along a number of dimensions (size, obliqueness, etc.), thus bringing them closer to being pictures.

<table>
<thead>
<tr>
<th>productive tools</th>
<th>hands</th>
<th>machines</th>
</tr>
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<tbody>
<tr>
<td>productive link</td>
<td>chirographics</td>
<td>technographics</td>
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<tr>
<td>contiguity</td>
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<td>videographic</td>
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<td>typographic</td>
</tr>
<tr>
<td>similarity</td>
<td>chirographics</td>
<td>computerographic</td>
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</tbody>
</table>

This breaking up of the association between that which is machine-made and that which is standardized is a characteristic feature of information society (at least on the face of it), but it really already began with photography and the cinema. However, what is more remarkable, from our present point of view, is that synthetic pictures, which, as Moles (1981) notes, may look exactly like photographs, do not regulate themselves on anything like contiguity, but are rather (indirectly)  

17 This is only part of Gubern’s classification, which also distinguishes pictures according as they are autogenrated or exogeneous, private and public, bidimensional or tridimensional, fixed, sequential, or mobile. We will comment on these overlapping categories in the new version of Report 2#. More to the point, for our present purposes, is Gubern’s threefold division of all visual information into the visible natural world, the visible cultural world, and the gestural system, where then those parts of the visible cultural world which are specifically destined to visual communication are separated into writing (our typographics), pictures, and other kinds of signalling devices. Gubern may be right, from a certain point of view, in lettering the branch of typographics separate out earlier than the others, since they do not contain pictures in an ordinary sense; but out point of departure, in the table given in the text, is the more general category of markings on surfaces.

18 That is, at least some subgroup of computer-produced pictures, whereas another sub-group may , as far as its productive link is concerned, come closer to freehand drawing. We will return to this issue later.
mediated by similarity.\textsuperscript{19} This really brings us to quite another categorization, as is seen above.

That is, traditionally all hand-produced pictures regulate themselves on similarity (they depend on what Gibson calls the hand-eye-system)\textsuperscript{20}, whereas all machine-made pictures are indexically derived — until this simple organization is destroyed by computerographics. We will refrain from drawing any further conclusions from this table, before having discussed more thoroughly, in the following sections, the nature of photographic indexicality.

III.1.3. On the specific sign character of photography

In this section, we intend to initiate an in-depth discussion of some of the theories pertaining more specifically to the nature of the photographic sign. We will follow Dubois in considering these theories under three divisions: such theories which take the photograph to be essentially an icon, those that claim it is as conventionally based as other pictures and/or as verbal signs, and those that claims its nature can only be derived from indexicality.

But there are really no theories to discuss about the iconical nature of photography, in the sense that there are no argument for this position; all through most of photographic history, it has simply been taken for granted. One exception may be Barthes’s enumeration of the respects in which photography differ from drawing. Thus we will consider this conception, together with the opposite, conventionalist argument, in our first subsection. Then we will review critically the claims for indexicality, as presented by Vanlier and Dubois. Although Schaeffer also defends an indexicalist position, though a somewhat more moderate variant of it, his theory will be considered under a separate heading, simply because we came to acquaint ourselves much later with his contribution. In fact, it will be seen that some of the critical observations we will direct at Vanlier and Dubois have been anticipated by Schaeffer; other,. however, remain valid also for Schaeffer’s theory.

\textsuperscript{19} Thus, if post-modernism is really epitomizing the indexicality character of photography, as Krauss would like us to believe (cf. III.3.), it is a late-comer to the game, for the most “revolutionary” images of today are not indexicality-based!

\textsuperscript{20} which includes hand-held tools. There is a problem, of course, a determining the limits between such tools and certain simpler kinds of machines.
III.1.3.1. The nature/culture debate in photography

There has been a common understanding, from the inception of photography onwards, that the photograph, even more than any other kind of picture, constituted a natural sign par excellence — or, more exactly, it was taken to be so intimately associated with the object depicted, with no distance being involved, that it could not even be considered a sign. To Fox Talbot, photography was "the pencil of nature"; and those who denied to photography the capability of being art, thought the photographic plane was produced, for good or for worse, as a direct emanation of the motive itself (Cf. Freund 1974; Gubern 1987b:145ff; Ramírez 1981; Scharf 1968; Tausk 1977 ). Indeed, the idea of photography being an emanation detaching itself from the object’s (or at least the subject’s) soul was taken quite literally by Balzac, at least as his theory of spectres is recounted in Nadar’s memoirs (cf. Krauss 1982 ).

However, Barthes may have been the first to state explicitly the respects in which the photograph could be supposed to be more close to its object than other pictorial kinds. Only photography, he claims (1964a:34f) is able to transmit a message, without using either discontinuous signs or rules of transformation. That a drawing, on the other hand, must be coded (that is, comparatively conventional) appears, in his view, from three considerations. First, the rendering of the object in the drawing is dependant on historically variable, and systematic, rules of transposition. In the second place, no object can be transposed to the drawing without a selection having been made beforehand from all the properties possessed by the object in the real world, and this selection gives rise to style; whereas photography is unable to intervene in the internal details of the object it renders (and thus, Barthes would seem to say, lacks style!). Third, drawing ability has to be learnt, as must the use of any other code (but photography, Barthes apparently implies, is innate!).

These arguments, which may certainly be somewhat naive, should not be rejected offhandedly, which is what Floch (1984a:26) does. Instead, let us have a look at them in turn, beginning from the rear end. But it is interesting to note, before we go on, that the historical nature of drawing is doubly affirmed: both in the characterization of its working principles (first aspect), and when the necessity of their inculcation is claimed (third aspect). Actually, this historical character is again included in the second aspect, when it is said to produce style. And even more deep down, what is implied by all three aspects is really that drawing allows a choice, even if that choice is historically fixed: but even so, that may not really be the same thing as arbitrariness in the sense of Saussure, which to structural
semiotics only makes something into a sign (and we will return to this issue below).

There is something true, of course, in the observation that the ability to draw has to be learnt, whereas photography may seem to be a possibility open to everyone without any preceding training. Gubern (1987b:46) comments on the apparent paradox of chirographic agraphy being nowadays much more common than a technographic one. It is not clear what this means, however. Small children presumably always begin to draw, but we ignore it they would do it spontaneously, without incitement from parents or teachers (cf. Gardner 1973;1980 ); but it is even less obvious if we should expect babies to start taking photographs all of their own. In fact, to the extent that a photograph may be produced, as the Kodak slogan goes, simply by pushing the button, the child should be able to discover the method; but on the other hand, the functionality of the camera would seem to be much less apparent than that of the pencil, and thus harder to detect. Of course, not even Barthes would argue that the ability of take photographs is really innate; but like the ability of decode pictures generally, to acquire it may require experience of the world, rather than experience with pictures.

On the other hand, if we take drawing ability to imply the capability of producing the illusion of a likeness, a lot of inculcation may be necessary for someone to gain this ability, and may not even be sufficient, as most of us have been trained to draw at school for years, and are yet unable to draw in this strong sense of the term. But then again, if some stronger requirement than being able to push the button is put on photography, we should certainly discover that some degree of training is indispensable. However, it seems to be a fact than any one of use may pick up a camera, decide on a motive, and produce at least a rough likeness, while being unable to do the same thing using pen and paper.

If drawing ability requires training, and photography less so, then this is not a fact about the nature of drawing and photography, but a consequence of their different nature. That it to so, Barthes’s third aspect is not really on the same level as the other two. So now we should inquire into the possibility of some of the other aspects being the requisite cause for the different need of training. Actually, we are not concerned with two independent phenomena: rather, what we have in the case of drawing, according to Barthes, is a set of rules for mapping perceptual experience onto marks made with a pen on paper; and these rules imply a particular segmentation of the world as it is given to perception, picking up some (kinds of?) features for reproduction, while rejecting others, and perhaps emphasizing some properties at the same time as others are underplayed; and all this takes place under given historical circumstances, which are
responsible for varying the emphases and the exclusions. Stated in this way, the theory certainly seems feasible. The question is, would it not also be valid for photography?

Indeed, photography must suppose some rules of transposition, at least as far as the two-dimensional rendering of three-dimensional objects is concerned. Each two-dimensional dot on the photographic plate actually assembles the coordinates of a three-dimensional spot in space (and, of course, in time). These rules of transposition, whatever their origin, are built into the optical apparatus which is a part of the camera giving rise to the images, and are thus not mediated by the consciousness of the picture producing subject. It is of little avail to determine to what extent the photographic perspective is a direct, historical descendant of Alberti’s devices for transposing space into drawing (for that kind of argument, see for instance Ramírez 1981:161ff ); for pictorial perspective, while it is not identical to real perceptual perspective, is certainly in no way arbitrary (cf. our discussion of perceptual psychology in Sonesson 1989a ). Rather, the point is that these rules, even if originally conventional, are incorporated into the apparatus, and thus not present to consciousness in the actual process of picture production, but are pragmatically given, prior to the inception of that process, just as is the subject matter itself.

Is it then true, as Barthes (1964a:34f) suggests, that

"le dessin ne reproduit pas tout, et souvent même fort peu de choses, sans cesser cependant d'être un message fort, alors que la photographie, si elle peut choisir son sujet, son cadre et son angle, ne peut intervenir à l'intérieur de l'objet (sauf truquage)?"

Of course, there is an obvious sense in which we must object that neither does the photograph render all of the object, and this in part for reasons that Barthes himself goes on to quote in the text above. Indeed, we have noted elsewhere three "intrinsic indexicalities of picturehood" (cf. Sonesson 1989a, I.2.6.):

"IVa) A factorality between the content and the referent, i.e. between what is seen in the picture and what is thought to be "there" in the world (between the picture object and the picture subject, in the terminology of part III.) The referent can probably never be rendered in its entirety in a picture: we will have to make a choice among the possible noemata, the possible attributes, or both, and maybe also among the proper parts, and obviously (if we exclude X-ray pictures, and so on), we are limited to attributes and noemata having the attribute visibility (cf. I.2.4.). IVb) Protained continuities (cf. I.2.4.) from the expression plane of the picture to the expression plane (and thus the content) of other pictures, real or only possible ones. This indexicality type is often complementary to the first one. IVc) A contiguity, more precisely an abrasion, between the expression and the second element, which may sometimes be the referent (as in photography, according to Peirce)."
In fact, apart from the imprint of the object left on the photographic plate, which so much interests Dubois, Vanlier, and Schaeffer, and which is our last type of indexicality, there are at least two our kinds of indexicalities, intrinsic to every picture, and thus also present in photography: the factorality, or part/whole relationship between the content and the referent, which may be conceived in terms of attributes, proper parts, and/or perceptual noemata; and the continuities extending from the lines of the expression plane interrupted by the border. As we shall see, these latter two types of indexicality confounded, are also considered to be peculiar to photography by Dubois (cf. III.1.4.). This may be exaggerated; but they are certainly present in photographs too.

In terms of the factorality between content and referent, however, Barthes may be taken to claim that photography is able to pick up particular proper parts (“son sujet”, “son cadre”) and perceptual noemata (“son angle”) of the whole motive, but cannot chose to render just a few of its attributes. In some all too obvious ways this is false: for essential reasons, photography only transmits visual properties, and it only conveys such features as are present on the sides of the object fronting the camera. Also, depending on the distance between the camera and the motive, only features contained in a particular range of sizes may be included. So far, no trick photography is involved. However, it seems to be true that, without recurring to later modification of the exposed material, photography is merely able to pick up features, or restrict its selection of features, on the global level, whereas in drawing, local decisions can be made for each single feature.

Now we know from cognitive psychology and brain research (see Gardner 1982:283ff;322ff; 1984:173ff, discussed in Sonesson 1989a,I.4.4. ), that centres in both halves of the brain are involved in the production of an ordinary drawing, the right half contributing contours, configurations, and overall organization, and the left half determining the details and inner elements, and the richness of their variation. In Piagetean terms, both figurativity and operativity are required. But since the elaboration of a photographs seems to be consciously mediated merely on the global level, we should expect photography to be a much more exclusively figurative business. Put bluntly, photography does not require any real perceptual analysis on the part of the photographer.

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21 Indexicalities, as they are defined in Sonesson 1989a, are not indexical signs, because they fail to fulfil the requirements of having discontinuous parts; but under certain circumstances, they may be exploited for the building of signs.
Both Gubern (1974:50ff 1987b:156ff) and Ramírez (1981:158ff) have made up lists of the various ways in which a photograph is different from that reality it is supposed to render. It seems that, in all these cases, we are confronted with modifications which are globally applied to the depicted percept. In the table below, these rules of transposition have been reproduced (those of Gubern are marked G, and those of Ramírez R), and we have tried to distinguish those which are valid for all pictures from those which affect photographs only, and those to which all photographs are subject from others which are largely optional.

<table>
<thead>
<tr>
<th>Rules of transposition</th>
<th>Pict</th>
<th>OpPict</th>
<th>Photo</th>
<th>OpPhoto</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Abolition of the third dimension with the possibility of modifying perspective by means of exchanging objectives</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>R</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1*. Projection of real-world three-dimensional space onto a surface of two dimensions, using perspectival grid</td>
<td></td>
<td></td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td>Comments: Perspectival systems, as used in photography, must be globally applied. In painting, if used, they are always locally modified, at least to adapt to common objects, whose shape is better known than seen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. The delimitation of space through the frame (where the dimensions of the included space (c) depends on the focal distance (f) of the objective, the distance between the camera and the motive (d), and the size of the photogram (h), as specified in the formula ( f:h=d:c ).</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Comments: There is no formula for determining the corresponding dimensionalities of the drawing, since this cannot be globally determined.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rule</td>
<td>3. The exclusion of movement</td>
<td>4. Monofocal and static character of vision</td>
<td>5. Granular, discontinuous structure of the expression plane, though largely irrelevant because of perceptual limitations of the human eye</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Comments</strong></td>
<td>Gubern clearly thinks of the movement of the motive, but there is also a limitation of the gaze itself, as noted by Ramírez in point 4 below.</td>
<td>Most pictures are monofocal, that is, they depend on Cyclopean vision, although Cubism and split-representation are exceptions among chiro-graphic pictures. More importantly, perhaps, the static character of visions means that in addition to the movement of the motive, that of the subject is excluded. Of course, early photography, with its long times of exposition, really assembled information from the motive over a large period of time—but the result was very different from the perceptual syntheses of ordinary human vision.</td>
<td>Curiously, even Vanlier and Duboisinsist on this granular character of photographic representation; and Lindekens is of course intensely concerned with it. However, as Gubern suggests, this granular structure is largely irrelevant, and it has nothing to do with features of a linguistic kind, for the same reason that Eco’s typographic screen has nothing to say about the nature of pictorial expression (cf. Sonesson 1989a, III.2.6-7).</td>
<td></td>
</tr>
</tbody>
</table>

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22 That is, in all static pictures, and not, most notably, in the cinema.
Although Ramírez talks about photographic conventions, his rules do not go a long way to conventionalize photography; and Gubern does not even make that kind of claim. Lindekens, however, is actually out to establish the conventionalist character of photography, in a sense comparable to that in which
verbal language is so considered. Putting together the accounts assembled from different texts, we believe that Lindekens, in addition to a rather unclear argument for double articulation, may be said to offer us essentially two phenomenon for consideration. There is the mutual dependence of the contrasts and nuances, which cannot both be true to reality, which we considered in the first section (in III.1.1.). And their is the possibility to redefine, by means of high contrast, the limits of real-world objects in the photograph. Both these factors really concern modifications of the referent as transposed into photography, but are they global changes?

We have already observed, that Lindekens’s opposition contrasted vs nuanced has nothing to do with a linguistic opposition, in spite of Lindekens’s own claim to the contrary (cf. III.1.1.). But clearly, the dependence of contrasts on nuances is a restraint of the possibilities of transposing objects into photography, and as such it applies to the photograph as a whole, whereas in a drawing, contrasts and nuances are freely correlated. Also when high contrast is used to redefine the limits between objects, this contrast applies to the photograph overall. Both since the photograph must be focused somewhere, it is clear that effects like these will not manifest themselves equally all over the photographic surface. However, this does not mean that local decisions became possible also in the elaboration of the photographic expression plane (this is only true of the subsequent treatment of the emulsion), but only that the global decisions have a thematic centre where they apply fully, the consequences being less determinate, or less developed, as we go from the centre.23

Even if, contrary to Barthes, we have admitted that even the photographic images obeys certain rules of transposition, we have not thus far established the arbitrariness of photography, in the sense in which Saussure uses this term. Indeed, a rule of transposition supposes there to be some entity which is transposed, however changed, as a result of the process. Let us now consider the double sense of arbitrariness in the work of Saussure, and compare them to some of the ways in which convention enters photography (cf. Sonesson 1989a,III.1.1. ).

In the first sense, it is affirmed that there is nothing consubstantial to the thing designated and the sound used to indicate it, these sounds being different from one language to another. As compared to this, it is true that the photograph, as any picture, is a surface, while that which is depicted is most of the time a three-dimensional object; but both are visually characterized phenomena, creatures of light, so to speak, and they give rise to an impression of similarity.

23 See the discussions of Vanlier’s “minceur de champs” in the following subsection!
In the second sense, it is claimed that the way in which verbal signs cut up and parcel out reality does not obey any rule intrinsic to reality itself, and so is arbitrary, and shifts from one language to another. However, even in the case of verbal language, this is only relatively true: first of all, it is certainly more plausible to think that the segmentation of the world accomplished by language follows the one laid down beforehand by the particular sociocultural Lifeworld; and secondly, we have nowadays substantial evidence from cognitive psychology which tends to show that the differences in categorization are not so great, at least on elementary levels, as was once thought (cf. Sonesson 1989a,13). Although photography, perhaps more than any other kind of picture, is able to detach things from their perceptual context, it does not offer a new segmentation of perceptual reality in a strong sense. Actually, photography can only be said to be arbitrary in a third and and fourth sense: in that it renders only some particular portions of perceptual reality (visual reality, under certain conditions of luminosity, etc.), and that it reproduces this reality as far as this is possible given the nature of its support (the emulsion, the optical device, etc.). This directly brings us to the issues treated in the next subsection.

Before we proceed to our discussion of indexicality, however, two other concern will retain us briefly. First, there is Lindekens´ belief that a double articulation can be established in photography, and thus conventionality, since the latter them have traditionally been linked to the former. We consider this argument ruled out by our general study of pictorial semiosis (in Sonesson 1989a,III.3-4.). If minimal units are to be considered, then Vanlier´ observation, that whereas drawings uses lines, those of photography are patches ("des plages"), is more to the point; still this leaves us with the question of how to differentiate photographs and cut-outs (cf.III.2. below).

Secondly, it should not go unmentioned here, that whereas photography, because of its lesser degree of conventionalism, may seem to stand further apart from the prototypical sign than chirographic pictures, it at the same time acquires for picturehood one of the other traits usually associated with the sign: repeatability, or *iterability*. Ivins (1953) early on insisted on the historical importance of the introduction of means for rendering the picture identically repeatable, the first of which were engravings, in particular as used in floras. But of course, engravings do not repeat indefinitely, each printing involves at least some small modifications, and, before it was supplemented by photographic processes, it could only indirectly convey the facture of the original. As is well-known, Benjamin (1974) thought only photography would make possible the reproducibility of the
pictorial sign (or, more precisely, of the work of art). More recently, Ramírez (1981.17ff) has conceived the whole development of a visual mass culture as a progressive iconographical densification, that is to say, an augmentation of pictures per inhabitant on the globe. When more closely scrutinized, this densification is actually seen to involve at least three different processes (not properly distinguished by Ramírez):

1) that the production of images having been made less costly, in particular in terms of what Moles would have called the time-budget, the number of images-type have been increased;
2) that since the means of reproduction have been perfected, more, and more adequate images-token may be made from each images-type;
3) that images, that were at other times only accessible in a small number of spaces, such as churches and palaces, are now circulated more widely (and, if we think of such channels as television and reviews, more actively circulated, issued somewhat more explicitly as directed messages).

There is a last paradox to be considered, however. Ivins pinpointed the importance of repeatable reproduction for scientific work, in particular as used in biological treatises; and, according to our argument, repeatability of pictures is perfected by photography; and yet, even today, floras continue to use drawings rather than photographs. This is because in a flora, not only the original must be identically reproduced, but the former should reproduce the plant-type, not a unique plant, and for reasons of which Barthes was clearly aware, chirographic pictures more easily leave out irrelevant attributes than photographs (cf. discussion above). What this means, then, is that what photographs reproduce is, at least in a comparative sense, not the object-type, but singularity. This explains that, much later, when reflecting on photography, Barthes (1980:21) would dream about a *mathesis singularis* (also cf. Delord 1986). But there is of course no way of making this science *speak*!

**III.1.3.2. Introduction to a theory of traces. Aspects of indexicality in the work of Vanlier**

Let us now have a fresh look at the nature of photography, considered this time from the point of view of indexicality. We will scrutinize the somewhat overlapping, yet distinct theories on this matter which were developed more or less at the same time by Vanlier and Dubois. It should be clear from the beginning that in what follows, we can only pick out a few of the themes touched on by these authors. To familiarize oneself with their full theories, there is, as always, no other method than to read their books.
We shall have no quarrel with what, on the face of it, appears to be the essential issue: there is actually an indexical relation, in this case a contiguity, between the photographic expression plane, and one or more objects present in the real-world situation in which the photograph was produced. In terms of our earlier investigations, however, an indexicality is not yet a sign (cf. Sonesson 1989a, I.2.). Thus we still have to inquire into the nature of that kind of indexicality which is present in photography, to see if it is susceptible of being the carrier of a sign relation; and then we have to investigate if in actual fact it does carry one, and if it always does. In our discussion of the work of Vanlier and Dubois, we in particular hope to address the first issue.

When photographs are said to be indexical, contiguity is always meant, and a particular kind of contiguity at that: a contiguity close enough for the referent to rub off on the expression plane of the sign, albeit not contemporaneous with the semiotical functioning of the sign, but more or less anterior to it.24 Inspired by the parallel between Peirce’s conception of indexicality and abduction, and Sherlock Holmes’s famous method, which has been explored by Sebeok, Eco, and others, we have suggested elsewhere (in Sonesson 1989a, I.2.) to term abrasion an indexical relationship resulting from the fact of what it to become the referent having entered into contact with, on some prior moment of time, and then detached itself from, what later is to become the expression plane of the sign, leaving on the surface of the latter some visible trace, however inconspicuous, of the event.

At this point, it will be useful to attempt a more systematic description of abrasion, so as to locate it among other kinds of indices. In an earlier work (op.cit.), we have argued that there are essentially two kinds of indexical relationships, that of factorality, by which term we refer to the relation from part to whole, or the inverse, and that of contiguity. In the case of abrasion, it is contiguity, not factorality which is involved in the constitution of the indexical relation; in particular, it is direct contact, not mere contiguity which is so involved. Furthermore, the event producing this contact took place at a moment prior to the use of the sign as a sign, not at the same time, or before it; and it left some traces of its occurrence on the object presently functioning as the expression plane of the

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24 It is because Barthes always maintained, from his earliest to his last work on our theme, that the photograph conveys the idea, when observing the scene depicted, of "cela a été", that Dubois is able to muster him also among the supporters of indexicality. But this is of course a very indirect way of invoking indexicality, for it merely attends to the temporal aspect (on which see our discussion of Schaeffer below), not to the contiguity from which is may be taken to result, nor its particular modes. That is, Barthes reads indexicality on the purely ideological plane.
sign, so that the interpretation of the sign is not entirely given over to abductions based on historical knowledge.

If this is so, abrasion may be placed in the following grid, without prejudging, for the instance, on the possibility of filling up the other slots. So far, all we have tried to do is the clarify the common-sense notion of abrasion, in particular so as to include among its number not only the "trifles" scrutinized by Sherlock Holmes, but the photographic picture. It must be left to the following discussion to find out if this conception is feasible, and if it has to be modified.

<table>
<thead>
<tr>
<th>Contiguity</th>
<th>Factorality</th>
</tr>
</thead>
<tbody>
<tr>
<td>closeness</td>
<td>contact</td>
</tr>
<tr>
<td>R/ E before t₀</td>
<td>visible</td>
</tr>
<tr>
<td>known</td>
<td>?</td>
</tr>
<tr>
<td>R/ E at t₀</td>
<td>?</td>
</tr>
<tr>
<td>R/ E after t₀</td>
<td>?</td>
</tr>
</tbody>
</table>

Now, let us have a look at Vanlier’s interesting observations on the nature of photographic indexicality. He begins by making a host of distinctions, the first of which concerns what the photographic imprint is an imprint of, and is very useful, which makes it all the more regrettable that he later forgets to make use of it himself, and the second of which implies, by the contrast of terms in introduces, that it is not really the Peircean notion of indexicality which is employed. Indeed, Vanlier remarks that the photograph must be taken to be a direct and sure imprint of the photons only, and merely an indirect and abstract one of the objects depicted. Thus

"Il ya donc eu un événement, l'événement photographique: la rencontre de ces photons et de cette pellicule. Cela a certainement été. Quant à savoir si à cet événement physico-chimique en a correspondu un autre, un spectacle d'objects et d'actions, dont les photons emprunts seraient les signaux en tant qu'émis par eux, c'est beaucoup plus problématique et demande à être soigneusement précisé." (Vanlier 1983:15).

One should expect, then, that Vanlier would find it necessary to problematize the requirement of similarity in photographs, that is, the obligatory correspondence of a photograph to a recognizable scene susceptible of taking place in the ordinary experimental world, but as a matter of fact, he does never broach the theme. Dubois
does, however, as we shall see, for he selects as the typical instance of a photograph what has been variously termed a Rayogram, a Schaadogram, or a photogram: the direct impression by contact of the (more or less deformed and often unrecognizable) shapes of objects placed directly on the photographic plate, and subjected to a light ray taking its origin on the opposite side of the objects.  

We will have to judge this analysis on its own merits later, but we should already take notice of the curious fact that, only a few pages after having attributed all imprecisions of the theories of photography to the confusion between the photons and the objects (p.15), Vanlier himself starts telling us that the indices signal their cause, which is the scene ("des indices, qui signalent leur cause, le spectacle"); p.23; "renvoient à leur cause (à leur spectacle éventuel)"; p.25), and then goes on all through the book contributing to the imprecisions he originally denounced!

There is, however, another problematical features of this approach, and that is that while we may certainly be on safer ground in claiming the contiguity relationship to hold between the plate and the photons, than when we attribute this same relation to the expression plane of the photograph and the objects depicted, there can be not doubt that, when the photograph is seen as a particular kind of pictorial sign, this is because it is taken to be a sign of the objects depicted and/or of the real-world scene in which the objects are present. The contiguity relationship potentially characterizing an index does therefore not obtain between the same relata as the semiotic function, defining the sign as such, and there thus would not be any indexical sign present in this instance. In fact, even in the case of the photogram, the sign relation connects the photographic surface and the objects, not photons or light.

This may not be too serious in the context of Vanlier’s own theory, for the next distinction introduced will anyhow bring us out of the Peircean framework into a conceptual no man’s land. According to Vanlier, we should distinguish “des

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25 It is interesting to note that Schaeffer (1987:59f) explicitly rejects the photogram as a candidate for consideration, although he does not mention Dubois’s divergent opinion. However, it certainly seems clear that the photogram is not the first instance of a photograph we would think of, and thus not the one from which the properties of the prototypical photograph may be derived. Cf. discussion of Schaeffer in III.1.3.3. below!

26 Schaeffer (1987:59f) suggests we should distinguish scientific uses of the photogrammatic technique, as those of Fox Talbot, from the abstract compositions of Moholy-Nagy, and the surrealist-figurative works of Man Ray. However, if the objects are recognizable or not, their presence in the confection of the photograph remains an essential definitional criteria of photograms, and they are thus involved in the sign relations characterizing the photograms as such. Similar shapes may equally be produced by applying some implement directly to the photographic emulsion, but the result is then no photogram.

27 Vanlier’s book is notorious for containing no references to the work of other thinkers in the domain, but it does contain a short appendix, in which the authors takes his distances to, among others, the work of Peirce. In particular, our author takes Peirce to task for confusing “l’index” and “l’indice”, and he claims that the interesting things which Peirce says about his “index” really applies to what is ordinarily designated by the
Part III. Photography – Tracing the index

index" and "des indices", a proposition which is impossible to translate into English, since the first term is there employed merely to express the singular, while the second one is used only in the plural. Of course, if the distinction as such were found useful, it would be possible to find some alternative terms to do the same business. So let us have a look at the conceptual point that Vanlier (p.22ff) is out to make.

Signs, in Vanlier’s view, are intentional, conventional, and systematic. However, some signs, such as sculptures and paintings, are analogical, because there is a kind of proportion between them and that which they designate. Other signs, however, like words and digits, are digital, because they designate things by means of labeling them in terms of a system, which is reducible to a set of binary choices between one and zero.

What Vanlier wants to term "des indices" are neither intentional, nor conventional, nor systematic: they are physical effects of a cause which they indicate in an equally physical way.28 The general category, of which these are a type, and which is opposed to signs, is termed signals by Vanlier. As against this, there are what Vanlier calls "des index", typified by the index finger and the arrow pointing to an object, and these are signs, because they are intentional, conventional, and systematic, although very elementary kinds of signs, for they do not designate anything, but only indicate it. Interestingly, Vanlier (p.23) apparently thinks photography importantly involves also this latter type of sign: it is present when, by means of the choice of film, lighting, or a particular type of frame, some part of the photograph is isolated for particular attention. He we encounter, among others things, a number of effects which to Dubois are still indices, in the Peircean sense, and which we have qualified as depicted indices (cf. III.1.4. below).

Now to return to the essential point, it would seem that to Vanlier, there are two principal types of meaning-bearing devices, signs, which are intentional, con-

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28 There are two types of such "indices", but their difference never becomes very clear, at least not to me: "Les indices ne sont pas des signes, ce sont des effets physiques d'une cause qui signalent physiquement cette cause, soit par monstration, comme l'empreinte de la patte du sanglier montre cette patte, soit par démonstration, quand un déplacement insolite d'objets démontre au détective le passage d'un voleur." (Vanlier 1983:22ff) No doubt, the mark left by the horn of the wild boar is an imprint, resulting from abrasion in a very straightforward sense, but the modified arrangement of objects in a room which is one of these trifles which were so informative to Sherlock Holmes and William of Baskerville, can perhaps only be decoded once the relationship between a number of perceptual units have been scrutinized, and employing a much richer encyclopedia, but it is not obvious that this is the distinction which interests Vanlier. In any case, in Sonesson 1989a.I.2.6., we have discussed a few cases from the work of the ethologists Ennion & Tinbergen, which would seem to bridge the gap between these two types of abrasion.
ventional and systematic, and signals, which have neither of these properties. Perhaps we may take this to be a variant of the traditional distinction between instituted and natural signs, as found in the work of Dégerando and others (cf. discussion in Sonesson 1989a,III.1.). Signs are analogical or not; but the third group of signs are not easily integrated with this classification, since the capacity to indicate is quite another kind of property. On the other hand, there apparently are no other signals than those which are physical, that is, those which Vanlier terms "des indices".

There is no doubt much confusion in Peirce's notion of index, but Vanlier's contribution certainly goes a long way to augment it. However, Vanlier is right up to a point: indicators, if we may so term signs which are employed to single out an object or a portion of space for attention, are not necessarily indices in Peirce's sense, and they are, in any event, not sufficiently characterized by being so classified (we already hinted at this fact in Sonesson 1989a,1.2.5. ). Thus, certain indicators, as pointing fingers and arrows do suppose a relation of contiguity with that which they point to; but this is not necessary, or even possible, in the case of many verbal indicators, most maps, and the options for making a photograph depending on film, lighting, and frame mentioned by Vanlier, in which case the indicative gesture is merely recreated at the level of content. It is also true that real indicators, such as fingers and arrows, are equally contiguous to a number of objects which they do not indicate; thus, mere indexicality will not do, but something more is required, in the case of the arrow, for instance, the forward thrust of the arrow-head as imagined in water, or the sentiment of its slipping from our hands, as Thom has suggested.29

The attitude which we may take on these distinctions, on the end depend on a more general issue, viz., the receivability of the opposition between signs and signals, reposing, as it does, on a threefold opposition of conventionality, intentionality, and systematicity. For reasons, which it would be too long to broach here, and which have been abundantly discussed in Sonesson 1989a, there can be no signification without a semiotic consciousness. All objects and parts of the universe interact, more or less directly, and thus will physically affect each other;

29 The term certain signs "indicators" is, obviously, to make a categorization of signs on the basis of their functions, as seen in relationship to the over-all scenes in which signs are produced. We should not expect this categorization to coincide with the one stemming from Peirce's classification, which depends on the nature of the relationship between the expression and the referent of the sign (or the content; both are contained in what Peirce calls the object, in so far as this by now traditional distinction can be identified with the one made by Peirce between the immediate and the dynamical object). Of course, from this point of view, the term "index" is a misnomer, for although the finger known by this name may function as an index, it is not just that, as we said above. Unfortunately, Peirce certainly confused the two classifications, which explains his use of the term.
but most of these interactions are neither detected nor detectable by human beings (or animals). For a physical point of view, the production of a single photograph depends on an infinite list of factors, some of them stemming from the inception of the universe. Therefore, we can only be interested in those of these factors which somehow stand out to human consciousness, and thus carry signification. In this sense, Vanlier’s notion of "indice" is conceptual nonsense, for either the physical effect is also a signification, or it is not merely physical.

Of course, in becoming present to consciousness, the trace does not necessarily acquire any high degree of systematicity, but neither is it obvious that those signs which Vanlier terms "index" possess it. As for the conventionality of these significations, they possibly only derive from the fact of certain traces having been highlighted, while others are neglected, but something similar could be true of Vanlier’s analogous signs. Again, they are of course not intentional as traces, but certainly as significative traces. Thus, while there may be differences between these significations and those present in, for example, verbal signs, it appears to us to be conceptually unsound to erect watertight bulkheads between them.

In spite of the doubtful nature of those of Vanlier’s distinctions we have considered so far, we shall find that he has done a good work attending to the peculiar nature of the photographic trace. Thus let us now take up for discussion those different features which, according to Vanlier, make the difference between the photographic trace and other imprints.

The first of these properties is intimately connected with the fact that the photographic trace does not result from the objects themselves, but from the photons emitted by the objects. The photonic imprint lacks all weight, it does not have any impact, as does the horn of the wild boar leaving its mark in the mud, nor does it result from any enduring contact with a substance, as does the blotches found on fabrics. Indeed, Vanlier says, the photons can hardly be considered to form a substance. Sun tan really transforms us into living photograms.

This is interesting on many counts. First of all, photography would seem to acquire for picturehood that immaterial quality which, according to Enlightenment semiotics, made the advantage of verbal language (cf. II.1.4. above). This is of course not really true, for the photograph, as such, just like any picture, is a stubborn material fact, a piece of paper with markings on it; only slides go some way in the direction of material elusiveness, at least if the picture seen is that which counts, the projected illusion, and not that which makes it seeable, that slide itself.
In fact, what becomes immaterial in photography is only the process by which the picture is produced, not the result.

More importantly, while there is certainly a physical contact between the photons and the photographic emulsion, in the sense of the natural sciences, there is actually nothing physical about this contact, if the term is given the sense it has in the Lifeworld. There is no pressing of an object on another, as is the case in printing, engraving included, although the latter may not require much of an impact, nor any extended duration.

The second property to which Vanlier attends is not only the distal character of the imprint, but also the particular modality of this distance. He observes that the photons projecting themselves on the photographic surface take their origin at different distances in space, that is, that they are defined by a volume; and, furthermore, that it is those photons which stem from the distance at which the camera has been focused, that produce the best differentiation on the photographic surface, whereas distances situated before or beyond that point are ever less differentiated. As Vanlier himself remarks, this gives the imprint a doubly abstract character. And since it is really only a small layer of space which is adequately reproduced on the plate, he suggests we should talk about a "minceur de champ", instead of the traditional term "profondeur de champ".

This is of course one of those transpositions which we took up for consideration in the last section; and, as we said there, it really applies globally to the entire volume reproduced, so as to stratify its reproduction on the plate. It does give us the choice of attending particularly to a single portion of space, but then the rest of the scene is defined as a matter of course. We now see, however, that not only is a central point in space picked up from the device of framing, but so is a particular layer in depth of the scene encompassed. Unlike what happens in natural perception, the noematic adumbrations are doubly stopped up.

The framing of the photographic imprint happens to be the third of the properties listed by Vanlier. There is nothing corresponding to the borderlines of the photograph in the activities of the photons, nor in the scene from which they stem. The shape of the lens, on the other hand, should make us expect a circular form, but instead a quadrangular one is imposed. Vanlier claims that this is very different from the way the frame was used by the ancient painter, as at network thrown on the scene, but his arguments really seem to suggest the opposite conclusion. As we shall see later, also Dubois thinks the frame takes on a very
different function in photography than in painting, though again for rather obscure reasons.

The fourth property on Vanlier’s list is the isomorphic character of the imprint. This means the photons give rise to rigorously calculable equations, which make it possible to situate exactly their origin in space, and which is used in geological and astronomical photography. However, being isomorphic in this sense, and in addition Cyclopean, the place of photography is no real place. Vanlier’s point does not become quite clear here; but certainly it points to the fact that photographic space is not actual, lived, space.

This would then be the same point as Vanlier then goes on to make, as far as time is concerned. Photographic time, he says, is physical time, not a time that may be experienced. No matter how long the time of exposure, the imprint itself is synchronic, for it is only the arrival of the last photon which may be calculated, to the exact milliardth of a second.

As we shall see when discussing Schaeffer’s theory, this may not be the only time of photography. However, we must investigate, at this point, to what degree these characteristics of time and space in photography make photographic imprints different from other kinds of traces. Unfortunately, the issue of space remains to obscure for us to make any profitable comparisons, so we will ignore it form the moment.

As far as time is concerned, we must distinguish two aspects. If we compare the photographic trace to, for instance, a foot step, or a fingerprint, we will find that they also give us a synchronic record of what is actually a time-distributed process. Of course, like the photographic blur resulting from the camera having been moved during the exposure, the deviations of the border-lines from the canonical shape of a finger or a foot indicate to us that these have occupied different placements inside the limits of the trace; but the imprint only conserves for us the last phase of the process to inspect. On the other hand, there is no obvious way for us to calculate the time of arrival of the last foot or finger impression contributing to the formation of the imprint we are about to read. Again, other traces are time-distributed, just as the processes they are traces of, though perhaps not to the same degree: such are, for instance, geological layers, and the annual rings found in tree.\footnote{Incidentally, this may be a case in which the digital version of the record, that is, the variant which is separated into discontinuous units, appears truer to lived reality than the analogous one, in the sense of continuous inscription. Cf. our criticism of the conceptions defended by Goodman and Eco, in Sonesson 1989a,III.2.}
Furthermore, since the photograph, as it is normally conceived, is in the positive, that is, it is the inversion of the image produced originally on the photographic film, we really have a negative of the negative. This explains that, in viewing a photograph, concave parts may take the place of convex ones, and vice-versa. To us, the most interesting aspect of this, not particularly highlighted by Vanlier, is that this amounts to another stage of indirectness in the process of photographic impression.

The seventh property singled out by Vanlier is the fact that, although clearly analogical, the photographic imprint is also digital; that is to say, it may be analyzed as a series of choices between points which are blackened and which are not, also describable as a collection of ones and zeros. In astronomical photography, points may actually be counted, instead of being perceived analogically. Even though it could be objected that this is not the ordinary use to which photographs are put, we must admit that, even in normal photographs, digital texture is at least a potentiality realized in enlargements.

We now come to the last property Vanlier attributes to the photographic imprint, which is that it contain, at the same time, much less information than the real-world scene, and much more. A lot of information is lost, in particular as far as the colours are concerned, where a few dozens nuances are made to stand for the milliards found in reality, and the lines, which are transformed into prolonged patches.\(^{31}\) On the other hand, since the photograph is immobile and handy, we may easily discover new facts in it, which we would never have observed in passing by the motive every day. All this is of course true, but we shall note to things. First, nothing of this really concerns the photograph as a trace (though it does point, somewhat obliquely, to some of its limitations, discussed already in the last subsection), but as a picture. In the second place, the paradox is only apparent, since it is the very reductionism of the photograph, together with its frame, which, by introducing a principle of pertinence, makes us see features which had escaped our notice in the motive itself.

It is a curious fact that Vanlier, who started out opposing the physical, and thus natural, character of the trace to the conventional means of indexicality, as the latter is understood by him, manages to build some of the artificial properties of photography into the trace itself, whereas Dubois, just as Barthes, limits the conven-

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\(^{31}\) This is a curious thing to say, since there really are no lines in reality, only edges which may be represented by lines, and thus no doubt also by prolonged patches. Cf. our discussion of perceptual psychology in Sonesson 1989a,III.3.
tional aspects of photography to such interventions of the photographer as modify the arrangement of the motive, and thus precede the taking of the photograph, as well as to those manipulations which are applied to the photographic film after the picture having been taken (cf. Dubois 1983:47).

Vanlier himself, however, would not seem to realize the consequences of these "abstract" properties of the photographic trace, for the overall impression gathered from his book is that of a defense and illustration of photographic naturalness, to the point of making the latter a simple physical effect. From the way his analysis has been reviewed and commented upon here, on the other hand, it should be clear that the motivated character of the photographic sign is very circumscribed. This can be understood from two considerations.

First of all, the photographic sign now appears to be merely an indirect imprint of its referent, and this in a double sense. It is indirect, because the positive, which is normally considered to be the picture itself, is an inversion of the negative, which is closer to being a real trace of the motive (but this chain of intermediary links may be further extended, on the lines suggested by Lindekens 1971b:86ff). Furthermore, it is also indirect, because even the negative is only a trace of the photons, not of the objects or the scene in any more precise sense.

If this is so, one may wonder whether the photographic image is really so very different from the chirographic one, which may also be (though it is not necessarily) caused by its object, when this serves as a model to the draughtsman, in particular if we take into account the intermediary stage represented by the device called a physio-trace, which, when a lens is made to follow the contours of a body, guide a pencil which take down the corresponding contours on a paper. The most important remaining difference may really be that, even when a physio-trace is used, there must be a person present which is required at each given moment of the creative process to attend to the motive (in the case of an ordinary drawing also to the drawing his is making), and to decide on how it should be rendered, whereas the production of a photographic picture depends on one single semiotic act, one decision - or, perhaps we should say on two acts, if we want to distinguish the onset and the termination of the time of exposure - even though a host of options (on where to focus, the light to be used, etc.) may have had to be taken, before the act could be accomplished.

The second consideration concerns the limitations imposed on the trace, not by the object, but by the support on which the trace is inscribed. Some of these are mentioned by Vanlier: the quadrangular shape of the photograph, its digital nature,
the information it leaves out, its inability to record the temporal aspects of the process giving rise to the trace,\(^{32}\) etc. But this may be restated by saying that the photograph is not only the trace of the objects, or even the photons, but also of the properties of the film, of the lenses, of the photographic device generally, of the space traveled through by the photons, and so on. As Ennion & Tinbergen points out in their excellent study of animal traces, the same animal will leave different traces on different ground -- and so will the same photographic motive, as we already observed in Sonesson 1989a, I.2.6.

In the passage referred to above, we also extended Black’s (1972:101ff) argument against the "causal history" approach to picture, according to which the picture results as much from the camera’s focal aperture, its distance from the motive, the exposure time, and so on, as from the motive. Some of Peirce’s definitions of the index claims it to be based on a relationship of cause and effect, and the same thing is true, as we remember, of Vanlier’s notion of the "indice". Thus, Black’s argument certainly applies here, but it could yet be objected, that now that, with the help of Vanlier, we have isolated some peculiar properties of that kind of index or "indice", which is not only an effect of a cause, but a trace in a literal sense, we can claim that the motive is different from the other causes involved in producing the photographic effect, precisely in being a trace.

The first objection which we would make to this objection, is that while Vanlier has gone a long way to specify what kind of trace the photograph is, he has done very little to elucidate the peculiarities of that index (or "indice", in his terms), which is a trace (though our analysis of "abrasion" above contributes a little to that task). There is a more fundamental rebuke which must be made, however, and that consists in observing that there is really no intrinsic reasons for considering the cause producing a trace (and even so, we have seen than many more causes than the motive may be held responsible for the trace) to be a more important type of cause than the others. Indeed, we can only explain the importance of the motive, when we realize that a trace, in the most central sense of the term, contains not only

\(^{32}\) It is certainly true of most commonly made photographs, as Vanlier claims, that they constitute records only of the ultimate state resulting from the cumulated photonic imprints left by different temporal slices in which the object is present to the camera, that is, as Vanlier puts it, that they are defined by the arrival of the last photon. There are, however, certain kinds of photographs, such as "the impartial record of the finish of a horse race", which are made by a particular camera having no shutter, and which therefore produce a single picture showing the horses distributed in space in the way they were really ordered in time, that is, in order in which they arrived at the finish line. In fact, to quote Snyder & Allen1982:77, from which we take this example, "every point in the photograph is the finish line". This means that the photograph may be read as a record of different temporal layers, just as the annual rings of a tree; therefore, the property attributed by Vanlier to photography should really be ascribed to a particular kind of camera, which happens to be the most commonly used.
indexical but also iconical aspects, and if we begin by admitting that a photograph is a kind of pictorial sign, and that all such signs a first and foremost grounded in the illusion of similarity.

Before we return to this issue, however, we must consider some aspects of Dubois’s indexical theory, first the particularities he attributes to indices generally, and in the second place, how he thinks photographic indices differ from other ones.

**III.1.3.3. From the general theory of indexicality to the photographic index. A critique of Dubois.**

Although in the general style of his exposition and his arguments, Dubois is far from being a follower of the rigidly taxonomic schools of Stuttgart and Pepignan, he turns out to be an orthodox Peircean in the meaning he attributes to the index. According to this conception, every index is characterized, not only by there being a real, physical connection between the expression and the referent (or content), but also be manifesting the principles which Dubois (1983: 48f, 60ff) terms singularity, designation, and attestation. The question, then, is if all indexical signs must really embody these properties.

In order to answer this question, we would need a very clear-cut understanding of what an indexical sign is, but there is no easy way to acquire such an understanding. It is not obvious that there is any way of making all Peirce’s different definitions of the index (or of other signs) agree with each other, as well as with all his examples. Furthermore, if we also want to include, in addition, each and every example adduced by some later semiotician, the task will become even more difficult, but, surprisingly, it it not certain that these latter examples should be disqualified, already because they could not have been accepted by Peirce. And this is because there is, in Peirce’s work, what we may well term a structural argument, which could just possibly be weightier than the details of his definitions, and that is that there are just three basic types of signs, so that something which we know to be a sign must be either an icon, an index, or a conventional sign – or some combination of these! Of course, Peirce may be wrong in thinking that there is just three types of sign, but if we take this assumption for granted, is is certain that any phenomenon which is a sign, and which is neither conventional nor iconical must be indexical. So let us now ponder the plausibility of this hypothesis.

We can here only summarize, and somewhat re-phrase, an argument which is given elsewhere (in Sonesson 1989a, I.2.2-6 and III.1.2/4 ). To begin with, we will
take the potential index, or the indexical ground, to consists of two units connected by a relation which is not identical to the sign relation, but which are, in the actual index, joined together a second time, in such a way that one of the units serves as expression, and the other one serves as content or referent of the sign. Peirce often says that the relation in question should be real, existential, or physical (1.558; 3.361; 8.335), but it is not clear what this means, over and beyond the fact that this relation is not just the sign relation (as in the case of a conventional sign). In any case, we cannot take this to mean that the index must be based on a spatial relationship, and even less, that is must reproduce the relationship of cause and effect, for in this case, the three sign types will not exhaust the universe of signs. However, it is possible that we may stipulate, more largely, that all relationships defining indices should be topologically describable, and, in that case, that they may all be subsumed under one of the categories described as contiguity and factorality (part/whole relationship). Both these properties may then of course be further specified, in terms or more or less well-known topological relations. At this point, then, we have already established that not all indices can depend on physical connection (3.361), in this qualification is to be taken in a familiar sense.

There is, however, a much more important distinction to be made among indexical signs, viz., that between what we shall call abductive indices, and another category which will be termed performative indices. If we pick out some of Peirce’s own most common examples, we shall say that deictic pronouns like "I", "you", "here", and "now", as well as an arrow or a finger pointing at an object, or pointing out a direction, are performative indices, whereas footprints and fingerprints, as well as the peculiar walk of the sailor, are indices of the abductive kind. In the former case, the contiguity or factorality which motives the sign does not really pre-exist to the sign, but is created at the moment the sign is given, although these relations are as such distinct from the semiotic function itself: the pointing finger is really contiguous to the objects it points to, and the sound corresponding to the word "you" is really close to the person so designated, but this only happens at the same time as the signs are produced, and there are no sets of "pointed-out objects" or "you’s" which are given beforehand.

The case is very different with the second group of examples. Here we will only be capable of concluding something from the sign, to the extent that we are informed about the existence of some regularities present in our Lifeworld, which may be the basis of abductions, or tentative hypothesis, about the relationship

33 Perhaps we should really say that, in this case, the index and the icon will not exhaust the universe of signs which are somehow motivated; for the Peircean "symbol" is anyhow a kind of residue category.
between the expression of the sign and its content. This is true of the footprint and the fingerprint, when we may be able to conclude something about something taking place at some particular anterior moment; but it is also true of the sailor’s way of walking, and, to add a few non-Peircean examples, of the cross standing for Christendom, the anchor standing for navigation, on so on, where we only seem to be able to conclude, in a very general sense, on the presence of some regular connection.34

Again, we should not confuse these elementary indexical signs with secondary signs, where the indexical relationships holds between objects which in themselves are signs already constituted in other ways. This latter relationship may exist between the respective contents of two signs, in which case we have something similar to an abductive relationship, which is the case in metonymy and synecdoche, in the traditional rhetorical sense; or it may obtain between the expressions of two or more signs, which results in a relationship which has certain similarities, but also differs in some ways, from that of performative indices, and which commonly appears in publicity pictures. There are also some other, in part intermediary cases, which we will not discuss here.

With all this in mind, can we really admit that all indices must refer to a singular instance, which is its referent (cf. Peirce 2.306)? This would seem to be true of all performative indices, and of some abductive ones. An imprint of a horse’s hoof may make if possible for the interpreter to determine that a horse, as against a donkey, is the animal having passed by, but normally there would be nothing in the expression of this index itself, which permit him to determine the identity of the horse in question, although, if he knows, as Prieto’s observes, that there is only one horse and one donkey inside the fence, he can draw a plausible conclusion as to which individual horse is involved (cf. Prieto 1966; for a graphic illustration, see Hervey 1982:59ff). In fact, even in the story of Zadig, or that of the Serendippus brothers, or that of William of Baskerville, the identity of the animal is only ascertained, when the observations of the traces is fit together with certain extrinsic informations (cf. Eco & Sebeok, eds., 1983). It might be argued, of course, that in all these cases, it was anyhow one, particular animal which left the imprint; but just as we have argued elsewhere (in Sonesson 1989a,I.2.3.), in the case of Peirce’s own example of a knock at the door, although a particular person must be the knocking, the knock itself just means “there is someone on the door”, unless we possess additional information beforehand.

34 In fact, as we recognized in Sonesson 1989a,I.2.5., there is also an abductive aspect to performative signs, since some, comparatively abstract, generalities must be presupposed.
Next, consider a very different example. The pretzel understood as a sign for a bakery is really an index two times over, one of them in the abductive sense, and the other performatively. As part of the whole of such objects as are habitually produced in bakeries, the pretzel stands abductively for any and all bakeries; there is no singularity involves so far. On the other hand, in so far as it is placed close to a particular locale, it contributes to designate this locale performatively as being a bakery (though it is certainly not as creative *ex nihilo* as the performative indices we considered above, since it is based on a prior abduction).

It seems doubtful, then, that all indices most point so singular, unique occurrences, as is sometimes said. Even in the case of a photograph, if we take it to be an index, it is clear that it is not always meant to signify a unique individual. Thus, a photograph of an animal illustrating an article in an encyclopedia treating of the corresponding species, is rather a sign of the species, than of the particular individual. The case is not as clear-cut as that of the horse’s hooves or the knock on the door discussed above, for it is undoubtedly true that, under given circumstances, even the photograph illustrating the article in the encyclopedia may serve to identify a unique individual of the species.

Next, let us ask ourselves if all indices must designate, if that is taken to mean that they point to something. No doubt Peirce affirmed that, and so does Dubois. However, we already argued above (in III.1.3.2.), that the functional category of indicators merely overlap somewhat with the index category, which is defined from the point of view of its motivational link. The pretzel, for instance, does not point to all the other bakery wares, for which is stands, more than in the extremely general sense in which every sign may be said to point to that of which it is a sign. As for the photograph, is does not indicate either, in the precise sense in which the arrow or the pointing finger does, but it may certainly be said to designate, in a somewhat less abstract sense than the pretzel. In fact, it does indicate, in the same way as all pictures does, but only *through the intermediary of its iconic layer*: if we recognize a landscape in a photograph, for instance, we may go looking in reality for some part of it to which the picture fit (as tourists are supposed to do). But the photograph is unable by itself to draw the attention to the object itself, as the pointing finger does, by blind compulsion, or otherwise (Peirce 2.306); and it does not say "there", as an index should, according to Peirce (3.361), for it does not possess any spatio-temporal coordinates in itself. Speaking of the photograph as an indicator is thus at best a metaphor.
Nor can we claim, in general, that the index attests the existence of something, in particular in the case in which no singular object is involves. This is obvious in the cases considered above, in connection with singularity. Even in the case of the photograph, we should be careful in accepting to readily this argument. Faked photographs may look exactly as authentic ones; indeed, so may synthetic picture, entirely fabricated on computer with no real-world motive (cf. Moles 1981 ). Of course, the latter pictures are no photographs, and so no indices, but the point is, there is no way we can discover it from looking at them! And in the case of the photogram, which Dubois (p.66) claims is really the prototypical photograph, it is not clear that there is anything, the existence of which can be testified, since often the objects are not recognizable as such, or the shapes are considered to stand for objects. Again, if we consider the many ways in the the motive may be transformed at will in the photographic process, as for example the deformations to which Brandt subjects his nudes, we must ask to what degree the properties the motives manifest in the photographs can be taken to be certified.

According to Dubois (pp.49f,73f), all the semantics of photography may be resolved into its pragmatics, and the photograph functions similarly to a linguistic shifter. This affirmation, and the comparison on which it is based, are not in the least convincing. Consider in effect a typical linguistic shifter like the pronoun "I". Depending on the point of view, if may be seen to be both more pragmatically dependant, and less so than a photograph. The shifter is produced and used at the same time, and each time it has another sense, namely that person who pronounces it. The photograph, however, has an identical sense each time it used, once is has been produced. But Dubois (p.59) also claims that the photograph should be compared to such phenomena as smoke, dust, and ruins, as well as to sperm and sunburn, and to a shadow and a cicatrice. In our terms, all these indices, unlike shifters, can only be understood abductively, that is, in recurring to the assumption that this smoke, just as over instances of the same matter with which we have been acquainted in precedent Lifeworld experience, is related to some fire, that the ruins results form histor-

35 In this sense, it is absurd to claim that the photograph "est par nature un object pragmatique, inséparable de sa situation référentielle" (Dubois 1983:93). It is precisely because it is so easily separable from its circumstances of production that the photograph has proved so useful, as has created its own pictorial society in our time. Indeed, unlike the shifter "I", the photograph of a person may be detached from the scene of its production, and used to identify and characterize the individual in his absence. Cf. in this respect our criticism of Eco’s comparison between the shifter and the mirror, in Sonesson 1989a,III.4.!
tical transformations of once intact buildings (which is not always true, however), and so on. It is important to note that, although smoke may only appear more or less at the same time as the corresponding flame, or a few instances afterward, and although there can be no shadow but at the precise moment that there is somebody or something around to cast it (except in Gothic novels), neither smoke nor shadows are performative indices, since both the units involved clearly pre-exist to the production of the sign, exactly as they appear in the sign. The distinctions between performative indices and abductive indices is thus not simply a question of temporal horizons, to which we referred in the first table of our last sub-section.

Dubois’s various example are of course different in many other respects, too. Thus, while the ruin is a material part of that of which it is a sign (if, with Dubois, we suppose it to stand for the building it once was), the smoke and the sperm are merely parts in a much looser sense of the total events which they refer to. Dust does not only signify the passing of time, as Dubois says, but also, among other things, neglect, or perhaps rather, the conjunction of the two. The cicatrice and the ruin (and perhaps also dust) actually seem to stand for a whole temporal process, in the beginning of which there was a wound or a building, followed by a whole series of events, which end up in the terminal state which is also the expression part of the sign. The shadow and the sunburn, however, are not parts of what they signify (except perhaps in a very loose sense, as ingredients of an abstract process), but rather are produced by abrasion from some other object, and thus seem closer than the others to the photograph. On the other hand, unlike the photograph and the sunburn, the shadow does not leave any permanent trace of its object; and unlike the shadow, the footprint, and the photograph, the sunburn does not produce any likeness.

These considerations already bring us to Dubois’s opinion about which properties constitute the particular character of the photographic index, as opposed to other indices. These are the properties of being "séparée, plane, lumineuse et discontinue" (p.94). Let us follow Dubois in scrutinizing these properties one after the other.

Criticizing functional semiology, as instanced in the work of Jeanne Martinet, Hervey (1982:180) points to the somewhat tenuous basis for describing some types of expressions and contents as being arbitrary or non-arbitrary in themselves. Whatever one may think of Martinet’s typology, there is no reason to suspect such a criticism must carry over to the present approach. Although it is true that all signs "select (and in this way 'create') the domain of their referents", such creation is not only more complete in the case of performative indices than in the abductive ones, but it is also made anew each time a token of the sign is produced, whereas it is intrinsic to the semiotic system, in the abductive type.
To the separated is, apparently, to incorporate a distance, which is both temporal and spatial. Dubois rightly observes that such a temporal distance, however small, is even present in a Polaroid photograph, and, correlatively, he claims that there is a spatial distance even in a photogram. Both these distances, on the other hand, are said to be abolished in such indexical signs as the ready-made, the happening, the performance, and the body art, where the referent itself serves as a sign. Already at this point, the argument undoubtedly poses some problems. The temporal distance is of course there, and we have already commented on it. As for the spatial distance, it certainly seems minimal in the case of a photogram, if we think of the gap between the objects and the plate; but, as we know from Vanlier, the contact between the objects and the photograph must be mediated by the photons, which is sufficient to produce a distance. In any case, even this spatial contiguity is there only at the moment of production of the photograph, not when it is viewed as a picture, which is the essential moment. Therefore, its seems we should agree with Dubois.

However, it turns out that our author is really thinking of something very different. As it emerges from the examples with which the photograph is contrasted, Dubois takes lack of distance to be the same thing as spatio-temporal coincidence. But it is not at all clear that we should qualify these signs as indexical: there is no two-term relation here, but a term bounded up with itself. More concretely, not contiguity or factorality is involved. In fact, such signs as these would be called exemplification by Goodman, and we have ourselves used that term, along with that of self-identification (cf. Sonesson 1989a,II.2.2.). Even if we admit that there is something vaguely indexical about a whole standing for this very whole, or a part standing for the identical part, this relationship will any case be abductive, and it does not involve any abrasion. Thus the comparison does not appear to be very fruitful.

Nor is really convincing when Dubois (p.95) claims that the ruin is different from the photograph simply by implying a merely temporal distance. Apart from the observations made above, it should be added here that there is no real spatial coincidence between the ruin and the building, since, at the very most, the former is only a part of the latter.

What, however, about the temporal and spatial distances in the photographic trace? Let us reconsider the question from another angle. In a later chapter, Dubois (p.116) tells us about the inception of art in the hand impressions made in Lascaux and other caves, and he recounts the story about the origin of painting, as told by Pliny, Quintilian, Plutarque, Vasari, and Alberti. According to the first ver-
sion of this story, a girl who is sorry that her lover is going to leave on a voyage, and who wish to conserve his aspects in memory, uses a piece of chalk to fill in the contours of his body as they are projected on the wall. Thus, on the one hand, there is a projection of light, just as in photography, and then there is the problem of fixation, differently resolved in this case than in the photograph. What is indexical, according to Dubois is, in both cases, the projection of light. And just as the filling in of the contours by means of a piece of chalk in the story, photographic development and fixation takes time. It is accomplished later, in the bath of fixation of the laboratory.37

The point of retelling this story and Dubois’s interpretation of it here is not so much to signal the incoherence of an approach which first claims the photographic index to be characterized by temporal distance, and then denies indexicality to the photograph we perceive, in order to reserve it for the projection of the object on the film taking place at the moment of total temporal coincidence. Rather, the question is what we shall think about an approach which, in comparing the photograph to the cast shadow, dissociates it from the footprint, with which, on the face of it, is has at least a little more resemblance. For clearly, unlike the shadow and the mirror image, footprints and photographs are not constantly changing signs of new objects, but permanent traces of unique, temporally situated events. That is to say, at the instant of projection, the object is inscribed on the photographic plate, although only as a latent image, but nothing of the kind happens when a shadow is cast on a wall.

In fact, in the case of the photograph, the temporal distance is present only when the sign is read, not when it is enunciated, just as we saw before that the spatial distance is. Indeed, at the moment of its production, the photograph may appear to behave somewhat like a performative index (for instance a shifter), but it must be read abductively. But no abductions could ever make us decode the faded images of mirrors and shadow-cast walls.

When it comes to the second trait which, according to Dubois, is characteristic of photographic indices, there is much less to be said, because we have already encountered the properties involved when discussing Vanlier’s conception. When Dubois (p.96) tells us that

37 There is another variant of the story, retold by Vasari, according to which a man who saw his own shadow cast on a wall filled in the contours of his body with a chalk. Dubois (p.123ff) rightly observes that this is in fact an impossible thing to do, for in approaching the wall, and in using the hand to move the chalk along the contours, the man causes a continuous series of transformation in the shadow cast by his body. It is an interesting fact, as Dubois remarks, that this dream of being able to make an inscription of oneself in the act of making an inscription is realized by the photographic auto-portrait.
then he refers, in a metaphorical way, to the properties which Vanlier terms distal-
ness of the imprint, Cyclopean vision, and isomorphism (cf. III.1.3.2. above). What
is interesting, however, is Dubois’s idea, that when invoking the last of this traits,
Vanlier means to refer, "confusingly", as he says, to the fact that, while each single
stroke is premeditated by the draughtsman, and may be further changed, and even
deleted, the act of the photographer is unique and global, that is, there is only one
choice to be made, and everything contained in the photograph is given in the same
scale, from the identical angle of vision, and so on. Indeed, this interpretation cer-
tainly seems justified from the fragments of Vanlier’s pre-publication quoted by
Dubois (p.97), but which does not seem to appear in the later edition.

It will be noted that, in our earlier work, as a critique and elaboration of
other conceptions of photography, we have already come upon this idea, and we
have even tried to show that all the transformations of reality worked out by
photography are global in nature (cf. III.1.3.1.). It should certainly be pointed out,
however, that before this single act of execution can take place, there is really a
whole series of global decisions which must be made, which determine the angle
vision, the focus, the luminosity, and so on.

There is hardly more to be said about the third and fourth properties at-
tributed to photographic indices by Dubois: that they are traces of light, and that
they are discontinuous. Unfortunately, Dubois has nothing particular to say about
the way in which the photograph is a trace of light. We ourselves, in Sonesson
1989a.I.2.6., however, commented on this property in the following way:

"Only the ‘photograms’ and ‘rayograms’ made by avant-garde photographers such as
Moholy-Nagy, Man Ray, and Schaad and preceding the invention of the common
photograph in the experimental work of Niepce and Talbot, are really comparable to
the footprints left on the ground, light being the operating agent instead of
mechanical pressure. When placed directly upon the photographic paper, without a
camera obscura as an intermediary, two-dimensional objects will give rise to
silhouettes, more similar to tactile noemata than to visual ones, which can be easily
identified; but when three-dimensional objects are used and the source of light is
moved, the configurations which result are due to complex interactions, not only
between the contiguous part of the object and the emulsion, but between the position
of the light source and the non-directly contiguous parts of the object."(p.64).

And we concluded by pointing to the paradoxicality of the fact, that it is a camera
obscura, which diminishes the contiguity between the object and the expression
plane of the pictorial sign, which is needed in order to obtain a configuration, which
really suggests a visual noema of the object, as against a tactile one, and which thus
make it possible to trace the configuration unambiguously back to its real-world
source.
And what this suggests, in the end, is that it is some kind of conventionality that redeems photographic indexicality, and assigns to it an iconic function. To these issues we turn in the next sub-section.

III.1.3.4. The imprint of a likeness. Reflections on Schaeffer's theory

Although, or rather precisely because Schaeffer's book is undoubtedly the best contribution made so far to photographic semiotics, we will have comparatively little so say about it. This is because we have found little to criticize, and also because much of the book is not concerned with the problem of photographic specificity, but with picturehood generally, and in particular with photographic picture types. However, two or three remarks on Schaeffer's conception while permit us to formulate a few remaining considerations, and thus to complete this part of our discussion of photographic specificity.

Many of the points which we have been driving at all through our criticism of the theories of Lindekens, Vanlier, Dubois, and others, are explicitly formulated by Schaeffer. Thus for instance, he states a) that photographs cannot be explained by conventionality, in the sense in which this term applies to verbal signs (Schaeffer 1987:32ff); b) that there are iconic, as well as indexical, elements in photography (p.27f; p.101ff); c) that the photograph must be understood as a perceptual unit (p.18) and, as such, contrary to the photonic image, it is not digital (p.15; p.74), nor does this conception admit of the photogram being considered the central instance of photography (p.59ff); d) that we can only apprehend the photograph as such when starting out from the assumption that it is an instance of the picture type known as photography (p.41ff); and e) that photography is essentially involved with time and space (p.64ff). It is, however, in the precise way of conceiving these different issues that we will have to part company with Schaeffer, while returning to some of the themes of our former analysis of picturehood.

There is no need to repeat here our earlier arguments against conventionalist theories of pictorial signs (see Sonesson 1989,III and III.1.3.1. above). Nevertheless, there is one interesting aspect of Schaeffer's version of this critique, to which we will attend in the following: the fact that he (p.32ff) turns against not only Eco's conventionalist theory of icons, but also the parallel conception of indices. In Eco's view, also indices must be conventional, because otherwise they should not be interpreted so rapidly, as when upon seeing a puddle, we immediately conclude that a shower has been falling. To this Schaeffer objects, first, that, since the puddle is only facultatively a sign, it may as well be apprehended as an obstacle; and
second, that it does not obligatorily indicate rain, but may stem from a broken water-conduit, or could have been produced by a street-cleaning machine. Thus to establish that there has really been a shower, we would not think of consulting some encyclopedia to ascertain the interpretation, but we would rather look for confirmatory signs in the sky (cf. our discussion of the weathercock, in Sonesson 1989a,III.1.2.). Thus, there is no reason to think that we should be able to conclude so rapidly.

Schaeffer rightly observes that Eco, just as many others semioticians, erroneously identify conventionality with the necessity of something having been learnt, and with the presence of regularities. Learning may be result from experience, that is, from having observed natural happenings, which often means the recurrence of certain events. So far there is nothing to object: if this were not true, nothing could be learnt from living and from observing, and all teaching would be based on the transmission of arbitrarily stipulated affirmations. And yet, Eco seems to be justified in thinking that, on seeing a puddle, or at least a certain amount of puddles, we would first expect there to have been a rain, reaching for other explanations only as this first interpretation is counter-indicated.

No doubt we are concerned here with a kind of meaning which works probabilistically, rather than deterministically, that is to say, a symptom (cf. Sonesson 1989a,I.1.2.); and given such an expression as this, some contents seem more probable than others. Of course, in the present case, the probability connecting the relata of the sign may in fact be derived from the one observed to prevail between the corresponding objects in lived reality. But there could be something else involved too: a Lifeworld hierarchy of relative importance (see Sonesson 1989a,III,passim), like the one which determines that in certain societies, as for instance our own, markings on paper are expected to be signs, and in others they are not. Such a Lifeworld hierarchy may itself by conventional, for all we know, or it could be grounded in the common experience of a particular sociocultural Lifeworld. We will have reasons to return to such hierarchies in the following.

Now as we indicated above, to Schaeffer the photographic sign is an indexical icon, and an iconical index particular instances tending more or less in one sense or the other (p.101ff). There are, however, reasons to think that the photograph must really always be essentially an indexical icon, rather than the reverse, for it is really only because we discover a likeness, that is, a kind of picture, that the fact of the likeness having produced as an imprint begins to acquire importance. Actually, the photograph, like any other object, contains a number of other indices: it is thus an index of the angle from which the photograph was taken, of the lighting
conditions at the moment of taking the photograph, of the film type used, and so on (cf. III.1.3.3) — but we will naturally attend to these facts only later, after having read it as an index of that which it is a picture of. Indeed, pictorality is primary in our Lifeworld hierarchy. But before we enter more deeply into this argument, we must consider some of the ambiguities of Schaeffer’s own position on the issue.

In fact, some parts of Schaeffer’s argument would seem to go in our sense. Thus he rejects some of the more extreme expressions of a pure trace theory, as found in the work of Vanlier and Dubois (p.27ff). He locates the photogram, as well as the X-ray picture somewhere outside the proper domain of photography (p.59ff), the first because the photonic flux has to traverse the referent to get the imprinted matter, while in the photograph the referent originate the flux, and because the flux is not relayed by any optical device, and thus not usable for analogical signification; the second, because what it reflects are difference of volume and density, not such things as are seen by the human eye (p.62; cf. our critique, in the same sense, of this and other "hard icons" of Maldonado’s, in Sonesson 1989,I.2.6). He even affirms that the requirement of analogy introduces further constraints on the photographic trace, for while movements may give rise to markings on a photographic plate (as used in physical experiments), these are normally excluded from photography, because what is to the human eye a succession of states gets transformed into spatial extension on the plate (p.18).

But, on the other hand, Schaeffer also seems to mark a certain distance to analogicalness. Thus he notes that the camera may see things man in unable to perceive (p.21ff) 38, although he immediately proceeds to argue that analogical objectives have determined an effort to modify the way in which the emulsion renders colours. However, he then goes on to reject the assumption that the photograph could be taken to be analogical to a vision of the object which the photograph is a picture of (p.23f). Behind the latter idea, he discovers the remnants of the romantic conception of originary experience, which always tends to accord a privilege to vision, and he claims it is the confusion between the reproduction of a being and the reproduction of a vision which explains Heidegger’s animosity to photography. There are many problems involved here, and some of them are certainly too vast, for us to go into them in the present context.

Schaeffer’s rejection of originary experience av vision may be more or less justified, in the general case (although the dominance of vision would seem to be at least an anthropological fact), but it seems widely off the mark when discussing pic-

38 whereas we noted the opposite case, in III.1.3.1. above.
Part III. Photography – Tracing the index

tures. There are two parts to this argument. Philosophers, it is argued, tend to con-
fuse the rendering of the thing itself, and of the thing as seen by a human eye (or, preferably, two). And they attribute to vision, rather than to the other senses, or even to pictures, the capacity to give us the truth of the thing. Against this, Schaeffer thinks that there are knowledge about starts and about radioactivity that has been acquired through photographic pictures of them, and which do not correspond to human vision, for human beings are unable to perceive them.

But if now, for a moment, we only attend to the first aspect, we will en-
counter it again, when Snyder & Allen (1982:67ff) observe that the argument for photographic analogicity relies on two models, which are usually taken to be identi-
cal: the visual model, which postulates a similarity between the camera and the eye as optical systems, and posits that a photograph shows us "what we would have seen if we had been there ourselves"; and the mechanical model, according to which "a photography many not show us a scene as we ourselves would have seen it, but it is a reliable index of what was". Now it is certainly true, as Snyder & Allen (p.70) goes on to argue, that the visual model will only hold when it is qualified into absurdity:

"A photograph shows us 'what we would have seen' at a certain moment in time, from a certain vantage point if we kept our head immobile and closed one eye and if we saw with the equivalent of a 1500 mm or 24 mm lens and if we saw things in Agfacolor or in Tri-X developed in D-76 and printed on Kodabromide / / 3 paper".

This having been said, however, the comparison is not as absurd as that: for indeed, the whole point of photography is to offer us vicarious perceptual experience, that is, the illusion of having seen something without having been present at the scene, and Schaeffer later himself admits it, when talking about the quasi-perceptual field of a photograph (p.116ff). There are, of course, photographs, such as those mentioned by Schaeffer (and Maldonado’s "hard icons"), which do not show us anything we could see, but which are truer to the essence of things, as the latter is conceived in natural science. But these are examples very far form the central core of photography, as the latter is colloquially understood.

And it is of course the other photographs which are true to experience, to perceptual experience, to be precise, as the latter takes place in the Lifeworld. This truth is of course a relative one, as we have noted above (III.1.4.1-3.; also cf. Snyder & Allen 1982:70), for whatever it is that is rendered, it is only conveyed to us in

39 There is no reason to believe that Snyder & Allen use the term index here in the technical sense given it by Peirce, but it certainly corresponds, in this instance, to the general idea defended by Vanlier, Dubois, and, to a certain extent, Schaeffer.
some of its aspects, parts, and attributes; and it is not perceived, only, as Husserl said about pictures generally (cf. Sonesson 1989a,III.3.5-6.) , perceptually imagined.

In the end, then, it seems that the photograph can only be a trace once it is seen to be a likeness.

And this brings us to another point of Schaeffer´s. Contrary to Vanlier and to Dubois, though he never points to the difference, he insists that in order to see a photograph as a photograph, we must know it to have been produced as a photograph; we must possess, as he says, knowledge of the arché (p.41ff). The reason for introducing this requirement is that there is no morphological criteria permitting us to differentiate a painting from, for example, a photograph having been modified by the techniques of the pictorialists, in particular if the latter is seen in reproduction (p.45f) . But there may be even more serious problems than this.

In Schaeffer´s example, we look at something which appears to be a painting, and we wonder if in actual fact it could be a photograph by a pictorialist. But then there are cases in which we do not know which parts, if any, of something which looks like a photograph, have really been photographically produced. Thus, by means of gum-bichromate details may have been added to the scene directly on the emulsion, whereas other details may have been suppressed with the help of bromoil (the illustration of a classical handbook, quoted by Snyder & Allen 1982:82f, is accompanied by the text "excess sheep removed", but without this caption, we could not know that it had been modified). But there is something which is more serious yet, and that is that we do now possess pictures, which do exactly look like photographs, but which have in no parts been photographically produced; these are synthetic, or computer-composed pictures (see examples reproduced in Moles 1971; 1981 ). Although Schaeffer does mention the existence of such synthetic images in passing (see his note 6, p.65 ), he takes no particular notice of their importance for impeding the identification of photographs.

In a sense, all that Schaeffer´s knowledge of the arché amounts to is the recognition that the photographic index must be what we have earlier termed an abductive, rather than a performative index, that is, an index that functions only because we take for granted that certain regularities which are commonly supposed to prevail do indeed do that. (cf. III.1.3.3).40 But even an abductive index may be

40 Schaeffer (1987:87ff,105ff) takes our background knowledge to be important for our interpretation of photographs also in another way (and more so than in the case of verbal language, which is at least doubtful); it is only because we recognize our grand-father, than we are able to learn from the photograph that he was in the habit of going out fishing. What is involved here, however, is only the necessity of possessing more, and more
more or less so: thus, in a somewhat loose sense Golgotha may be considered an index for Christ, if we think he was once present there, but then the link must be entirely reconstructed from abductions; whereas, in the case of footsteps and photographs, there are, so to speak, some remains on which to lean when making a start at the construction of abductive meanings. To put the point in another way, if Christ’s sweaty face had not left an imprint of St. Veronica’s napkin, it would still have been an index of his face, for those who knew of the event, but much more (and less intersubjective) abductions would be needed to reconstruct the sign.

But when we hesitate to qualify a picture as a photograph, a painting, a synthetic picture, or some combination, the problem is no longer to establish what it is a sign of. We know that the napkin of St. Veronica is a sign depicting the face of a man, and that the man it shows is Christ (according to one or other of the canons for representing Christ with which we are familiar), but just as if it had been a possible photograph, we do not know if this likeness of a face was really imprinted on the napkin by means of a pressing applied to it by the referent itself. But what kind of question is this? Consider for instance the elementary situation in which the emission of a sign takes place, as studied by Prieto (1966:15ff; cf. Hervey 1982:63ff) in the example of a horse’s hoofprints. There is what Prieto what could the "significative indication", which tells us that there is a horse around. There is not, in this case, as there would be in a linguistic sign (and presumably in a pictorial sign any "notificative indication", which which convey to use the idea "attention! this is intended to convey a message". But where, then, is there an indication that these signs are really hoofprints, and not just fake impressions?

What this shows is that, from our point of view (but we should not forget that Prieto is really up to very different matters), this analysis is seriously amiss, or at least incomplete. For if the significative indication of the hoofprints is that there is (or was) a horse around, then what is the difference of meaning between real hoofprints and fake ones? Let us suppose there is something in common between the real and false hoofprints, which is a significative indication and which amount to something like "horse here", and then there is some other part of the meaning, which, for the sake of the argument, we shall baptize with the rather barbarian term "indicative indication", which is only present in the real hoofprints, and which says so much as "caused by the application of some part of a real horse to the ground".

detailed schemes, in order to be able to interpret pictures, and perceptual reality, at lower intensional levels (cf. above part II, and Sonesson 1989, I.3.2.).

41 Prieto uses the term "indice" here, but this has nothing to do with the Peircean index, although the example would suggest so. Actually, "indice" would seem to be the most general term of functional semiotics, corresponding to what we would call "sign".
Thus, although the real hoofprints do not have any notificative indication, they do possess an indicative indication, along with the significative one.

We should really distinguish two cases, however (and maybe more). The hoofprints may be faked, in the sense that someone, who was not a horse, applied horseshoes to the ground, creating markings which falsely tend to suggest that there has been a horse around. In this case, we are quite right in believing in the indicative indication which informs us that they imprints we see were created by the pressing of horseshoes to the ground, and what is mistaken is the assumption that there was also a factorial relationship between the horseshoe and a horse´s foot and leg, and between the latter and the entire horse (we could think of intermediary cases, in which a real horse´s leg, severed from the body, has been used). But the hoofprints may be faked also in the second sense that there never was any horseshoe which was applied to the ground, but the semblance of a hoofprint was instead created by a human being, who sketched out the contours of a horse´s foot in the soil using some kind of writing implement or the like. In the latter case, not only was there no horseshoe present at any time, but no ready-made mould at all was pressed to the ground; instead, the shape was created by a procedure which should remind us of that involved in the production of chirographic pictures.

In both these cases, there is both an notificative and a indicative indication, in addition to the significative one (although it is possible, and even probable, that the notificative indication tries to disguise itself into a merely indicative one). But it is only in the latter case that the indicative indication is of the kind which is connected with real hoofprints, that is, a kind of abrasion.

Now suppose that, like Zadig, the Serandippus brothers, or William of Baskerville, we observe on the soil markings which are similar in shape to the imprints left by a horse, a camel, or what have you. Rather than taking account of all these eventualities, and a lot more, we will certainly suppose them to be imprints of the animal in question, until there emerges some particular reason for believing them not to be so. Indeed the case is parallel to the one described by Searle, where we find something which looks like writing in the desert sand, and where, according to Searle (1969), what must first impute to someone the intention of convey to us some meaning through writing, before we can interpret the message in the sand, that is, we must ascribe to the writing a notificative intention. As we argued elsewhere (in Sonesson 1979b), this notificative intention is ascribed to the writing as a matter of course, even if that means taking it to be a message from God or some playful spirits, as long as the markings in the sand look sufficiently like what would normally be letters of the alphabet. This is just an aspect of the way
things are taken for granted in the ordinary Lifeworld which is the locus of all our experience.

The case is similar with photography. Just like the hoofprint, the photograph carries with it a indicative indication, along with the significative one; but, in addition, it also embodies a notificative intention. But neither of these indications must be intentionally ascribed to the photograph; they are attributed to it as a matter of course, as long as it looks similar to what would normally, and as far as our experience goes, be a photograph. It is not important, therefore, that there are no trustworthy criteria for telling a photograph from another kind of picture, neither as a whole, nor in its particular parts, for we do have a clearly characterized notion of what a photograph looks like, and a long as there is no resistance on the part of the sign, we will attribute photographicness to it without hesitation.

There are two corollaries to this. First, it as clear that, if in the future synthetic pictures become more common, are even more indistinguishable from photographs, we shall have to give up this idea of photographicness. In the second place, this conception will not permit us to give to much importance to the testimonial function of photography. Photographicness is mere a connotation, that is, the way in which the photographic signs designates itself as such, and the existence postulate (logically developed by Schaeffer 1987:122ff ) is a contextual implication following from this connotation (cf. Sonesson 1989a,II.1.2 and II.4. ); and just as is possible to connote French while speaking English, other pictorial kinds are perfectly capable of connoting photographicness. Of course, as long as we believe we are in our right to take a picture to be a real photograph, we will also hold it for probable that it depicts a real particular. Indeed, the photograph may seem to tell us that "cela a été", in Barthes’s words, that is, that there was before (and may still be) some particular being, but it cannot tell us exactly how it was (for in the photograph, it is not the same), what further properties it had, how it look from other angles, or some seconds before or afterwards, with what else it was present, and so on. Thus, that particular that was, and which still is in the photograph, remains as a mere vestige – which may explain why it has to be filled up with sentiments, as Barthes is so good at doing. And it also points to some further indexical properties of photographs, which are very different form abrasion.

42 Schaeffer (1987:52ff, 78ff) in fact denies intentionality to photographic signs, but he can only do this because he confuses a number of levels. If we except the interventions on the plate after the shot has been made, there is of course no possibility of conveying local decisions, but there is a host of global decisions which must be made before each photograph is taken, even if the camera is then left to record the scene on its own.
This is a convenient point to turn to Schaeffer’s considerations on temporality and spatiality, before concluding on the indexicality issue. Time and space are taken account of essentially in two ways: first, in order to justify the introduction of the *arché*, and then as a means of classifying photographic types. We will start from the first aspect.

According to Schaeffer (p.64ff), time is not rendered iconically in the photograph, as it is in the cinema, but has to be supplied from the knowledge about photography possessed by the receiver; and in the same way, the photograph is spatially anchored, not by perspective alone, but again by our knowledge of the photographic arché, which follows from the fact that while a subjective stand-point is immediately ascribed to the photograph, only intricate and laborious devices as those present in "Las Meninas", or in "the Arnolfinis", are capable if introducing it into painting. However perspicacious these observations may seem they are, we believe, somewhat off the mark, because their author fails to distinguish temporality and spatiality as categorical facts, and particular occurrences in space and time.

Just as any action, that which is reproduced in a photograph may be seen as a part of a greater whole, to the extent that it can be integrated into one or other of the schemes taken over from our common Lifeworld existence, and from this point of view, the photographic scene does not differ in any way from the painted one, nor from a tableau vivant, as practiced in the social life of the 18th century, nor even from our experience of stepping out in the glade and seeing the Weberian wood-feller at work (cf. Sonesson 1989a, I.2.5.). This is exactly Lessing’s problem, and it thus antedates photography, as it indeed antedates Lessing himself (cf. II.1.4.).

It is true, of course, that this temporality is not present in the picture itself, but is somehow introduced by the receiver, but there is nothing peculiarly photographic to this abduction. No doubt, the photograph is inapt to present a synthesis of several moments of the act (without using double exposure, or something of the

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43 It is not at all clear that cinematographic time can be described as generally speaking iconic. First of all, montage, of the kinds considered by Metz in his macro-syntax, does away we the uninterrupted flow of natural time. In the second place, or more importantly, time is hardly ever the subject of filmic signs, but rather something which accompanies the action sequence as well as the projection, without being directly signified. On the other hand, some montage types do serve to represent time, but that that is exactly were similarity wears off!

44 In this respect, it is interesting to note that Schaeffer, without referring to Lessing or the Laocoon tradition, conceives of the problem in identical psychological terms, but opts for another solution: in his view, it is the picture of the climatic moment which should be chosen, because points both forwards and backwards the the uttermost tension (p.143).
Part III. Photography – Tracing the index

sort)\textsuperscript{45}, whereas the chirographic pictures may do it, and usually did so, before the invention of photography. But although this difference caused people to be shocked on seeing the first photographs, of horses galloping, to choose a classic example, it is hardly noticed nowadays.

On the other hand, only a photograph gives us at least the illusion that what we see is a phase of an action taking place at some particular moment of clock time.

In a similar way, spatiality is categorically present in the photograph, just as in any picture, and this in several ways. First of all, we know from our experience in the perceptual Lifeworld, that reality goes on continuously; thus, there must be something beyond the frame of the picture, if it is a photograph or a chirograph. In the second place, we also know, as Gurwitsch puts it (cf. Sonesson 1989a, I.2.), that every perception of reality is a partial view, susceptible of being complemented in perceptual experience, but petrified for ever in a picture; which is to say that every picture transforms a subjective view on an object, into an object of its own. But all this is either taken for granted in every conceivable Lifeworld, or in such sociocultural Lifeworlds as possess pictures (also cf. III.1.4. below for more details).

Again, we may note that, unlike the chirographic picture, the photograph is unable to subsume in one image several points of views, without having recur to special procedures like double exposure (and this, like the unity of time, depends on the global character of photography, that is, on Vanlier’s and Dubois homogeneity). Furthermore, only the photograph make us expect that there must be a unique place in the world, the coordinates of which may at least potentially be given, from which this view is to be had. When painting a real landscape, even the painter must of course sit somewhere, but he may change his place many times, and he may even adapt what he sees when transposing it to the canvas.\textsuperscript{46}

The over way in which time and space enter Schaeffer’s discussion is, we said, in his classification of photographic types (p.72,pp.128ff). Photographs differ, Schaeffer contends, as far as their representamen, object, and interpretant are concerned; for the first may be rather more indexical, or rather more iconical; the second either represents an entity or a state of things; and the third is either predominantly temporal, or more to the spatial side. We shall not go into the details

\textsuperscript{45} It should be noted, however, that this is only true of photography as it is commonly used, although this is a use which is built into most cameras; it would not apply, for instance, to that picture of the horses arriving at the end of the race, mentioned by Snyder & Allen, and commented upon in note 32 above.

\textsuperscript{46} Here, as always, there is of course the problem of knowing how far we may go in excluding “tricks”, without thereby pleading for some particular conception of what photography should be like.
of this classification here; it seems anyhow difficult to reconcile with the little which is certain about the Peircean relata of the sign. Thus, indexicality and iconicity are not, in Peirce’s view, properties of the representamen, but of the relation between representamen and object; and the interpretant concern a relation between three terms, and thus does not seem to be involved with time and space.

In any case, while it may be true that certain photographs are more indexical, or more iconical than others, it seems certain to us that the photograph is essentially an indexical icon, and not the reverse, that is, that it is first and foremost iconical, like any picture. To see this, we shall consider another way in which photographs are involved with time and space.

There is a kind of temporality in that very indexical relation which attaches the photograph to its referent, which is also at least one of its causes. As Barthes said, the photographs tells us that “cela a été”, and Dubois rightly considered him to be something of an indexicalist on this merit only. The photograph, then, is an index of something that *was*, not (other than by accident) of something which *is*. In this respect, we said (in III.1.3.3.), the photograph is similar to footsteps and tracks generally, but not to cast shadows and mirror images. Well considered, however, this similarity may not go as far it we had expected. For while both the photograph and the trace stand for a bygone referent, the signifier of the former sign continues to occupy the place that was that of the referent, and it stills remains temporally dated, whereas the photographic signifier, like that of the verbal sign, is omnitemporal and omnispatial, while tokens of its type may be instantiated in any time and place (although only *after* the referential event and the time needed for development). Thus, if, for the sake of simplicity, we only attend to the temporal aspects here, the following table can be constructed:

<table>
<thead>
<tr>
<th>Content</th>
<th>Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>time-dependant</td>
<td>footsteps</td>
</tr>
<tr>
<td>omnitemporal</td>
<td>photograph</td>
</tr>
<tr>
<td>omnitemporal</td>
<td>verbal sign(^{47})</td>
</tr>
</tbody>
</table>

\(^{47}\) That is to say, verbal signs are omnitemporal when considered as types; however, each time they are instantiated in a concrete situation, they appear as token, or replica, as Peirce would have said, and then they carry additional meanings as tokens. Of course, each hoofprint may also be considered as tokens, the type of which is the general idea of a horseshoe, or a particular horseshoe (of a particular leg of a particular horse). Nevertheless, the difference remains, for in the case of the trace, the essential information is conveyed by the particular imprinting of the horseshoe, at a particular occasion.
That is to say, in the case of a footstep, a hoofprint, or what have you, both the expression and the content are located at a particular time and place; in verbal language, non of them are; and in the case of photography, it is only the content (or, strictly speaking, the referent) which is bound up with spatio-temporality. Thus, the hoofprints, present where before the horse was present, tells us something like "horse here before"; but the photograph of a horse, which most likely is not where the horse was ever, only tells us "horse", and then we may start reconstructing the time and the place.48

At this point, it may seem that we could say that, whereas the hoofprint is first and foremost an index, the photograph must originally be seen as an icon, before its indexical properties can be discovered. In fact, however, things may be still more complicated. Schaeffer (p.56) is of course right in pointing out, against Peirce, that not all indices involve some iconic aspect, but it so happens that the hoofprints, just like all other imprints and traces, in the narrow sense of these terms, also convey a partial similarity with the objects for which they stand. We have to recognize the hoofprint as such, that is, differentiate if from the traces of a man’s feet, or of a donkey’s, as well as from fake hoofprints (in the sense discussed above), and from accidental formations worked by the wind in the sand. Only then can with interpret the hoofprints indexically. It remains true, however, the the essential meaning of the hoofprints are embodied in indexicality: they tell us the whereabouts of the animal.

In the case of a photograph, on the other hand, we do not need to conceive of it indexically to be able to grasp its meaning. It will continue to convey significations to us, whether we are certain that it is a photograph or not. Indexicality, in photo-graphs, really is a question of second thoughts and peculiar circumstances.

Therefore, we may conclude that indexicality cannot be the primary sign relation of photographs, although it is an open potentially present in their constitution, and exploited in certain cases. First and foremost, the photograph is an iconical sign.

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48 Therefore, Schaeffer (p.57f) makes to much of the undoubtedly authentically Peircean idea, that the photograph, as an index, is a sign of existence, while other pictures, because of being icons, are signs of essence. As we pointed out when criticizing Dubois’s idea of the photograph being an indicator, the photograph does not in any sense designate the locus of its production.
III.1.4. On some marginal indices of photography

It remains for us to investigate a last possibility: that the peculiar nature of photography makes it depict the world of perceptual experience, in a way that, more crucially than other picture types, forces it to employ indexical signs in the rendering of the world, or to depict signs which in themselves are indexical. Although Dubois never appears to claim this explicitly, the very organization of his book, which includes a chapter on such depicted indexical signs, tends to suggest that these should be more common, or otherwise more characteristic of photographic signs than of other picture signs.

In Dubois’s (1983:151ff) view, the photograph must be seen as something "cut-out", but temporally and spatially: the same shot picks out a moment of time and a fragment of space. On the first aspect, he has not much to say, and the little he says is extremely metaphorical. He is more prolific on the second aspect, and he even proposes a kind of taxonomy, which we will have to scrutinize in a moment. But first, let us see if we can get something more out of the temporal aspect.

The photograph gives us "tout, d'un seul coup" (p.158f), whereas the painting is successively elaborated. We recognize this idea from the work of Vanlier, and will not further comment on it here (cf. III.1.3.2-3.). Furthermore, the photograph is said to transpose "un temps évolutif à un temps figé" (p.160), although there is something paradoxical to speaking of petrified time, there is really much more to this observation than Dubois realizes.

Since it holds on to a single, isolated phase of a passing event, and detaches it from the whole of which it is a part the photograph, much more effectively than the phenomenological reduction, transforms what is in perceptual reality a simple noema of an object (or event) into an object in itself, having its proper series of noematic adumbrations, or noematic matrix. Here, of course, we use the term "noema" in the strict sense in which it is introduced by Husserl and Gurwitsch (see discussion in Sonesson 1989a,I. 2.2. and III.3.), not mere decoratively, as in the late work of Barthes (1980): thus, it means, simply put, that point of view through which we apprehend we object, without at the same time becoming aware of the viewpoint itself. Phenomenology, however, is dedicated to the study of such viewpoints, which are thus transformed into objects, since they become the goal of the perceptual acts of study; and Husserl himself (as quoted in the passages referred to above) admits that aesthetical experience does the same. Photography appears to go about the business of isolating noemata in a much stricter sense than other pictures are able to do (in fact because of the synchrony of photographic
recording, noted by Vanlier and Dubois), although it should not be forgotten that the series from which it picks them out are noematic adumbrations as given to a single eye, that would have the character of a photographic lens, and so on (cf. III.1.3.3. above).

The photograph, therefore, has an indexical relationship to time, but the latter should not be confounded with the sign relation joining the picture to its referent. There is thus a second aspect to Barthes’s dictum "céla a été", the pointer, implicit in the photograph, to what happens before, particularly just before the photograph was taken. But this is not all: the photograph must also contain pointer to the future, that is, to the moments following the taking of the photograph.

Now Husserl has shown, in his study of time consciousness, that each single moment of time must incorporate retentions of foregoing moments, and protentions of what is to come, as well as retentions of retentions and protentions of protentions, to which must undoubtedly be added retentions of protentions and protentions of retentions. In any case, when petrifying the hic and nunc, photography will also petrify these retentions and protentions, and all their combinations. This means that when observing the photograph, we are also aware of at least the categorical form of what has gone before, and what is to follow. Of course, also the future of the photograph is part of our past, even if its is a minimal past, as in the case of a Polaroid snapshot, and the picture of a Photomaton.

As they are preserved in the photograph, retentions and protentions can only be categorical beings, such as they may be supplied from the schemes of Lifeworld experience. But if we have ourselves taken the photographs, or were present when it was done, we may of course try to reconstruct more concretely the past future as well as the past past of the photograph, which is more or less what Barthes does in his book. Here, then, all the fallacies of reconstructive memory are likely to occur.

As we have explained when considering the general case of the picture, these kinds of indexicalities do not qualify as signs in the strict sense, because they are not completely discontinuous from what they stand for, and their expression plane (which is of course the content plane of the pictorial sign) is more thematized than their content plane, but since they do seem to be clearly conscious in the perception of the picture, we may admit that they functions as proto-indices (cf. Sonesson 1989a, I.2.5.).
Now let us turn to the spatial aspect. Dubois´ (1983:168ff) claim is that, whereas the painting is a composed by a series of adjunctions taking place inside a pre-given frame (what he calls a centripetal space), photographic space is simple lifted out, as a whole, from its environment, and thus always carries with it its "hors cadre", that is, what might be called the extra-framal space (cf. II.2.2. above, and Sonesson 1989a,I.2.6. ). Furthermore, photography always involves four spaces: referential space, represented space (apparently the content plane), the space of representation (the expression plane), and topological space (the space of the observer, or receiver of the photograph; pp.170,193 )49. There may be indices present in the space of representation, which point to referential space (the latter, curiously, here seems to be only that part of real space which is not rendered in the represented space!).

There are three types of shifters onto extra-framal space, Dubois (s172ff) contends. However, the last of them has a lot of sub-types. 1) indicators of movements, in particular those of the personages ("Indicateurs de mouvement et de déplacements surtout des 'personnages'"; p.173 ); 2) the network of gazes exchanged by the personages ("les jeux de regard des personnages"; p.174 ); 3) fragments of other spaces introduced into the homogeneous interior space ("tout ce qui est susceptible d’indiquer à l’intérieur de l’espace homogène et bouclé du champ, des fragments d’autres espaces"; p.177f.); 3a) extra-framal space by means of recentration ("hors champs par effet de (re)centrage"; p.179f ), which is defined by the insertion of a second, empty frame inside the first one; 3b). extra-framal space by leakage ("hors-champs par fuite"; p.181 ), as testified by "natural" openings such as doors, windows, etc. ; 3c) extra-framal space by means of obliteration ("hors-champ par oblitération"; p.182 ), as the black square of the censor ; and 3d) extra-framal space by means of incrustation ("hors-champ par incrustation"; p.184 ), which may be operated by a mirror, or something of the like.

Although he refers to the pages of Dubois´s book quoted above, Schaeffer (1987:119f) actually seems to react, rather to the general idea of the photographic scene being simply lifted out of referential space, and perhaps more in particular to Vanlier´ s (1983:17f) idea of a "cadre-index". Indeed, we are informed that (as is well-known) the frame cutting the scene before its natural margins which introduced in painting well before it was exploited by photography. Schaeffer then

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49 To clarify the import of this last space, we will record here that to Dubois (p.187ff), Stieglitz photographic series "Equivalents" which shows cloud-formations, exemplifies the problems of topological space, since there is nothing in these photographs to indicate what is up and down, and therefore nothing which tells the viewer how to hold the photographs when observing them. The term is undoubtedly a little unfortunately, since its suggests something much more general.
goes on to claim that what is really particular to photography, is that, contrary to painting, it suggests an extra-framal space, even when there is nothing in the picture to indicate it. Whatever the interest of this observation, Schaeffer certainly fails to comment of Dubois’s shifter types.

Just like any real-world scene, any picture possesses its spatial horizons, the outer ones, as Husserl would have said, which encompass the environment in which the objects is contained, and the inner ones, which are embedded in the texture of the object itself. But whereas these horizons are given are open potentialities of the environment, to which we may choose to attend whenever we like, and to the degree we find convenient, they are represented in the picture only up to a certain threshold; and whereas these potentialities are continuous with the environment in reality, they are conveyed in the picture at a quite different level (cf. Sonesson 1989a,I.2.1. and passim ). In this sense, then, both the painting and the photograph have their restricted share of extra-framal space. Still, we may agree with Schaeffer that this is more true of the photograph than of the chirographic picture, since we know, or we believe that we know, that there is some point in real space, from which we may see the same scene as we see in the picture, and then go on from there to explore the outer horizons of the scene.

As we have noted elsewhere (in Sonesson 1989a,I.2.6. ), there is really two different indexicalities involved here: there is a (retained) contiguity between that part of the referential space which is mapped onto the content, or, or you prefer, the represented space; and then there is the protained contiguity from the expression plane or, in Dubois’s terms, the space of representation, to some imagined greater space of representation. The first kind of indexicality exist, because we recognize objects of the world, which would ordinarily have further parts, heads, for instance, which tend to sit on shoulders; but the second kind is due to our desire to see interrupted lines prolonged, and often joined together. Often, but not always, both indexicalities will tend to suggest the same meanings. Inside perceptual psychology, constructionism would account for the first kind, and Gestalt psychology for the second. None of them are necessarily signs, but may perhaps function as proto-indices (cf. above).

What, however, about those "shifters" which Dubois introduces? Are they really indexical signs? And, if so, are they performative indices, as the term "shifter" ("embrayeur") would tend to suggest, a least to the readers of Roman Jakobson? And what shall we make of the confusion of terms, which permits "indicator" to be a synonym?
The first category does not seem to contain any indicators, but it does enclose phenomena which function indexicality, although they may no so often acquire the status of a sign. At least this is true, if we here interpret Dubois correctly. Indeed, our authors describes two extremes, but tells us there are many possibilities in between. In one case, as in early photography, the movement is too rapid, and only a blur, or an aura subsists on the plate. At the other extreme, the film fixes a phase which lasts a split second, too rapid to be seen by a human eye. If we take Dubois seriously here, it will be clear that everything which we described above as the temporal cut of photography will be found between these extremes, are rather, it will coincide more or less with the last extreme. We should feel free to include our wood-feller in this category then. Nothing more must therefore be said about this eventuality here.

As for the first possibility, it is clear that it is an abrasion, a real trace left by the movement on the plate; but unlike real photographic traces, it does not involve any similarity. But if we should include in this category also those lines which, in early photography, resulted from movements, for example of traffic in the streets, then we must recognize at least a part of diagrammatic similarity in these traces, for the do represent the extensions of the movement, although not its direction. In any case, like the ordinary photographic imprint itself, this is an abductive index, and it has none of the properties of a real indicator. Curiously, in this first category, it is not even clear that an extra-framal space is suggested (if anything, it is rather an extra-framal time!).

Let as next turn to Dubois´s second category, which concerns the gazes of the personages. Here Dubois tells us that people in photographs tend to look out of the scene frontally, whereas in the film, they usually gaze at one or other of the sides. This may have more to do with the genres in which the two picture types tend to be employed, however: the typical film is fictional, and thus the cameraman, and the viewer who will occupy his space, is obliterated, in favour of some third party; but the typical photograph, which may be a portrait, is somehow a dialogue with the person taking it. In any case, this observation makes it clear that Dubois is really thinking of the gazes, only to the degree that the are directed outside of the represented space, which is of course the only case in which they will suggest an extra-framal space, but not, it would seem, the only one in which they point out a direction.

If anything is an indicator, it must be the gaze. We know that one of the first things the newborn learns to do, is to follow other peoples gazes, to see if there is something interesting to see. But the gaze is certainly not an index. At least, we are
unable to see that contiguity or factorality, or causality for that matter, plays any part here. Nor is it obvious that we can adduce any peculiar indicative devices, as those Thom proposes in the case of the arrow. But certainly, we are trying to explain that which bears no explanation: the eye is simply the primordial model of a focusing device, and cannot be explained from all those phenomena which have built on this model.

Also in this category, Dubois places a number of photographs by François Hers, in which the arm of the photographer emerges from one of the frontal sides of the frame, and touches the nude girl which is the apparent theme of the photographs. But here something different is at stake. First of all, by simple factorality, the arm suggests an entire body, and abductively, from what we know about the way photographs are made (Schaeffer’s *arché*), we conclude that it must be the body of the photographer (but this is only the most probable solution). It is not clear if the arm is an indicator, and in that case, if it points to the girl, or to the photographer.

In fact, if we look a little more attentively at the photographs (reproduced in Dubois 1983, opposite p.76), we will see that the arm is rather participating in a combat with the girl, and this would then tend to present the image as a phase of a more extensive combat sequence. Again, there is also the perspectival deformation of the arm, which may permit it to acquire some of the indicative capacity of lineal perspective, at the same time as it becomes a trace, not so much of the real arm as of the optic properties of the lens, in combination with the distance to the motive. However, Dubois is of course right in affirming that a space outside represented space is thereby suggested.

The first sub-category of category three is rather special. It would seem that Dubois conceives of it, simply to account for the photographs of Christian Vogt (reproduced in Dubois 1983, opposite p.180f). Here a frame, of the traditional sort used for paintings, is superimposed on the photograph, so as to interrupt the shapes of the objects depicted, which however continue on the other side of the frame. There is at least one photograph by Man Ray which also employs a frame in this way, though not a frame connoting traditional painting. In any case, we could think of at least two ways in which these frames may comport indexicalities: first, they present us with an alternative way of cutting-out represented space from the referential one; and in the second place, they cover part of the motive, so that it must be abductively supplied from our knowledge of this kind of objects, or simply from our desire for continuity (compare above). It will be noted, however, that when considered from the first aspect, the category does not point to any real extra-
framal space, by only delimits such a potential space, whereas, when viewed from the second angles, it presents an extra-framal space, which is however internal to the limits of the represented space.

Another marginal case, which is similar also in other respects, is the third sub-category. To the extent that the black square covers over a part of the space of representation, we must again have recourse to the schemes of our common or sociocultural Lifeworld, which permit us to fill in the missing details of the represented space. We have already (in II.1.3.9.) discussed similar operations as applied to pornographic images. Even in this case, the space which is here abductively supplied is not properly speaking an extra-framal space, for it is again internal to the limits of the represented space. On the other hand, if the obliteration is literally produced by black squares resulting from censorship, then these squares may also be taken as traces, in a general sense, of the work of the censor, and then they do suggest a space outside the represented one, though this time it would be a particularization of what Dubois calls the topological space.

More generally valid, and therefore more important, are the other two sub-categories, the one operating by means of leakage, and the one employing incrustation. As for the first of these, it is certainly true that doors, windows, and other openings suggests the existence of a further space, not directly visible in the picture, but it is not clear that this is because of some indexical link. Indeed, from our common knowledge of doors and windows, we make reasonable abductions that there must be further spaces beyond them. Since doors are parts of walls, and since walls are parts of greater ensembles which erect frontiers between spaces, there may indeed be some indexicality involved in the abduction, but it does not seem to be fundamental here. Rather, we simply recognize the objects in question, and expect them to behave as in reality. In their capacity of being openings, doors and windows may in addition carry some projectivity, that is, they could possibly embody some of those "modes and vectors", which, following Gardner, we have tried to systematize elsewhere (cf. Sonesson 1989a, I.4.5.).

The last sub-category is concerned with incrustations of others spaces, here taken to be operated by mirrors. Dubois distinguishes two cases, according as the space represented by incrustation is the same as that in which it is mounted, or another one; but this distinction is not clear, since, if it is the "same" space, it must undoubtedly show it from another point of view, that it, in another one of its possible noemata. However, mirrors (and it is not clear if Dubois would include other phenomena here, shadows, for instance) are interesting from the point of view of indexicality, for, as we argued earlier, they present traces of the objects before them, but
only as long as the objects themselves remain in place; but when a photograph is taken of a mirror, the mirrored object, being a part of the photograph, continues to be reflected in the mirror for ever, and thus the mirror somehow changes its category.

In any case, there is no doubt that the mirror functions indexically, and that is conveys (though in its normal state will not preserve) traces of objects, and when reproduced in a picture, it will certainly function as a sign. In addition, the mirror introduces indexicalities of at least two of the kinds we have considered above, for it covers over a part of what was otherwise be the represented space of the photograph, and it introduces yet another space having its objects interrupted by a frame (though we shall see that the latter is not quite true in the case of Henri´s self-portrait, discussed in III.2.2.).

This concludes our discussion of Dubois´s indices. It seems, then, that some of them may indeed be indices some of the time, although none of them are performative indices, that is, no “shifters”, in the Jakobsonian sense. With the single exception of the gaze, there really are no indicators, if we reserve that term for its stricter sense. On the other hand, it certainly seems to be true that all, or most of these factors contribute to the illusion that there is a world outside the photographed scene, that it, they suggest an actual continuity of the horizons of the Lifeworld. But then indices, indicators, and devices for opening up space are three independent, only sometimes overlapping categories, and instead of one problem, we are now faced with three. Although we shall have to leave our question here, in the next chapter, when we proceed to take the text analytical approach to photography, we shall have occasion to return to these marginal indices of photography and elucidate their concrete work in actual pictures, and how they do it.

III.2. The text analytical way to photography

In the following chapter, we are going to consider, rather thoroughly, two different photographs, which are both more or less artistic in character. As it was said above, there is almost no one but Floch who has tried the text analytical approach to photography, and we will have to follow his lead. (cf. III.1.1.) But it will be remembered that, according to this author, there is really no important differences between photographs and other pictures. The method does not promise then to be of any help, when focusing on the specificity of photography, and yet will will continue to attend to this issue as we go along.
One of the photographs, "Les Arènes de Valence", by Cartier-Bresson, has been analyzed before by Floch, in a very succinct, but suggestive article. Thus, we will continue where he left off, although we will first try to formalize a little more his analysis, which is this time not more than sketched out, and we will attend much more to the iconical layer, which even this time turns out to be heavily indexical in character, and gives us occasion to try out some of the categories referred to in the earlier discussion.

The second analysis starts out from some very brief remarks by Krauss on the similarities (which are hardly apparent) between an self-portrait by Florence Henri, and a photograph by Man Ray, and our own approach, with less basis in Krauss’s considerations, develops in a way analogous to the Cartier-Bresson analysis. After these two analyses, we will return to consider the results of the approach, in particular as far as the specificity of photography is concerned. However, the following analyses must also be read as a contribution to the development of methodology, in the sense of our part II.

### III.2.1. Floch reading Cartier-Bresson and beyond

Cartier-Bresson is well-known in photographic history as one of the original exponents and promoters of the photography of the decisive moment, or, as he puts it in French, "la photographie au flagrant délit". This naturally means that the photographer is out to seize the event in the act, preserving for posterity a temporal phase which is rich in indexical detail (in the sense of our discussion in III.1.3.4. and III.1.4. above). At the same time, however, one is wont to think that, since in that case the photographer has to make his one and only, global decision very rapidly, the photograph should tend to be comparatively poor indexically, when considered from the point of view of spatiality.

It is from a somewhat different angle, although close to this paradox, that Floch starts out. In his earlier work, Floch has tried to demonstrate the presence, in a number of pictures, even including advertisements, of a very elaborate, artful organization on the plastic level, and now he sets out to discover such a level also in a picture of Cartier-Bresson, well aware that we would not usually expect a picture taken "en flagrant délit" to be particularly intricate plastically. From this point of view, "Les Arènes de Valence", photographed in 1933, is exemplary: it has all the appearance of being a montage, or a collage, as Floch (1984c:48) notes, and indeed we have found that this is the impression its makes on any viewer, when being con-
fronted with the picture for the first time. But nothing could of course be more contrary to the spirit and practice of "flagrant délit" photography than a montage, whose contrived character places it at the opposite end of any spectrum of naturalness.

Not only ideological values are opposed here; but if "flagrant délit" photograph realizes the ideal case of the global decision, which appeared to us to be typical of photography (cf. III.1.3.1.), because to all appearance, it is unitary in both time and space, then the photo-montage clearly approaches chirographic pictures, in admitting a multitude of partial decisions, which only successively builds up a whole. However, appearances are false here, because we know, simply from seeing the name of Cartier-Bresson inscribed, that this could not be a montage.

And yet, as Floch manages to show, the pictorial surface is intricately organized. Although we shall have to disagree with Floch as far as the particular features of the organization are concerned, we cannot but confirm the presence of an elaborate plastic layer. So, before we proceed to detail our own analysis, it will be convenient to resume here the traits distinguished by Floch.

The picture appears to be divided by a grey stroke which is slightly oblique to the left. The right-hand part is comparatively luminous, and distinct, whereas the shapes of the left-hand part are dark and vague in their contours. In both parts, there is a horizontal repetition of elements such as small, black squares, big half-circles, and descending oblique lines. This over-all impression of angularity is interrupted in two ways: by the winding repeated on both sides of the division line, corresponding, on the iconic level, to the body of the boy in the background, and to the shape of the digit "7"; and by the white half-circle surrounded by bands in different grey tones, and the small circle of the watchman’s spectacles.

There is a light silhouette on a dark background, and a dark digit on a light background; and in a parallel fashion, the light circle appears on a dark figure, and the dark figure on a light background.
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Fig. 3. "Les arènes de Valence" (1933), by Cartier-Bresson, as reproduced in Floch 1984c.

If we project the dimensions of the smaller division block on the greater one, both couples of curved forms will be found to have their axes on the imaginary verticals thus traced. The three figurative elements, that is, the digit, the boy and the head of the watchman are not clearly situated in the third dimension, because no soil and no horizon are visible, and thus they appear to be simply listed, like on a painting by Léger. This, then, accounts for the montage effect.

Iconically, the content appears to be rather simple. Floch tells us there are two stories, and they involve a "flagrant délit", in the literal, juridical sense. The boy in the background has committed an infraction by entering in the building, and he tries to escape, giving the appearance of not knowing that he has already been caught in the act. The watchman represents the authority, and he is the one who makes the former action into a "flagrant délit" by observing it.

Returning to the plastic level, Floch now observes that there is what he calls a "plastic rhyme" between the two winding forms on both sides of the dividing line. This configuration, in its turn, is circumscribed by the triple, grey band of the right-hand part of the picture, which forms, with the small white circle of the spectacles, what may be called a "plastic anaphore". Thus, what is scene on the left-hand side is somehow signified as being that which the watchman observes. Floch then goes on the explain that all this is a parable of photography itself, in particular to that of
the Leica, which, apart from being monofocal, as any camera, is non-reflex, and thus involves two images which must be made to coincide while focusing.

We will have a lot to say about, in particular, the iconical aspects of this analysis later, but for the moment, we will only introduce some critical remarks about the notions of "plastic rhyme" and "plastic anaphore". Floch quotes a definition of the anaphore, from Greimas & Courtès's dictionary, according to which it is "une relation d'identité partielle qui s'établit, dans le discours, sur l'axe syntagmatique, entre deux termes, l'un en expansion l'autre condensé, servant ainsi à relier deux énoncés" but he does not give us any definition of rhyme. The problem is, that, in verbal language, where both phenomena are well-known, they both imply a "partial identity", but whereas this identity is found, in the rhyme, exclusively on the plane of expression (at least before the rhyme), it is situated on the content plane in the anaphore, and rarely on the expression plane, which is why anaphorical relationships could normally only be brought about by a small class of established means. What we have in this case, on the other hand, are in both cases plastic, that is to say, expression plane similarities. In is thus arbitrary to call one of these a rhyme, and the other one an anaphore, but it remains true that, plastically, there is a kind of inverted symmetry between the person in the background (who may not really be a boy) and the shape of the digit, and another similarity between the triple band of half-circles and the watchman's glasses; and that topological (or intra-iconically, as Lindekens would have said), there is the suggestion of an inclusion of the first configuration in the second (similar to what we found in our revision of the "News" analysis, in Sonesson 1989a,II.3.).

In the following, we will proceed very formally, and very rapidly, not detaining ourselves to explain methodological points, when these have been dealt with already in the preceding part. What will be presented, then, are results, rather then we whole analytical procedures, and its justifications. The reader is advised to evaluate the features lists himself, reporting them onto the photograph, and to the different schematic pictures.

Now let us consider different ways of partitioning the picture.

III.2.1.1. Three versions of the plastic layer.

There seems to be roughly three ways of partitioning the picture: a) the one made by Floch: Aa vs Ac, in our terms; b) the one we would immediately make: A vs B, Aa vs Ab, Ba vs Bb; c) a reduction to simple, prototypical shapes: Cle vs Rle (based on a yin/yang organization). For an explanation of the terms, the reader is referred
to figure 5 below, and the following figures. We shall begin with a formalization of Floch´s proposal.

a) Floch´s version (Aa vs Ac)

In the following, we intend first to restate Floch´s analysis in a more explicit and formal mode, and then pass on to a few comments.

<table>
<thead>
<tr>
<th>smaller part (Aa)</th>
<th>vs</th>
<th>bigger part (Ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td>dark shapes</td>
<td>vs</td>
<td>light shapes</td>
</tr>
<tr>
<td>blurred shapes</td>
<td>vs</td>
<td>distinct shapes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>horizontal repetition of</th>
</tr>
</thead>
<tbody>
<tr>
<td>black squares</td>
</tr>
<tr>
<td>big half-circles</td>
</tr>
<tr>
<td>descending obliques</td>
</tr>
</tbody>
</table>

That is, a general angularity (isotopy) interrupted (deviation), by, respectively

digit/person vs half-circles/glasses

There really is very little basis for this segmentation, in fact only the difference between dark and blurred shapes, on the one hand, and light and distinct shapes, on the other, and this is in any case a very relative distinction (that which is seen through the watchman´s loop-hole is rather hazy, too, and there are many smaller, dark areas).

We have supposed the general angularity of the whole picture to be describable as an isotopy (cf. II.1.3.). If so, we could take the respective deviations from the isotopy to form another contrast between the parts. But, to begin with, the isotopy itself is doubtful: there are small, dark squares in Aa only, the grey half-circles are exclusively in Ab, and descending obliques are only to be found in Ac. Even if we reformulate this as a general angularity (which is curious for the descending obliques, and stranger still for the half-circles), it is difficult to accept it, in particular as roundishness would seem to predominate entirely in Ac.

Furthermore, of the two "deviations", one is, on this account, not localized to one of the areas, but its parts are distributed on both sides of the dividing line. The type of deviation could therefore not be used to justify the partition of the picture. However, we do not mean to say that Floch´s intuitions has hereby been "falsified"; it may perhaps be made explicit using better arguments.
Fig. 4. The first two divisions of Cartier-Bresson’s photograph “Les Arènes de Valence”

Of course, the division is perfectly justified from an iconical point of view, and even the difference of light and darkness is so impressive a contrast in itself, and so well manifested here, that the segmentation imposes itself to some extent. The former is certainly plastically irrelevant, but the latter may be sufficient to make this division valid at least on a subordinate level.

Even if we thus accept the division into a field of comparatively dark colours, and another one of comparative light ones, it should be noted that the dark tones are present both in Bb and Aa; and we will have more to say about this fact below.

b) Another binary variant (A vs B).

We will first look at the justifications for the principal distinction into two fields, A and B, and then go on to elucidate, in the same way, the different subdivisions.
A vs B:

verticals vs horizontal
vertical field division vs horizontal field division
extreme tone contrasts vs grey tone scale
sub-fields on the same level vs included sub-field
straight lines and curved shapes vs obliques
parallelism of curved shapes Aa/Ab vs parallelism Ba/Bb in obliques
figure down to the right vs figure up to the middle
field part of a circle vs rectangle part of the field

Fig. 5. Predominant field features in Cartier-Bresson’s photograph "Les Arènes de Valence"

Most of these contrasts would seem to be self-explanatory. The reader may want to compare fig. 5, which highlights some of the traits characterizing the different fields and, as we shall see, sub-fields. Note, however, that the extreme tone contrasts are those of the almost black left-hand side with the predominantly white left-hand side of field A (Aa vs Ab, to which we turn below). In the last contrasts, we have formulated a typically Lévi-Straussian opposition, which involves a double contrasts, of primary forms, and of direction of inclusion. The quasi-parallelism of obliques in Ba and Bb is more clearly seen in fig. 4 above.
Figure here means an anthropomorphic centre of interest, and it is known from psychological interests that such centres are characterized, in descending scale, by human beings, animals, and something which moves. Thus, it is properly an iconic elements, but we hope that it could be plastically justified, by the the largely irregular shape of the forms, and their repleteness of details.

Aa vs Ab vs Ba vs Bb

<table>
<thead>
<tr>
<th></th>
<th>vertica vs</th>
<th>curves</th>
<th>vs</th>
<th>obliques</th>
<th>vs</th>
<th>horizontals</th>
<th>&amp; horizontals</th>
<th>&amp; obliques</th>
</tr>
</thead>
<tbody>
<tr>
<td>homogeneous field (with deviation)</td>
<td>inhomogeneous vs (of homogeneous sub-fields)</td>
<td>homogeneous field (with deviation)</td>
<td>inhomogeneous field (of details)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dark vs light</td>
<td>vs</td>
<td>grey tones vs</td>
<td>dark/light/grey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The latter may be developed in the following way:
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<table>
<thead>
<tr>
<th>Light vs dark represented by (extreme cases)</th>
<th>Dominance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aa medium light vs very dark</td>
<td>medium dark</td>
</tr>
<tr>
<td>Ab very light vs medium dark</td>
<td>very light</td>
</tr>
<tr>
<td>Ba medium light vs medium dark</td>
<td>medium light</td>
</tr>
<tr>
<td>Bb very light vs very dark</td>
<td>medium light</td>
</tr>
</tbody>
</table>

An idea of what this means may be gained from Fig.7 below.

![Fig.7 Colours distribution in Cartier-Bresson’s photograph "Les Arènes de Valence"

At this point, it seems natural to wonder, if all these features carry differential meaning, that is, if they all carry their proper message. In other terms, do they have a significative, or a merely demarcative function (cf. II.2.2.2., conclusion b.)? According to Lindholm & Arnheim, quoted above, curves a felt to be "sad, quiet, lazy, merry (sic!)", descending forms stand for "weakness, lack of energy, relaxation, depression", while ascending ones signify "strength, energy, force", and an indirect, changing, and waving direction is sad, but a precise, sharp, and mostly forward one conveys the idea of strength. However, this is hardly sufficient to begin to construe the content level of plastic language.

We would suggest, in any case, that horizontals are calmer, more passive, and more equilibrated than verticals; and we know, from Lindeken’s experiments,
that circles (and then perhaps also half-circles) are experienced as closed and passive. This would give us, in the present picture, reading from left to right, a transition from activity to passivity. To appreciate this, and the following, the reader should consult fig. 5 and 6.

To this may also be compared the placement of the figure in B in the middle of the field, and, to some extent, of sub-field Bb in Ba, which suggests a state of equilibrium on the B side, contrasting with the dislocation of plastic weight operated by the figure in Aa, and also a little by the digit in Ab. That is, we would get:

weight below vs weight to the right vs weight to the middle left vs weight to the middle above vs weight completely in the middle

which is to say that the equilibrium augments, from left to right, for, while in Aa, the figure is off centre in both dimension, it is desequilibrated only on one dimension each in Ab and Ba, but almost central on both dimensions in Bb.

Thus, we arrive at the conclusion, that on one hand, because of the presence of verticals and circles, respectively, activity diminishes further to the right, and that, on the other hand, because of the plastic weight of the figures and sub-fields, equilibrium augments when going to the right, and this two facts would seem to agree very well with each other; and we will see that they also correspond fairly well to the iconic reading.

Now let us consider the colours which are here really degrees of luminosity. The sharpest contrast between fields and sub-fields is the one opposing Aaa to Ab; but it is in Bb that we find the sharpest contrasts inside a field (or sub-field). At the same time, there is an increasing effect of blending and leveling in sub-field Ba, and predominantly so in Bb. Therefore, we could say that, from left to right, brightness contrasts are miniaturized and intensified at the same time.

If this means anything, then is may perhaps be interpreted to present tension, first, on a grand scale, visible for all, as an opposition between the sub-fields Aa and Ab, and then at a more secret, intimate, level, as internal to Ba and, in particular, Bb.

50 Here, and in the following, the notion of reading from left to right must not be understood in an entirely lineal sense, for while sub-field Ab is effectively to the right of sub-field Aa, sub-field Bb is enclosed, in the upper half of sub-field Ba. Thus, we take the reading order to imply, not only a leftward movement, but also a closing-in on the internal, lower space.
c) The prototype version

Our third and last segmentation is not based on entirely different facts, but it uses them in a different way. Basically, it consists in saying that most of the left-hand part of the picture (which then expands to be the greater one of the partitions) are included in a imaginary circle, drawn from the half (or less than that) circles of the picture, if the radius is allowed to continue outside of the picture: and that most of the remaining space (now reduced to the smaller half), or that which holds any variety, is found inside a rectangle, which is entirely contained in the picture, but overlaps the circle somewhat (cf. Fig.8 below).

Fig.8. The prototype version of Cartier-Bresson’s photograph "Les Arènes de Valence"

It will be remembered that, also when analyzing the tomato-and-bottle picture (in II.2.1.1.), we found the configurations present to be interpretable as a circle and a rectangle, respectively. These are of course elementary, prototypical shapes, in the sense of cognitive psychology. However, it immediately becomes apparent, that the circle and the rectangle are realized here in a very different way from that in which we found them in the recipient advertisement.

Some of these differences are the following:
1) there, we had a small circle and a big rectangle, but here the size relationship is reversed;
2) in the earlier case, the circle was enclosed in the rectangle, but here, it is rather then rectangle which appears to be comprised in the circle space, though it would be more correct to say that the two shapes overlap a little, and perhaps the relation of inclusion is not the pertinent one in this case;
3) in the other case, the rectangle stood on its end, but here it occupies a prototypical position, that is, is lays on its longer side.
4) in the earlier picture, the simple opposition of circle and rectangle almost entirely exhausted the plastic level of the picture, but here we are faced with a multitude of other forms;
5) to discover the prototypes, in the former case, some degree of abstraction was necessary; but here the prototypical shapes are given as such. On the other hand, the forms were complete in the former picture, but here the circle is only suggested, and we have to reconstruct it be means of a continuity index stemming from the expression plane.
6) in the former case, there was a kind of yin/yang structure which appears as a modification of the principal contrasts, that is, some circle properties were found on the rectangle, and some rectangle attributes could be discovered in the circle. Here, however, there are independent smaller circles, present inside the principal rectangular shape, just as there are autonomous squares, included in the imaginary circle continued from the circle fragment present in the picture (cf. Fig.9).

It should be noted that, in the latter point, we make use of some of the same plastic relations which Floch made into rhymes and anaphores (cf. introduction above); but Floch fails to note that not only the circle, but also the rectangle of the loop-hole, has a smaller representative in the other field.

Next, we shall consider some possible plastic values, or meanings, of the circle and the rectangle. Most of the following are taken from experimental studies by Arnheim, Lindekens, J essen, Perkins, Hoffman, and Volkelt & Sander (quoted above, in part II). However, we are ourselves responsible for having put the features together in oppositional pairs, wherever possible, even when they stem from different studies. It is obvious that the value of such a table must be very provisional indeed.
### Fig. 9. The yin/yang structure of Cartier-Bresson’s photograph "Les Arènes de Valence"

<table>
<thead>
<tr>
<th>Circle</th>
<th>vs</th>
<th>Rectangle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volkelt, Sander, Hoffman</td>
<td></td>
<td>elaborated, developed</td>
</tr>
<tr>
<td>Jessen</td>
<td></td>
<td>masculine</td>
</tr>
<tr>
<td>Perkins, Arnheim</td>
<td></td>
<td>Lindekens</td>
</tr>
<tr>
<td>Arnheim &amp; Lindholm</td>
<td></td>
<td>Lindekens</td>
</tr>
<tr>
<td>Lindekens</td>
<td></td>
<td>Lindekens</td>
</tr>
<tr>
<td>&quot;</td>
<td></td>
<td>vs sincere</td>
</tr>
<tr>
<td>&quot;</td>
<td></td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot;</td>
<td></td>
<td>dynamic</td>
</tr>
<tr>
<td>&quot;</td>
<td></td>
<td>vs static</td>
</tr>
<tr>
<td>Groupe µ</td>
<td></td>
<td>Lindekens</td>
</tr>
<tr>
<td>adult</td>
<td></td>
<td>Lindekens</td>
</tr>
<tr>
<td>association</td>
<td></td>
<td>&quot;</td>
</tr>
<tr>
<td>discussion</td>
<td></td>
<td>&quot;</td>
</tr>
<tr>
<td>closed</td>
<td></td>
<td>&quot;</td>
</tr>
<tr>
<td>massive</td>
<td></td>
<td>&quot;</td>
</tr>
<tr>
<td>mathematical</td>
<td></td>
<td>&quot;</td>
</tr>
</tbody>
</table>
Give this impressive list (which has a certain coherence, of course, at least at the ideological level), we are faced with an appreciable number of disturbing questions: a) which of these features are we to consider relevant, and how are we to pick them up from this abundant choice – if not in relation to iconic meaning?

b) how are these plastic meanings modified by the relationship in which the circle and the rectangle are found in the picture? According to Lindeken's experiments, made with trade marks, it is the outer shape which imposes its meaning on the inner one. But we do not really have an inclusion here, but rather an overlap. And besides, perhaps our picture functions differently from a trade mark, and maybe the respective meanings of the shapes are both present in the picture forming a contrast, or in some other way, instead of one of them dominating the other.

c) what difference makes the fact that the circle is not really there, but must be reconstructed?

d) what importance should we attribute to those further properties in which the circle and the rectangle differ in our picture, the one being big and the other small, one fragmentary and the other entire, one overlapped and the other overlapping, etc.?

If calm and laziness are ascribed to the circle, this would engender a certain contradiction to the verticality of field A, which the circle encloses. On the other hand, the opposition dynamic vs static is in accord with the earlier segmentation, and, as we shall see (particularly when considering the movement vectors), with the iconic analysis. As for the basic difference between the circle and the rectangle, that between elementary/natural and elaborated/serious/adult, it could of course be iconically related to the parts of the picture occupied by the respective human figures of the boy (is that is iconically correct) and the watchman.

The fact that the circle is much bigger, and to some extent encloses the rectangle, could be interpreted to signify some amount of dominance on the part of the circle; but the necessity for the circle of being constituted from continuities indexicalities makes the inclusion of other picture elements merely potential. Even the "natural" is given here as an "open" potentiality, like so much else in the picture (cf. the vectors of movement considered below).

Referring back to the third difference between this picture and the earlier considered, it appears that the opposition between the circle and the rectangle cannot be made to carry the whole axis of meaning in this case. But we should not
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forget that, because of its prototypical position, the rectangle should be stronger here.

Although the circle is only fragmentarily present, the opposition to the rectangle certainly contributes to make it more pregnant. And to the extent the circle meanings concord with other parts of the pictorial signification, the circle reconstruction will be even further justified.

As for the last difference, it seems reasonable to suppose that, when the prototypical shapes themselves are modified by the features normally attributes to the opposite shape, there is more of an integration, and meaning is more profoundly transformed, although on a lower level (cf. II.2.1.1.). Here, on the other hand, the yin/yang structure mores seems like a marginal comments, but it certainly establishes a link between the fields.

No doubt this analysis has left us with a lot of meanings, but little certainty. Let us now see if the iconical layer may be of any assistance.

III.2.1.2. A few icons for indexicality

As is often the case, the iconical analysis will be largely concerned with depicted indices, and this is particularly interesting for us now, because we will be able to try out the indexical categories derived from our discussion of Dubois and others. However, we will start from another end, which is, at least apparently, purely iconical.

It will be remembered that Floch’s segmentation, although is could hardly be justified plastically, was accepted above as iconically valid. There are a number of oppositions which point to this:

a) depth (Aa) vs closeness (Ac)

- deep vs shallow
- whole figure vs face picture
- close to camera vs further from camera
- lowered camera vs raised camera

b) directions/vectors of movement.
If we note everything which suggests a movement in the picture, we are left with a lot of vectors, as marked in fig. 10.

c) axis of the picture.
The dividing line between the two iconical fields of the picture coincides with the axis around which the door moves. Thus, the centre of the picture itself is revolving.

Now the result of all this is that, iconically, the picture contains a lot of movement and dynamism, and it is very "open" to the outside. This seems contradictory with the immediate, plastic impression of the picture as being a "montage", but in fact, we have seen that there is a lot of dynamism in the plastic layer also.

![Fig.10. Movement vectors in Cartier-Bresson's photograph "Les Arènes de Valence"](image)

There are some curious problems involved with the iconico-narrative interpretation of the picture, as conceived by Floch, but it will be more convenient to deal with those after having had a look at the indices, or what Dubois have taken to be such. In fact, the problems will readily emerges already in the discussion of these "indices".

In the following, we will be referring to Dubois’s categories, as discussed in III.1.4., and to some of our own index categories, mentioned in different subsections of III.1.3. Our use of Dubois’s categories here should not be taken to imply an evaluation which is contrary to that of our theoretical discussion; although many of these categories are not indices, and/or not indicators, they are important ways of conceiving the scene, since they point to its temporal and spatial horizons.
D1. Phases of movement.

A lot of events are "caught in the act" here, most prominently, of course, the movement of the man in the background (Floch’s "boy"), and the vigilance of the watchman. As we said in III.1.4., this would rather be the temporal cut of the events, and since what is actually thematized here are the phases, with some vague indications of their horizons, rather than the entire processes, we should say that we are in the presence of proto-indices. Let us note the following, although there may be others, at least at other intensional levels:

- A phase of the process of going out while turning around to look behind one’s back.
- A phase of the process of opening the door in the background.
- A phase of the process of looking out of the loop hole.
- A phase of the process of opening or having opened the door with a seven on it.

Furthermore, at least some of these processes also possess their proper direction in space. Thus, the gaze of the watchman is directed more or less to us (or the photographer), but a little more to his own right perhaps (the left side of the picture), and the other man’s gaze clearly goes to the left. Then there are the opposite phases of movement initiated by the legs and the head of the man in the background. The direction of the background door is also obvious, but that of the door with a seven is undetermined, or perhaps bidirectional, since it may only be potential. None of these movement could however be described as indicators. They are simply phases of on-going processes having a goal in space.

It could be asked now if there is not something here more properly to be ranged among the spatial indices, that is, comparable to the blur at the other end of Dubois’s scale? Indeed, it may be remembered from the plastic analysis, that the shapes in the Aa field are not only darker, but also fuzzier than the others. Should we attribute that to the sudden movement of the man in the background, swinging round to detect what is behind him, in which case we would have an imprint, no longer properly photographic, because it is not iconical, of the velocity of the movement (as a physiognomic quantity, of course, not in any sense measurable)? There may be some justification for this argument, which supposes a recourse to the arché of photography, since it is only the man, and in particular his head, which are (to put it paradoxically) clearly seen to be fuzzy. But, on the other hand, this fuzziness could simply be an effect of the photographer having focused in the foreground, in which case if would be an index of this decision.
In any case, since none of these meanings are ordinarily, or at least immediately read off the photograph, they are merely indexicalities, potential signs, rather than real indices.

D2. Direction of gazes.

We have already noted (in III.1.4.), that the gaze undoubtedly serves to indicate a direction, although there is nothing indexical about it. Contrary to what Floch’s interpretation of the scene would make us expect, the two gazes of the picture do not meet; on the face of it, they are both aimed at the camera, that is, at the observer of the picture, which means they do not only point to a space outside the represented one, but more precisely, to topological space, in Dubois’s sense.

At this point, it may be useful to introduce a comparison of three typologies for the different spaces involved in a picture (that of Marin concerns paintings, and emphasizes the frame as a particular, concrete object, but in this sense, the frame is less important to photographs). We must warn, however, that the similarity, in some cases, is only very rough

R: espace référentiel           hors-champ                      —
C: espace représenté            champ                           representation of space
E: espace de représentation-cadre       hors-cadre       space of representation
        espace topologique           —                              space of representability

We will adopt, in the following, Marin’s term space of representability (manifested in the painting, according to Marin, as linear perspective) for that part of referential space, which includes the locus of the picture-maker, and which, so to speak, prescribes the place of the viewer. In a photograph, the perspective is an indexicality, if not an index, for the camera, the lens, and also for the position of the photographer, and there is perhaps more than in a painting a tendency for making the "hors-cadre" (the environment of the picture as expression) coincide with the "hors-champ" (the environment of the depicted scene in reality). In the present case, at any rate, we cannot avoid finding ourselves in the position of the photographer (and indeed, we take it to be our position, before we realize that it was first that of the photographer), facing the twin gazes of the watchman and the other man slipping out in the background.

There is a mystery here, then, for it is not to be understood how the watchman is supposed to be watching the other man. Is is not, instead, we, and before us
the photographer, who is really "caught in the act" (like in Solomon’s famous photograph, "Volilà le roi des indiscret!", though less dramatically), by the two subjects of the shot?

So far, we have ignored the fact that we can hardly see the watchman watching us with more than one eye, since one of the glasses is covered as a result of the light reflected from it. But this is of course an index in a very commonplace sense, like the mirror and the shadow (cf. III.1.3.3.), an imprint of sunlight or of a flash, although the luminosity in the foreground would seem to exclude the latter alternative (cf. D3d below).

In addition, this index also tells us a little of where we could expect the sun to have been, that is, does extend considerably referential space, not represented directly in the picture. Actually, the luminosity in the foreground and darkness in the background are also indices of light conditions on the place of action, and convey information about temporality and spatiality of the scene, that is, it tells us roughly the time of day, and the epoch of the year, and it marks off the outside space from the inside.

D3a/D3c. Recentering and obliteration
These are, as we said above (in III.2.4.), very particular categories, which are not wont to be found manifested so often. No doubt, we could claim the field Bb is a frame inside the frame, but the limits of this frame certainly coincide with the limits of a part of represented space. It is true that the photograph gives the appearance of being a montage, so we could think that there should be a multitude of spaces which are not spatially related in any obvious way, and this is indeed the case, for it is difficult to understand in what way the space behind the loop-whole is related to the space of the man opening a door in the background. However, there are no recognizable shapes in Bb, which continue uninterruptedly at the other side of the frame, as in the photographs studied by Dubois (also cf. Man Ray’s photograph reproduced in III.2.2. below).

Nor is there any censure involved. Of course, as every representation of space supposes a choice of proper parts, attributes, and angles of vision rendered, a lot of perceptual reality is undoubtedly obliterated, and the curiously unmediated way in which the two principal portions of space are related in the picture, may make us suppose that one of the scene somehow covers over the continuity of the other (this is part of the "montage" effect). We could also say that the watchman’s right eye is "censured" out of the picture, and is then abductively added, from our
knowledge of the body scheme; but there is no censuring agent, other than the sun, to culprit.

Db. Leakage
There are a lot of places where represented space, in this picture, is found to leak out to referential space: the door with the digit seven; door and/or loop-holes inside the building; the loop-hole where the head of the watchman is visible; the sky which may be detected at the upper right-hand corner of the loop-whole. All these leakages, apart from the of the door in the background, let us also apprehend a part of the whole which is another space, which means that there is an abductive factorality already on this account. However, for all those who are accustomed to living in houses, there may be an additional abduction from the knowledge of the use to which doors and windows are usually put. There is no indication, but all the doors and windows are potential ways out.

D3d. Incrustations.
Dubois’s single example of an incrustation was the mirror, but there are no mirrors here. In fact, we thought at first that the singular spatial relationship between the two principal scenes of the picture (the man slipping out, and the watchman gazing) could be explained, and Floch’s description of what is going on could be accepted, if we took the watchman to be seen in a mirror, attached to the wall, on the right side of the door on which the digit is inscribed. However, if we examine the photograph closely, we will discover the comparatively thick sides of the wall in which the loop-whole is taken out, and which would not be there had the rectangle been a mirror. Also, the reflection in one of the glasses would seem difficult to explain on this interpretation.51

On the other hand, if we interpret the term incrustation more loosely, we could say that the space behind the loop-hole is an incrustation, since we would not have been able to see it from this angle of vision, if the loop-whole had not been taken up in the wall at this place.

51 In Nordström (1983), there is a photograph which is described as showing a news-vendor reflected in a mirror behind the coupled seated at a café table. This is easily seen to be wrong, however, because if the news-vendor had been just a mirror reflection, the titles of his newspaper should have been reversed, since this is a necessary condition on the way mirror indexicality is imprinted, and it follows that the man must in fact be standing behind the café table. Unfortunately, there are no such simple hints in the present picture.
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Fig. 11. "Leningrad" by Cartier-Bresson

The reflection of light in the watchman’s spectacles possesses one property in common with the mirror, that is, it is an imprint of light stemming from a source beyond the scene, but it fails to have any iconical aspect.

There is another photograph by Cartier-Bresson, the caption of which reads "Leningrad" (Fig.11), which comes more closely to realize Dubois’s intentions with this index type. The whole lower part of the picture contains an immense puddle, in which the policemen appearing in the middle of the picture are reflected, and thus the same "space" is incrusted in itself, though presented from another point of view. But we also discover in the same puddle the roof, and the dome and cupolas, of the building, the lower facade of which is visible in the upper part of the photograph, which is to say that there is also another space incrusted in the primary scene of our picture.

There is a sense, however, in which this is not quite another space, precisely because we read in the continuity (that is, in this case, the factorality of dispersed parts) between the facade and the roof. To see this however, is is not enough to
know about the arché of photography; it is rather the arché of puddle reflections which we should know of.52

**IVa. Content as part of the referent**

This is a general case, which includes D1 (not only movements, but things) and D3b (not only openings, but all parts of wholes). Here, for instance, we discover a part of what looks like a storehouse, in the background; a part of another space, which is the place occupied by the watchman; a part of a stone wall; a part of a storehouse door; a part of an man, which, on another intensional level, is a watchman; a part of a digit, inscribed in the middle of a part of a circle, etc. Of course, we could go on for a long time.

Indeed, there is another photograph by Cartier-Bresson, which is rather similar, taken, if would seem, at a somewhat less "decisive moment", but which shows the other half of the storehouse door, on the left, where this photograph is interrupted by its border.

**IVb. The potential continuity of the expression plane.**

This is a classical case, for the circle is the most prototypical of prototypical figures; and very much of our plastic analysis hinges on the assumption that we will immediately complete the circle upwards. Other continuities, like that of the digit, are less pure, for in order to go through with them, we cannot rely on perceptual laws only, but must be familiar with Arabic numbers.

**IVc. The picture as an imprint**

Here, we could take the photograph to be also an imprint of the angle at which the camera is placed in relation to the motive, for this is clearly signified by the oblique lines of the right-hand part, and the difference of depth between the fields, etc. Of course, the photograph is not immediately read as standing for any of these factors, but, as we concluded above, nor is it directly apprehended as standing indexically, as against iconically, for that which it shows.

**III.2.1.3. Concluding remarks**

That then, is this picture a of story of? There seems to be no way of making spatial sense out of the photograph which permit us to accept Floch´s version, according to which the watchman discovers the "boy" (who may well be a grown man) stealing his ways out of the storehouse. Nor were Floch´s notions of plastic rhyme and

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52 There may be a difference between mirror reflections and puddle reflections, at least as the latter appear in this photograph: the latter comes closer to the character of a cut-out, in the compact character of the shapes, and the effacement of details.
plastic anaphore really convincing. Instead we seem to be left with the view of two men who both look towards us — which is to say, towards the photographer. And this we will discover if we have recourse to the arché of photography, which requires more than light causing an imprint, and, among other things, the presence of a photographer on the scene, who is there as our stand-in.

That is to say, the photographer is caught in the act, and we are caught in the act. The act of observing a double scene, characterized by predominant movement and disequilibrium and the left side, and rather more calm and equilibrated on the right side. Again, this is not the only result of the analysis, for that is contained in all the minutiae of our procedure.

III.2.2. On an self-portrait by Florence Henri

Also in the analysis which follows, our point of departure has been an analysis made by another author, which we then develop in a different sense, as we did with that of Floch above. Nevertheless, there is a difference, for this particular writer may not qualify for the title of semiotician, in spite of the fact that she makes abundant use of some semiotic concepts, notably that of index. To our mind, Rosalind Krauss’s texts are too impressionistic and inarticulate in character to be counted to semiotics, and it is not even certain that she would care to be thus included.

This is why we cannot base ourselves on her analysis, which is jeopardized in a few paragraphs, and with no apparent arguments, and we cannot hope to get any assistance from her work, as we did from that accomplished by Floch. Rather, our analysis must inscribe itself against her brief, yet suggestive remarks.

In the following, it is from the comparison of two very different pictures, as it is made in Krauss’ book, that we will begin our discussion.

III.2.2.1. Man Ray caught in the act.

Krauss (1985:87ff) juxtaposes the self-portrait by the functionalist Florence Henri (Fig.12) to Man Ray’s surrealist composition "Monument to de Sade" (Fig.13), claiming that, against all appearance, they are about the same, sexual, subject matter, which we could perhaps try to epitomize as phallic domination. She then goes on to tell us that
"in both cases one is treated to the capture of the photographic subject by the frame, and in both, this capture has a sexual import. In the Man Ray the act of rotation, which transmutes the sign of the cross into the figure of the phallus, juxtaposes an emblem of the Sadean act of sacrilege with an image of the object of its sexual pleasure" (p.89f).

On the face of it, this description is more convincing in the case of Man Ray’s picture, than in that of Henri’s. We should note immediately that the latter photograph embodies that kind of frame-in-frame-construction, which Dubois termed a "hors-champ par recentrage", although the shape of the frame is both more significant in itself, since it clearly suggests the cross of St. Peter, and less independent of the motive it contains, since the central shape of the motive is included in, and even parallel to, the shape of the frame. Krauss points to these facts in a different way:
"And two further aspects of this image bespeak the structural reciprocity between frame and image, container and contained. The lighting of the buttocks and thighs of the subject is such that physical density drains off the body as it moves from the center of the image, so that by the time one’s gaze approaches the armrings, flesh has become so generalized and flattened as to be assimilated to printed page. Given this threat of dissipation of physical substance, the frame is experienced as shoring up the collapsing stræume of corporeality and guaranteeing its density by the rather conceptual gesture of drawing limits" (p.90).

It is clear, then, that even before the cross is superimposed on the picture, the photographic imprint has been so treated as to convey to us only those parts of the referent which manifest attributes particularly attracting the interest of Man Ray. From the point of view of indexicality, this picture is certainly complex. First of all, it renders exclusively a part of the human body to which portraits are hardly ever devoted on such an exclusive basis, for even a pornographic magazine would
give us a little more context. Thus, already for this reason, the abduction from body part to the entire body may be difficult to make. Moreover, even this motive tend to dissolve itself into the mere printed page, as Krauss observes: what is actually presented to us are only some parts of this body part chosen according to some particular attributes (cf. Sonesson 1989a, I.2.4. on this notion), which are, in this case, those of openness, and more generally, discontinuity, for that which has been isolated for us is, on the one hand, the anal cleft, and the space between the legs, and on the other hand the gluteal folds.

This double movement of factorial reductionism, operated on the level of attributes as well as on that of proper parts, is thus not dependant merely on the frames, neither the outer one (which we know should be there, although it is hardly manifested materially), nor the inner, crucifix-shaped one. It is the imprint itself which is partly effaced. No wonder that is is difficult, on first viewing the photograph, to discover what it shows, however gratifying this view may be for the Freudian unconscious. Krauss, however, sees the latter invoked:

"This sense of the structural intervention of frame inside contents is further deepened by the morphological consonance - what we could call visual rhyming - between shape of frame and shape of figure: for the linear intersections set up by the cleft and folds in the photographed anatomy mimic the master shape of the frame. Never could the object of violation have been depicted as more willing" (ibid.)

If this is true — and on this we will suspend judgment —, we are faced with something more than a picture, a visual metaphor (cf. Sonesson 1989a, III.6.). It is not clear, either, if Krauss’s "visual rhyme" may be compared with Floch "plastic" one, but in fact the similarity seems to be even greater here. Indeed, we may want to call this parallelism.

And this brings us to the point were the comparison with Henri’s picture begins:

"In Florence Henri’s self-portrait there is a similar play between flatness and fullness, as there is a parallel sense of the phallic frame as both maker and captor of the sitter’s image. Within the spell of this comparisons, the chromed balls function to project the experience of phallicism into the center of the image, setting up (as in the Man Ray) a system of reiteration and echo; and this seems far more imperatively their role than that of promoting the formal values of stillness and balance" (ibid.)

Apparently, then, Krauss thinks there are at least two similarities between the two photographs at a plastic level, and that these justify the conclusion that the pictures are metaphors of the same thing. In both pictures, the motive is being dissolved on approaching the limits of the traditional quadrangular format of the photograph, and both somehow depend on enclosing its motive into a secondary frame (if this is what is meant by the "phallic frame").
We cannot exclude the possibility that Florence Henri’s photograph is in some way about the same theme as Man Ray’s, and that this identical theme is indeed some kind of sexual capture. Our first, very basic point, however, is that, if so, this sexual import is present, in Henri’s photograph, on a much deeper, more secret level, than in Man Ray’s picture, where it appears on the surface. Therefore, there cannot be any such simple way of comparing the two photographs, as the one proposed by Krauss.

Let us now attend to the plastic properties. It is true, of course, that both pictures tend to dissolve on approaching the borders. However, in Man Ray’s picture this occurs at all four directions, and it is a continuous process of de-densification, which does not start abruptly at the frame, although it may reach some threshold there; whereas, in Henri’s picture, the dissolution only takes place at the upper sides, precisely where the mirror and the table cease.

Nor is the frame similar. From Dubois’s point of view, the Man Ray picture is, as we noted above, a case of “hors-champ par recentrage”, while Henri’s self-portrait involves a "hors-champ par incrustation", and classically so, for it is built around a mirror. The tension in Man Ray’s photographs comes from the similarities and differences between the cross and its contents, both on the iconic level, which is obvious, and on the plastic one, where the different "openings" of the buttocks form a shape which deviates a little from the inscribed frame, like any concrete instantiation must diverge from its schematic model.

We have chosen, in the following, to delve deeper into Henri’s photograph, beginning with the plastic level.

**III.2.2.2. Plastic analysis according to two schemes**

Even in this case, two different segmentations seem possible, and we will start by exploring both of them. In the first version, we create segments by drawing out maximally all lines, until they encounter the limits of the photographic surface. This division, designated by the letters A, B, C (including the sub-fields Ca and Cb), is illustrated in Fig.14. As always, after the division has been intuitively made, we proceed to assemble feature oppositions which support it.

This is also true of the second segmentation, the fields of which are designated, in Fig.15. by the Greek letters $\alpha, \beta, \gamma$, allowing for a triple sub-division of the latter field into $\gamma_{\alpha}, \gamma_{\beta},$ and $\gamma_{\gamma}$. Here, divisions lines which are not clearly visible in the picture are ignored (the A/C is vary faintly marked out, and the A/B division,
which it not very clear either, is overridden by the transversal lines). But we will have a look at the details of the justification later.

![Diagram of Florence Henri's self-portrait](image)

**Fig. 14. First segmentation of Florence Henri's self-portrait.**

a) The maximal division (A vs B vs C)

This is a ternary partition, as is the second one, but it might be argued that it should be reduced to two embedded, binary, series of contrasts, one of which would involve the classical distinction between the figure and the ground (see, for instance, Floch’s analysis of Bourbat, in Floch 1984a ). Indeed, our field C is (almost) of no use as a point of departure for oppositions, since its only positive properties,
which are the shapes of its borders, are not remarkably different from those of the other fields (but see below).

However, it is precisely this extreme void offered us by field C which makes it into something more than a ground; we therefore prefer to include it, at least in the beginning, into our series of contrasts.

But first, we will attend to the basic similarities of the fields (cf. Sonesson 1989a, I.3.3.).

\[ A = B = C \]

All fields may be described as irregular quadrangles having two vertical, quasi-paralle l border lines, and two horizontal, more or less no-n-parallel borders, which do not form only straight angles to the former. Strictly speaking, of course, Ca possesses four, non-parallel sides, though two or more non-parallel (paradoxically, but perceptually speaking) than the others. The same thing is, to an even less perceivable degree, applicable to Cb and A.

\[ A + C \text{ vs } B \]

vertical axis dominance vs horizontal axis dominance

close to rectangle prototype vs between rectangle and triangle

parallel sides longer sides vs parallel sides shorter sides

inner directed (2-3 sides) vs outer directed (1 side touches

touch on other fields vs on other fields

vector straight upwards vs vector successively upwards

to the right

\[ A + B \text{ vs } C \text{ (since } C \text{ is void, } A = B). \]

replete field vs empty field\(^{53}\)

vertical, quasi-parallel obliques vs no lines

diagonality upwards to the right vs straightness (of borders)

divergent detail vs no details\(^{54}\)

some roundish shapes vs no roundish shapes

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\(^{53}\) This distinction should not be confused with another one, which is used below, between homogeneous and heterogeneous fields. All empty fields are homogeneous, but so are some replete ones.

\(^{54}\) The problem of divergent details will be treated more fully in the analysis of the minimal division, since the details are more clearly situated in relation to the fields there. Cf. also the "details" of the girl-with-a-hat-and-a-watch-analysis in II.2.2.
B + C vs A

- homogeneous field vs heterogeneous field
- white dominant vs rupture black/white

A vs B

- fewer, denser obliques vs more, and more distant, obliques
- a strain of horizontality vs only (quasi-)verticals
- irregular, non-elementary vs only regular, elementary shapes
- geometrical shapes
- divergent figure(s) big and central vs divergent figures small and peripheral
- roundish shapes do not form circles vs 2-4 shapes close to the circle prototype
- distinct areas inside the field vs no areas inside the field
- black/white in areas vs only white field colour

A vs C

- inserted vs inserting (Ca + Cb)
- plastic weight to the left vs plastic weight to the right
  (since Cb has the greater surface)

B vs C

Nothing beyond that of A+B vs C above.

Ca vs Cb

- band vs rectangle
- narrowing upwards vs comparatively parallel
- small surface vs big surface

---

55 A field may be homogeneous, either because it is empty, or because it is filled in a very regular fashion.

56 The features will be the same here, whatever we take to be the the figure, the body shape, or the inverted shapes which remain. However, the difference may make a difference later. Because of Gestalt principles, notably because of its centrality and darkness, we will that shape which is iconically identifiable as a human being to be the figure, rather than the two, peripheral, and symmetrical areas which form part of the background.

57 We here employ Floch’s (1981a) distinction between insertion and enclosing, which will be introduced below.
b) The minimal division \((\alpha \text{ vs } \beta \text{ vs } \gamma)\)

This is also a ternary analysis, but because of how the limits between the fields are placed, there is not the same problem of one field being void. Nor is there much to be said about the similarities between the fields, as these are no very slight, or, more precisely, situated on very abstract levels.

**\(\alpha \text{ vs } \beta + \gamma\)**

- regular, reclining rectangle vs irregular polygons (8-9 sides)
- enclosed vs enclosing\(^{58}\)
- heterogeneous field vs homogeneous field
- black/white contrast vs white dominant
- a strain of horizontality vs no horizontality
- irregular, non-elementary vs only regular, elementary geometrical shapes

**\(\beta \text{ vs } \alpha + \gamma\)**

- diagonality upwards vs straight vectors (horizontal and vertical)
- parallelism (inside field) vs no parallelism (inside fields)
- irreducibly irregular-sided polygon vs (reducible to) simple rectangles \((\alpha + \gamma\alpha + \gamma\beta + \gamma\gamma)\)

**\(\gamma \text{ vs } \alpha + \beta \) (that is, \(\alpha = \beta\))**

- empty field vs replete field
- no figures vs centrally placed figures (figure + ground)
- no inner vectors vs inner vectors

**Figure vs ground in field \(\alpha\)**

This field symmetrically encloses the figure.

- **Field (ground)** vs **Figure**
  - enclosing vs enclosed
  - white dominance vs black dominance

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\(^{58}\) Cf. note 57 above!
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- black details vs white details
- continuous, horizontal bands vs fragmentary, white areas
- horizontal axis dominance vs vertical axis dominance (close to axis equivalence)
- angularity vs roundishness

Fig. 15 Second segmentation of Florence Henri’s self-portrait.

Figure vs ground in field β

Field (ground) vs Figure
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Straightness + angularity vs roundishness

Large surface vs small surface

Vertical axis dominance vs axis equivalence

White dominance vs white dominance (but black contours)

A comparison of figure vs ground in field α and β

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<thead>
<tr>
<th>α</th>
<th>vs</th>
<th>β</th>
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<td>surface equivalence</td>
<td>vs</td>
<td>ground large surface</td>
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<tr>
<td>figure dominantly black</td>
<td>vs</td>
<td>figure dominantly white</td>
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<td>figure unique</td>
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<td>figure forms ground for other</td>
<td>vs</td>
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<td>figures (details)</td>
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Conclusion of the plastic analysis.

As we have repeatedly pointed out, there is no reason to believe that only one of these analyses must be the correct one. On the other hand, if we admit any analysis equally valid, there will be no point at all in going through with the analysis. Also, it would be more satisfactory to be able to designate one of the segmentations as the principal one. And we would of course like to be able to assign plastic meanings to the features we have derived. The latter seems more difficult than ever, for the features are generally rather peculiar, and they do not concur in any obvious way. Before we take a stand on these issues, we will now consider the iconical layer of the picture.

III.2.2.3. The mirror of iconico-indexical analysis.

Again, the iconical meaning of the picture is largely an indexical one. We observe 4-5 comparatively independent objects in the picture, three of which are only present as parts. That is, they are factorially signified, from the point of view of proper parts, and all objects are of course so signified, from the point of view of perceptual parts.

In the following, we will consider all these independent elements of the picture, as far as the proper parts, perceptual parts, and attributes included are concerned.
a) Proper parts

1) Balls: Entirely present.
2) Table: Only part of one (out of four) borders (but cf. below on perceptual parts).
3) Mirror: Almost completely present, though the upper border would seem to be missing.
4) Person: Head + upper trunk + arms + hands (the rest is conventionally anticipated to be present below the table).
5) Wall and floor (?) (pattern): fragments are indirectly visible as patterns in the mirror (The other wall, which we would expect to appear behind and on the sides of the mirror, is completely effaced).

b) Perceptual parts

1) Balls: as a view from one side, we see roughly half of the globes, but the other half is present, in a complementary perspective, in the mirror (but cf. attributes below).
2) Table: seen aslant from above, in the direction of one of the edges. Another edge (the opposite one, as we presume) and, curiously, even one corner, is present in the mirror as seen from another angle. Thus, we have partially overlapping perspectives of the table in the principal space, and incrusted by means of the mirror, but the extensions of these perceptual parts are different. The identification of the surface in the foreground as a table-top is based on a) the normally expected position of a mirror; b) the sitting position of the person seen in the mirror (which implies a further object, a chair); c) the corner seen in the mirror. That is, most of the identifying traits of the table are only given indirectly, as mirror images!
3) Mirror: the front side, the only one which has a functional-definitional importance for this object. How do we discover that the surface in question is a mirror (cf. III.2.1.2. and note 51)? Maybe this is because of a) the mirror symmetry (cf. the paradoxical continuity between picture in reality in many of Magritte’s works. There is something of this here, but mirror symmetry gains the upper hand). b) traditional shape and position of mirror.
4) Person: frontal view of upper body. That is, that which is normally considered to be the central/fundamental part of a person (cf. Rosch on prototypical perspectives, different for vehicles, animals, and men). It should be noted, however, that our only access to the person is indirect, again through the mirror!
5) Wall and floor (?) (pattern): Is present only as a pattern lacking all substantiality; indeed the wall (and the floor?) is (are) identified as such, only because we dispose of schemes for where mirrors, tables, and people are usually put.
c) Attributes

1) Balls: What seems most prominent here is perhaps not the feature of the ball as such, but the repetitions of ball-ness. This repetition is partly real, that is, it takes place in (what is represented as) real space, and partly obtained through mirror images. The result of the repetition is to highlight the geometrical form itself, that is, properties such as: elementariness, repetition, roundness (softness?), redundancy, regularity, symmetry. Because of the balls being chromed, they reflect light, and this glare is further magnified by the mirror. Indeed, this material make the balls function somewhat like mirrors themselves, and there is a suggestion in the picture (if we may thus interpret the different-coloured areas on the balls) that they reflect their own reflection in the mirror.

2) Table: only appears as a board made up of regular deals. That is, it suggests something simple, Spartan, merely functional.

3) Mirror: just the mirror surface, and what may be a very thin frame, with no decoration. Thus, we would again have the idea of something simple, Spartan, and "functional" (in the connotative sense of "functionalism").

4) Person: must be distinguished, from this point of view, into a number of sub-components. Dress: black, simple, Spartan, sinister, perhaps ominous. Body: flattened, dematerialized (because of the lack of volume in the trunk), reduced to the 2-3 luminous areas of the hands and the left side of the face. Posture/Gestures: closed, rigid, "expressionless" (which is an expression), massive (because of the extended surface of the upper trunk), confronting (because of the arm arrangement and the vis-à-vis position at the edge of the table, facing us, and or stand-in, the photographer, that is, Henri herself!), distant (because of being seated at the end of all the sight lines, at the opposite end of the table). Lighting: emphatic, flattening (cf. body) perhaps ominous.

5) Wall and floor (?) (pattern): simple, regular.

Extra-framal space

Apart from that which is properly speaking the extra-framal space, we are inclined to distinguish, inside the very space of representation, two different simulacra of such a space, one which coincides with that part of the picture which is not the mirror, and another one which is the surface remaining after the mirror and the table-top fragment has been deduced. The justification for this is not quite clear, of course, but we will consider the possibilities in turn, starting from the least plausible one, that of the mirror.
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a) The mirror vs depicted extra-framal space.

Unlike the Man Ray, this picture does not contain any inner frame, which overlap the motive of the outer one: instead, it involves a mirror, an additional space procured by incrustation. Yet, it does seem to do something more than just presenting another space, or the same space over again, for while there is a discontinuous cessation of the mirror motive laterally, this motive actually seems to go on without rupture outside the mirror frame in the frontal direction. Thus, we have a space by incrustation masquerading as a space by recentring.

However, if we scrutinize the workings of the latter device, as it has been used in Voigt’s photographs (reproduced in Dubois 1983 ), and also in Man Ray’s Sade monument, the term re-centring seems adequate, no doubt because the internal frame appears in the middle of the external one, and the motive protrudes equally on all its sides; but here is seems more correct to talk about a de-centring of space, since the internal frame is no longer in the centre, and since the motive oversteps the border in only one direction. Put in another way, while the Voigt and Man Ray pictures create the impression of something having been complete before and now having been sectioning, but in such a way that central parts have been pick up for attention, the Henri picture would rather appear to start from two discontinuous spaces, which are then, against all plausibility, made to communicate. Alice (or, rather, Florence) does not enter the mirror, she steps out of it.

It will be noted that, in this opposition of frame and (simulated) extra-framal space, it is the space inside the frame, as framed, which is interesting, not that which is outside. Indeed, a far as a description of concrete space is concerned, all information conveyed by the extra-framal space is also in the mirror, but not vice-versa. The table, for instance, is most easily identified in the mirror. In addition, the mirror holds the only object which is likely to attract attention from an iconic point of view, a human being (although it is not notable for expressing movement, or something distinctly animate). It is true, however, that the balls, which are also present outside the frame, are the objects holding the highest potential for movement in the picture. But their position, and unity with their own reflection in a complementary space, certainly makes them appear arrested.

Something should be said here about the mirror as an index. Clearly, the mirror is an imprint of its referent, as much as the photograph is. Eco has denied to the mirror the status of a sign, for reasons which are not really convincing (cf. Eco 1984a and Sonesson 1989a,III.3.6 ). Even though appearances are constantly
changing, we could admit that the mirror functions a sign at the very moment someone uses it to observe oneself, and when this particular appearance is then fixed by a camera, it is certainly instituted as a sign. Thus, the mirror part of the photographs depends on a double "abrasion", that of the mirror itself, and that of the photograph.

b) The motive vs expected extra-framal space.

This might actually be a real, extra-framal space, but in some printings of the photograph, there is as least as slight suggestions of a difference between this space and that of the blank page. In any case, this space has a double existence, as a continuity from the expression plane, and as an expectancy engendered by the referent.

From the first point of view, it is simply taken for granted that photographs should be square-shaped, and, in addition, a few lines drawn out to prolong the outer limits of the other fields will rapidly meet at square angles, and thus delimit the desired space. As far as the referent is concerned, we have reasons to believe that there must be a wall emerging on the sides of the mirror. In this sense, the extra-framal space of the motive is continues with, and includes the real extra-framal space.

c) Real extra-framal space

In the real extra-framal space are contained the remaining parts of the table (the edges, the legs, etc.), the chair, the upper part of the mirror, the walls, the lower part of the woman’s body, and a lot more — and, of course, the camera!

For the curious thing here is that we cannot see the camera. There is a long tradition in painting for making self-portraits in the mirror, and these have gained popularity, and have in addition become the condition of possibility, of making such pictures by means of photography.59 Dubois’s (1983:184ff; cf. 9ff) discussion of the mirror is in fact motivated by an investigation of such photographic self-portraits — but in these, the camera figure prominently! There are undoubtedly other ways of making photographic self-portraits, by using for instance a self-timer (but that would make it difficult to calculate the exact plastic effects) or a cable release (which is visible on some of Cindy Sherman’s numerous self-portraits). In

59 Had it not been for the caption, we should not have know that this was a self-portrait, if we had not happened to be familiar with the looks of the photographer. Without disposing of what Schaeffer would have called lateral knowledge, we should not even have discovered the problem.
the latter case, the cable would of course have to be present as part of the extra-framal space.

Though this is a self-portrait in a mirror, it fails to mirror the process of taking the picture. The photograph, we have learnt, is an index, and thus should give an imprint of its referent; but this object, which is in part identical with a mirror, should itself procure us a (fleeting) impression of the object in front of it, which would have to be the camera. But this object is not imprinted here. Our picture eludes its double indexicality.

The gaze of the woman depicted is directed at us, which is to say, that in actual fact, it is directed at the camera, the photographer, that is, herself. As we noted when discussing Dubois’s categories (in III.1.4.), the gaze is hardly indexical, but it nevertheless functions as an indicator, and a fundamental one at that. But there is another directedness present here, which goes in the opposite direction, from us to the woman, and which is laid down in the semblance of a perspectival grid, inscribed partially in real space, and partially as a mirror reflection, and at whose central point, somewhat laterally dislocated, the woman sits and watches us. No doubt also the perspectival grid has something of the indicative thrust found in the arrow, already because of the mere continuity of the lines, and then because it narrows down slowly until encountering its end point. In fact, however, the real end point is not included here, for the massive, flattened, upper trunk of the woman enters as an obstacle, impeding the lines from meeting in an imaginary prolongation.

Schaeffer (1987:67), it will be remembered, argued that, whereas painting must have recourse to peculiar devices, like those found in Las Meninas and the Arnolfinis, to suggest the coincidence of the depicted scene with the subjective view-point of the observer, this identification is given is photography as a matter of course, because of our knowledge of the way in which photographs are produced. In the present case, however, there is, in addition to the arché of photography, the suggestion, present in the photograph itself, that we are really looking at ourselves in the mirror, and that thus, we are the photographer, who is also the motive.

If so, then the photograph would be making use of two typically chirographic devices, that of the perspectival grid, and of the mirror projecting the space of representability. But it makes use of them photographically.
III.2.2.4. Conclusion on layers and versions.

Let us now put all, or at least some of, these observations together, and try to draw some conclusions. In the light of what has been said about the iconic layer, and in particular about its indexical properties, the two plastic segmentations no longer appear to contradict each other. But we must of course review the evidence, both when the features are considered as purely demarcative, and when they are taken to signify something in themselves.

In the first case, there are fundamentally two differences between the segmentations: the maximal division poses a limit between what is iconically the mirror and the table top, which is not there is the minimal division; and the minimal division admits a kind of continuity between the different parts of the ground, where the maximal divisions splits it in two parts. The first difference is completely congruent with our observation, on the iconico-indexical plane, that the picture is essentially concerned with overriding a limit between the world in the mirror and the real world, which it first establishes; the two plastic divisions simply corresponds to different phases of this process. As for the second difference, it simply depends on being more or less strict in assigning to the ground that which is not thematically important.

There is also an opposition of depth and surface involved, however. The maximal division follows must faithfully the limits as they are marked out on the pictorial surface, by means of contours, or rather, the edges of areas, and it leaves the different division blocks comparatively similar to each other in shape, and all comparatively regular. On the other hand, the minimal division, which gives partly more irregular fields, which are more dissimilar to each other in shape, also permit us to concentrate certain features exclusively in certain fields. Thus, for instance, while both field A and field B possess vertical, quasi-parallel obliques, only α is a heterogeneous field, and only β possesses parallelism. From a plastic point of view, therefore, this latter division is more important, even if it is iconically unacceptable, and even though the other division also seems to play a part in the constitution of pictorial meaning.

We cannot attend here to all the meaning which we be assigned to the plastic features present in the different field, but we shall try say something of the over-all impression. There can be no doubt that, whichever segmentation we follow, the picture is characterized by simple, geometrical shapes, which are generally parallel, and otherwise regular, as long as each elements is considered inside the limits of its field. Although, according to Vanlier, the units of photographs are not
lines, as are those of chirographs, but areas, here most of the picture is describable in terms of mere lines. The tone scale of the picture is simple, because it is made up principally of black and what, with a few intermediary stages (contrast this with Cartier-Bresson’s photograph analyzed in II.1.).

On the other hand, in terms of the elementary correlations of plastic values, such as they emerges from the study of child drawings (cf. Sonesson 1989a, II.3.5-6.), the organization of the picture is not as simple, "natural", and "soft", as it could have been, for the domineering values are no doubt straightness and angularity, with the contribution of roundishness being very reduced. That is to say, the primary units from which the picture is built up are at least at a level two complexity, but the way in which they have been combined seems to be among the more elementary ones.

There are exceptions to this general impression of angularity and straightness, however, in what we have called the divergent details of field α and β, respectively. Both represent roundishness, but in rather different manifestations. In the second case, the roundish shapes, which are iconically balls, are directly prototypical instances of the circle, though somewhat modified by being given in their three-dimensional version, and perspectively deformed. In addition, the reduplication of the form seems to disturb our reception of the prototypical instance, although this procedure itself, as we know from linguistics, has something atavistic about it. As for the "detail" of the other field, it coincides iconically with the sitting person, and it is much less regular and complete in its manifestation of roundishness, including even some angular traits.

Interestingly, these two "details" are not only related by occupying divergent position in their respective fields, but they are also, as we noted, in many respect inversions of each other. Even though they may not be a perfect instantiation of the circle prototype, the balls, which are placed (at least partially) in the reality plane of the picture, come closest to represent the ideal, of which the sitting person, curiously located in the mirror world, is the real-world manifestation. However, since the person in question is a woman, but does not, as she appears in the picture, possess a very "feminine" appearance, this point is not very well taken.

In may be better, therefore, to look upon the two divergent details in another way. They both break the general impression of angularity and straightness, and the woman also break against regularity, though only a little, since she almost displays a lateral symmetry. But this corresponds with the ascending
scale of human interest, on the iconical level, which is attributes to the balls, because of their potential movement, and the woman, because of her being a human being, and which contrasts with the barrenness of both fields as such, manifested in another way in the ground. We should not forget, however, that on the iconic level, also the woman, her position and attire convey ideas of simplicity, rigidity, confrontation, and an Spartan way of life.

Yet we are also drawn into the picture, and further down (or up) into the mirror. The sight lines, the woman’s gaze, and perhaps even the potentiality for movement of the balls establish a connection between the woman and us, which is also her. The picture frame is broken down. However, we are not sure to be well received.

Rather, we are unwelcome, for this woman is confronting herself, and we are only her stand-ins, not the reverse. And her tête-à-tête with herself does not seem to be a very friendly one. It is, in any case, very difficult to discover anything sexual in this picture, if we do not admit, with Freud, that everything must a priori by about sex. And if it is about sexuality, it is not about sexual capture; for it does certainly suggest an opening up. Even if it is a cold and distant embrace.

If, at this point, we should try to say something about the text analytical approach to photography generally, then it must be that, so far, it has permitted us to make use of and develop some notion taken over from the system analytical approach, but is has not suggested anything new about the specificity of photography. (but more stricter conclusions must await the confrontation with chirographic pictures in the next part). Rather, the success and failure of these analyses tend to convey the general impression that photography may certainly enter as a legitimate part of that which Chiarenza (1982) has described as an "integral history of picture-making".

III.3. Some observations on photography and postmodernity

Indexicality, as is has been brought forward in the modern world, by the spread of photography, is at the origin of that kind of art which has lately been known as postmodernity. This is Rosalind Krauss’ (1985) thesis, and it is echoed by Dubois. Unfortunately, since this theory never attains the level of a formal argument, is is difficult to counter it by such means. So, what we will essentially do in this last chapter of part III, is to have a look at some works, which according to Krauss, are
postmodern, and try to determine to what extent indexicality, in whatever form, enters as an important element in their constitution.

Before proceeding to do this, however, we would like to leave constancy, in a little more formal manner, of our perplexity. For why should we need photography as a promoter of indexicality, and if indeed is was needed, why should it have taken it so long to accomplish its effects? Let us restate these questions a little more fully.

First of all, if indexicality is, as we have seen, the general principle of perceptual experience, humanity has certainly since time immemorial been accustomed to thinking in indexical terms. Every single perceptual act implies parts and wholes, as well as relations of contiguity, and nothing more than this is needed to make up indexical signs. Even if we restrict our attention to the particular brand of indexicality which is involved in, among other things, photography, we find is also, in a more concrete form, in wood-cuts and engravings, which have been part of the human semiotic environment for a much longer time than photography. It is true that none of these are related by abrasion to their own referent, but neither are all the works of art which Krauss discuss. In fact, abrasion, which is indeed of the referent, is also present in a much more ancient kind of sign, the footstep and its family of traces.

Suppose, however, that while abrasion was a popular sign category well before the invention of photography, the impact, and spread of the latter to all fields of human existence, had the effect of making this sign type even more prominent. But, then, even we admit, with Krauss, that postmodernity begins with Duchamp, that is, more or less at the same time as modernity, according to some chronologies, it is not to be understood why photography should had have to wait for so long before impressing itself upon the collective mind of painters and other chirographic artists. Indeed, photography certainly had a profound effect on artist which where contemporary with its inventions (cf. Scharf 1968 ), but not is that way, and while Krauss (1982) may well be right in observing that the fact that holds together the different episodes of Nadar’s memoirs is not photography, but indexicality in general, the necessary presence at the act, it was not Nadar, but people long after him, who invented postmodernity.

In the following, we shall consider a few works by Duchamp, and then by a number of contemporary artists, and we shall investigate to what extent they involve indexicality, and in which form they make use of it.
Duchamp’s painting “Tu m’” is, in Krauss’s (1985:198f) view, “a panorama of the index”. What is fixed on the canvas are the cast shadows of some of Duchamp’s ready-mades, not the objects themselves. In addition, a “realistically painted hand” with its finger pointing is included in the composition. And the title itself obviously is made up of indexical, verbal signs.

There are actually a number of ways in which this painting is indexical, of course: To begin with, “tu” and “me” are certainly shifters, which means they are performative indices, derived by contiguity, which is however not of the type abrasion - which marks a lot of distance to the photograph, which is an abductive index. In addition, however, “m’” undoubtedly stands abductively, and by factorality, for “me” — in fact, it seems probable that the whole of “Tu m’” stands for the phrase “Tu m’emmerde!”. These then are abductive indices, but they do not work by contiguity, and therefore not by abrasion, which is a type of the latter.

In the second place, cast shadows are of course indexical, and, as we have noted above, in many respects similar to photographs: that is, they result from a kind of distant “abrasion”. However, they do not leave any permanent record, so they are able to appear here, only because their contours have been filled in by Duchamp, in the manner of a chirograph: which means that, on the painting, they are only very mediately indexical.

Rather than being realistic, the hand included in Duchamp’s work is a stereotypical pointer, as these are often employed in the place of arrows. It is in any case an indicator, not just an index, and it does not work by abrasion.

Let us now consider “Le grand verre”. The two parts, Krauss (p.202f) tells us, are called “MAR” and “CEL”, which are of course parts, at the same time, of his Christian name “Marcel”, and of two words in the full title “La MARIée mise à nu par ses CELibataires même” (our capitals). This we recognize, again, as abductive indices which are factorially derived. Furthermore, the “Sieves” have been made by fixing dust that has fallen on the glass surface for many months, and is thus, in Krauss’s interpretation, an index for the passage of time, which, from our point of view, makes it into a kind of abductive and factorial index. We could also see it as a kind of imprint of dust itself, and it that case it would really resemble the photographic process, though it lacks the latter’s instantaneity, and perhaps it really involves factorality rather than contiguity.

At last, consider the work entitled “With my tongue in my cheek”. Krauss (p.206) tells us it contains an icon and an index for the same thing, Duchamp’s
own head, for on top of a profile drawing of his profile, his has placed a plaster casting of his own chin and cheek. To know the latter to be true, we certainly need to be informed about the arché of plaster casting. In any case, both these concurrent signs are icons, and the plaster is addition an index and an imprint. But why should we take the cast to imitate photographicalness, rather than the reverse?

After Duchamp, it seems, postmodernity makes a leap of nearly a century, for the next works to be considered by Krauss are contemporary. Thus, there are Luicio Pozzi’s two-coloured panels which have been affixed to an old building exactly overlapping the places where the old walls themselves shift their colour. According to Krauss (p.212f), this is that kind of quasi-tautological relationship between the expression and the content which Barthes talked about, and this is supposed to make the work in question into an index.

But this is a curious affirmation, in many ways. First of all, Barthes used this (as is happens, absurd) way to qualify a picture, that is, a typical icon (cf. also Sonesson 1989a,II.1. ). But quite apart form what Barthes thinks, an identity, which is what is claimed here, would ordinarily be considered an iconical sign of some kind. However, since the panels in questions are placed directly on the places where the wall itself changes colour, this iconical sign, together with is referent, is used to construct a secondary, performative index, which is derived by means of factorality, if we only attend to the pattern, but by means of contiguity, if the lack of identity of the material (we suppose) is also considered pertinent.

Michelle Stuart took rubbings from the wainscoting, cracked plaster, and so on, of one wall of the corridor, and then placed on the opposite side. This is of course an imprint. Unfortunately, for one who has not been present in the very house in which this work was executed, it is a little difficult to understand its mechanism: for how could one of these imprints function as a sign, if the wall from which it was rubbed off was itself covered by the rubbing from the opposite side? If so, we would have an abduction to a retained contiguity, which is, in that respect, similar to the photograph, by also to the engraving, the wood-cut, the footprint, and so on. However, to the extend that there were still something to be seen of the wall from which the imprint was taken, we would rather (or in addition) be faced with a performative index, derived by contiguity.

These are undoubtedly the best instances of those adduces by Krauss, and we have seen that they (contrary to some of her other examples) do involve a strain of indexicality. But to the extent that this indexicality is similar in kind to that find in photographs, it would seem to lack that which is peculiar to photograph: the
combination, in one sign relation, of indexicality and iconicity. In fact, if these works remind us of something, then it is rather of the photogram. And the photogram, as we concluded with Schaeffer, is not the typical photograph, but its limiting-case. Indeed, it returns photograph to the level of seals and, beyond that, to footprints. Postmodernity, in that sense, would be at the origin of time.

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