an ending, can consist of one syllable and can consist of one
phoneme does not mean that the syllable is a sign-expression or
that the phoneme is a sign-expression. From one point of
42]   view the *s* in *in-act-iv-ate-s* is a sign-expression, from
another point of view a phoneme. The two points of view
lead to the recognition of two different objects. We can very
well preserve the formulation that the sign-expression *s* includes
one, and only one, phoneme, but this is not the same as identi-
fying the sign-expression with that phoneme; the phoneme
enters into other combinations where it is not a sign-expression
(*e.g.*, in the word *sell*).

Such considerations lead us to abandon the attempt to
analyze into "signs," and we are led to recognize that a descrip-
tion in accordance with our principles must analyze content and
expression separately, with each of the two analyses eventually
yielding a restricted number of entities, which are not necessarily
susceptible of one-to-one matching with entities in the opposite
plane.

43]   The relative economy between inventory lists for signs
and for non-signs corresponds entirely to what is presum-
ably the aim of language. A language is by its aim first and fore-
most a sign system; in order to be fully adequate it must always
be ready to form new signs, new words or new roots. But, with
all its limitless abundance, in order to be fully adequate, a
language must likewise be easy to manage, practical in acquisi-
tion and use. Under the requirement of an unrestricted number
of signs, this can be achieved by all the signs' being constructed
of non-signs whose number is restricted, and, preferably, severely
restricted. Such non-signs as enter into a sign system as parts of
signs we shall here call *figuræ;* this is a purely operative term,
introduced simply for convenience. Thus, a language is so
ordered that with the help of a handful of figuræ and through
ever new arrangements of them a legion of signs can be con-
structed. If a language were not so ordered it would be a tool,
unusable for its purpose. We thus have every reason to suppose

that in this feature—the construction of the sign from a restricted
number of figuræ—we have found an essential basic feature in
the structure of any language.

Languages, then, cannot be described as pure sign systems.
By the aim usually attributed to them they are first and foremost
sign systems; but by their internal structure they are first and
foremost something different, namely systems of figuræ that can
be used to construct signs. The definition of a language as a sign
system has thus shown itself, on closer analysis, to be unsatis-
factory. It concerns only the external functions of a
44]   language, its relation to the non-linguistic factors that
surround it, but not its proper, internal functions.

13. Expression and content

Up to this point we have intentionally adhered to the old tradi-
tion according to which a sign is first and foremost a sign *for*
something. In this we are certainly in agreement with the popu-
lar conception and, moreover, with a conception widely held by
epistemologists and logicians. But it remains for us to show that
their conception is linguistically untenable, and here we are in
agreement with recent linguistic thinking.

While, according to the first view, the sign is an *expression*
that points to a *content* outside the sign itself, according to the
second view (which is put forth in particular by Saussure and,
following him, by Weisgerber[10]) the sign is an entity generated
by the connexion between an expression and a content.

Which of these views shall be preferred is a question of ap-
propriateness. In order to answer this question we shall for the
moment avoid speaking about signs, which are precisely what
we shall attempt to define. Instead, we shall speak of something
whose existence we think we have established, namely the *sign
function*, posited between two entities, an *expression* and a *con-*

[10] Leo Weisgerber, *Germanisch-romanische Monatsschrift* XV, 1927, pp. 161 ff.;
id., Indogermanische Forschungen XXXXVI, 1928, pp. 310ff.; *id., Muttersprache
und Geistesbildung*, Göttingen, 1929.

tent. On this basis we shall be able to determine whether it is appropriate to consider the sign function as an external or an internal function of the entity that we shall call a *sign.*

We have here introduced *expression* and *content* as designations of the functives that contract the function in question, the sign function. This is a purely operative definition and a formal one in the sense that, in this context, no other meaning shall be attached to the terms *expression* and *content.*

There will always be solidarity between a function and (the class of) its functives: a function is inconceivable without its terminals, and the terminals are only end points for the function and are thus inconceivable without it. If one and the same entity

contracts different functions in turn, and thus might ap-
45]   parently be said to be selected by them, it is a matter,
in each case, not of one and the same functive, but of different functives, different objects, depending on the point of view that is assumed, *i.e.,* depending on the function from which the view is taken. This does not prevent us from speaking of the "same" entity from other points of view, for example from a consideration of the functions that enter into it (are contracted by its components) and establish it. If several sets of functives contract one and the same function, this means that there is solidarity between the function and the whole class of these functives, and that consequently each individual functive selects the function.

Thus there is also solidarity between the sign function and its two functives, expression and content. There will never be a sign function without the simultaneous presence of both these functives; and an expression and its content, or a content and its expression, will never appear together without the sign function's also being present between them.

The sign function is in itself a solidarity. Expression and con-tent are solidary—they necessarily presuppose each other. An expression is expression only by virtue of being an expression of a content, and a content is content only by virtue of being a

content of an expression. Therefore—except by an artificial iso-lation—there can be no content without an expression, or ex-pressionless content; neither can there be an expression without a content, or content-less expression. If we think without speak-ing, the thought is not a linguistic content and not a functive for a sign function. If we speak without thinking, and in the form of series of sounds to which no content can be attached by any listener, such speech is an abracadabra, not a linguistic expression and not a functive for a sign function. Of course, lack of content must not be confused with lack of meaning: an ex-pression may very well have a content which from some point of view (for example, that of normative logic or physicalism) may be characterized as meaningless, but it is a content.

If in analyzing the text we omitted to take the sign function into consideration, we should be unable to delimit the signs from each other, and we should simply be unable to provide an ex-haustive (and therefore, in our sense of the word, empirical) de-
scription of the text accounting for the functions that
46]   establish it (p. 22). We should simply be deprived of an
objective criterion capable of yielding a useful basis of analysis.

Saussure, in order to clarify the sign function, undertook the device of trying to consider expression and content each alone, without consideration of the sign function, and reached the fol-lowing result:

"Prise en elle-même, la pensée est comme une nébuleuse où rien n'est nécessairement délimité. Il n'y a pas d'idées préétablies, et rien n'est distinct avant l'apparition de la langue. . . . La substance phonique n'est pas plus fixe ni plus rigide; ce n'est pas un moule dont la pensée doive nécessairement épouser les formes, mais une matière plastique qui se divise à son tour en parties distinctes pour fournir les signifiants dont la pensée a besoin. Nous pouvons donc représenter . . . la langue . . . comme une série de subdivisions contiguës dessinées à la fois sur le plan indéfini des idées confuses . . . et sur celui non moins indéter-miné des sons . . . la langue élabore ses unités en se constituant entre

deux masses amorphes . . . *cette combinaison produit une forme, non une substance.*"[11]

But this pedagogical *Gedankenexperiment*, however excellently carried out, is actually meaningless, and Saussure himself must have found it so. In a science that avoids unnecessary postulates there is no basis for the assumption that content-substance (thought) or expression-substance (sound-chain) precede language in time or hierarchical order, or *vice versa*. If we maintain Saussure's terminology—and precisely from his assumptions—it becomes clear that the substance depends on the form to such a degree that it lives exclusively by its favor and can in no sense be said to have independent existence.

On the other hand, it would seem to be a justifiable experiment to compare different languages and then extract, or subtract, the factor that is common to them and that remains common to all languages, however many languages are drawn into the comparison. This factor—if we exclude the structural principle that involves the sign function and all functions deducible therefrom, a principle that is naturally common *qua* principle to all languages, but one whose execution is peculiar to each individual language—this factor will be an entity defined only by its having function to the structural principle of language and to all the factors that make languages different from one another. This common factor we call *purport*.

47]   Thus we find that the chains

jeg véd det ikke	(Danish)
I do not know	(English)
je ne sais pas	(French)
en tiedä	(Finnish)
naluvara	(Eskimo),

despite all their differences, have a factor in common, namely the purport, the thought itself. This purport, so considered, exists provisionally as an amorphous mass, an unanalyzed entity,

[11] F. de Saussure, *Cours*, 2nd ed., pp. 155–157.

which is defined only by its external functions, namely its function to each of the linguistic sentences we have quoted. We may imagine this purport to be analyzed from many points of view, to be subjected to many different analyses, under which it would appear as so many different objects. It could, for example, be analyzed from one or another logical, or from one or another psychological, point of view. In each of the languages considered it has to be analyzed in a different way—a fact that can only be interpreted as indicating that the purport is ordered, articulated, formed in different ways in the different languages:

in Danish, first *jeg* ('I'), then *véd* ('know'—present indicative), then an object, *det* ('it'), then the negative, *ikke* ('not');

in English, first *I*, then a verbal concept that is not distinctly represented in the Danish sentence, then the negation, and only then the concept 'know' (but nowhere the concept corresponding to the Danish present indicative *véd*, and no object);

in French, first 'I', then a kind of negation (which is, however, completely different from the Danish and English, since it does not have the purport of a negation in all combinations), then 'know' (present indicative), and finally a peculiar special sign which some call a negative, but which can also mean 'step'; as in English, no object;

in Finnish, first a verb signifying 'I-not' (or, more precisely, 'not-I', since the sign for 'I' comes last; the negation in Finnish is a verb that is inflected in person and number: *en* 'I-not', *et* 'thou-not', *ei* 'he-not', *emme* 'we-not', *etc.*), and then the concept 'know' in the form that has imperative meaning in other combinations; no object;

in Eskimo, 'not-knowing-am-I-it', a verb derived from *nalo* 'ignorance', with the suffix for the first-person subject and third-person object.[12]

48]   We thus see that the unformed purport extractable

[12] We have disregarded the fact that the same purport can also be formed in quite different chains in some of the languages: French *je l'ignore*, Eskimo *asuk* or *asukiaκ* (derived from *aso*, which by itself means 'enough!').

from all these linguistic chains is formed differently in each language. Each language lays down its own boundaries within the amorphous "thought-mass" and stresses different factors in it in different arrangements, puts the centers of gravity in different places and gives them different emphases. It is like one and the same handful of sand that is formed in quite different patterns, or like the cloud in the heavens that changes shape in Hamlet's view from minute to minute. Just as the same sand can be put into different molds, and the same cloud take on ever new shapes, so also the same purport is formed or structured differently in different languages. What determines its form is solely the functions of the language, the sign function and the functions deducible therefrom. Purport remains, each time, substance for a new form, and has no possible existence except through being substance for one form or another.

We thus recognize in the linguistic *content*, in its process, a specific *form*, the *content-form*, which is independent of, and stands in arbitrary relation to, the *purport*, and forms it into a *content-substance*.

No long reflexion is needed to see that the same is true for the *system* of the content. A paradigm in one language and a corresponding paradigm in another language can be said to cover one and the same zone of purport, which, abstracted from those languages, is an unanalyzed, amorphous continuum, on which boundaries are laid by the formative action of the languages.

Behind the paradigms that are furnished in the various languages by the designations of color, we can, by subtracting the differences, disclose such an amorphous continuum, the color spectrum, on which each language arbitrarily sets its boundaries. While formations in this zone of purport are for the most part approximately the same in the most widespread European languages, we need not go far to find formations that are incongruent with them. In Welsh, 'green' is *gwyrdd* or *glas*, 'blue' is *glas*, 'gray' is *glas* or *llwyd*, 'brown' is *llwyd*. That is to say, the part of the spectrum that is covered by our word *green* is intersected

in Welsh by a line that assigns a part of it to the same area as our word *blue* while the English boundary between *green* and *blue* is not found in Welsh. Moreover, Welsh lacks the English boundary between *blue* and *gray*, and likewise the English boundary between *gray* and *brown*. On the other hand, the area that is covered by English *gray* is intersected in Welsh so that half of it is referred to the same area as our *blue* and half to the same area as our *brown*. A schematic confrontation shows the lack of coincidence between the boundaries:

49]

	gwyrdd
green	
blue	glas
gray	
brown	llwyd

Similarly Latin and Greek show incongruence with the chief modern European languages in this sphere.—The progression from 'light' to 'dark', which is divided into three areas in English and many languages (*white, gray, black*) is divided in other languages into a different number of areas, through abolition or, on the other hand, elaboration of the middle area.

Morpheme paradigms show a similar state of affairs. The zone of number is analyzed differently in languages that distinguish only a singular and a plural, in those that add a dual (like Ancient Greek and Lithuanian), and in languages that also have a paucal—either simply a trial (like most Melanesian languages, the West Indonesian language Saṇir on the islands between Mindanao and the Celebes, and the Southeastern Australian language Kulin in some of its dialects) or also a quadral (like the Micronesian language on the Gilbert Islands). The tense zone is analyzed differently in languages which (apart from periphrastic formations) have only a preterite and a present (as, for example, English), and where therefore the present also covers

the area that is covered in other languages by the future, and in languages that set a limit between present and future; again, the boundaries are different in a language which (like Latin, Ancient Greek, French) distinguishes several kinds of preterite.

50]   This incongruence within one and the same zone of purport turns up everywhere. Compare also, for example, the following correspondences between Danish, German, and French:

træ	*Baum*	*arbre*
	Holz	*bois*
skov	*Wald*	*forêt*

We may conclude from this fact that in one of the two entities that are functives of the sign function, namely the content, the sign function institutes a form, the *content-form*, which from the point of view of the purport is arbitrary and which can be explained only by the sign function and is obviously solidary with it. In this sense, Saussure is clearly correct in distinguishing between form and substance.

Precisely the same thing can be observed in the other of the two entities that are functives of the sign function, namely the expression. Just as, for example, the color zone or the morpheme zones are subdivided differently in different languages in that each language has its own number of color words, its own number of numbers, its own number of tenses, *etc.*, so we can also disclose, by subtraction from a comparison of languages, zones in the phonetic sphere which are subdivided differently in different languages. We can, for example, think of a phonetico-physiological sphere of movement, which can of course be represented as spatialized in several dimensions, and which can be presented as an unanalyzed but analyzable continuum—for example on the basis of Jespersen's system of "antalphabetic" formulæ. In such an amorphous zone are arbitrarily included in different languages a different number of figuræ (phonemes) since the boundaries are

laid down in different places within the continuum. An example is the continuum made by the median profile of the roof of the mouth, from the pharynx to the lips. In familiar languages this zone is usually divided into three areas, a back *k*-area, a middle *t*-area, and a front *p*-area. If we consider only the stops, however, Eskimo and Lettish, among others, distinguish two *k*-areas, whose lines of division do not coincide in the two languages. Eskimo places the boundary between a uvular and a velar area,

51]   Lettish between a velar and a velo-palatal area. Many languages of India distinguish two *t*-areas, a retroflex and a dental; and so on. Another such obvious continuum is that of the vowel zone; the number of vowels varies from language to language, with the boundaries set differently. Eskimo distinguishes only between an *i*-area, a *u*-area, and an *a*-area. In most familiar languages the first is split into a narrower *i*-area and an *e*-area, the second into a narrower *u*-area and an *o*-area. In some languages each of these areas, or one of them, can be intersected by a line that distinguishes rounded vowels (*y, ø; u, o*) from unrounded (*i, e; ɯ, ʏ*; these last—curious "dull" vowels which are rare in Europe—or one of them, are found, for example, in Tamil, in many of the Eastern Uralic languages, and in Rumanian); with the aperture of *i* and *u* can be formed, besides, midvowels, rounded (ʉ) as in Norwegian and Swedish, or unrounded (ɨ) as in Russian; and so on. Especially because of the extraordinary mobility of the tongue, the possibilities that language can make use of are quite indefinitely great; but the characteristic thing is that each language lays down its boundaries within this infinity of possibilities.

Since the state of affairs for the expression is evidently quite analogous to that of the content, it will be appropriate for us to be able to underline this parallelism by using the same terminology for the expression as for the content. We should then be able to speak here of an *expression-purport*, and even if this is unusual there seems to be nothing beyond that fact to prevent us. The examples we have given, the vocalic continuum and the

median profile of the roof of the mouth, are then the phonetic zones of purport, which are formed differently in different languages, depending on the specific functions of each language, and which are thereby ordered to their expression-*form* as expression-*substance*.

We have observed this for the *system* of expression; but just as with the content, we can also demonstrate the same for the *process*. Purely by virtue of the cohesion between system and process, the specific formation of the system in a given language inevitably involves effects in the process. Partly because of the very boundaries that are laid in the system and that are incongruent from language to language, and partly because of the possibilities of relation between the phonemes in the chain (some languages, for example various Australian and African languages, admit no consonant groups at all, others only certain definite consonant groups, different in different languages;

52]   the placing of the accent in the word is governed by different laws in different languages) *one and the same expression-purport may be formed differently* in different languages. English [bə:'lɪn], German [bɛr'li:n], Danish [bæʊ'li?n], Japanese [bɛluɟinu] represent different formations of one and the same expression-purport (the city-name *Berlin*). It is, of course, indifferent that the content-purport happens to be the same in this instance; in the same way we could say that, for example, the pronunciation of English *got*, German *Gott* ('God'), and Danish *godt* ('well') represent different formations of one and the same expression-purport. In this example the expression-purport is the same, but the content-purport different, just as in *jeg véd det ikke* and *I do not know* the content-purport is the same but the expression-purport different.

When a person familiar with the functional system of a given language (*e.g.*, his mother tongue) has perceived a content-purport or an expression-purport, he will form it in that language. An essential part of what is popularly called "speaking with an accent" consists in forming a perceived expression-

purport according to predispositions suggested by functional facts in the speaker's mother tongue.

This investigation shows us, then, that the two entities that contract the sign function—expression and content—behave in the same way in relation to it. By virtue of the sign function and only by virtue of it, exist its two functives, which can now be precisely designated as the content-form and the expression-form. And by virtue of the content-form and the expression-form, and only by virtue of them, exist respectively the content-substance and the expression-substance, which appear by the form's being projected on to the purport, just as an open net casts its shadow down on an undivided surface.

If we now return to the question from which we began, concerning the most appropriate meaning of the word *sign*, we are in a position to see more clearly behind the controversy between the traditional and the modern linguistic points of view. It seems to be true that a sign is a sign for something, and that this something in a certain sense lies outside the sign itself. Thus the word *ring* is a sign for that definite thing on my finger, and that thing does not, in a certain (traditional) sense, enter into the sign itself. But that thing on my finger is an entity of content-substance, which, through the sign, is ordered to a content-form and is arranged under it together with various other entities of content-substance (*e.g.*, the sound that comes from my telephone).

53]   That a sign is a sign for something means that the content-form of a sign can subsume that something as content-substance. Just as we felt before a need to use the word *purport*, not simply of the content, but also of the expression, so here again, in the interest of clarity, despite the time-honored concepts whose shortcomings now become increasingly evident, we feel a desire to invert the sign-orientation: actually we should be able to say with precisely the same right that a sign is a sign for an expression-substance. The sound sequence [rɪŋ] itself, as a unique phenomenon, pronounced *hic et nunc*, is an entity of expression-substance which, by virtue of the sign and only by

virtue thereof, is ordered to an expression-form and classified under it together with various other entities of expression-substance (other possible pronunciations, by other persons or on other occasions, of the same sign).

The sign is, then—paradoxical as it may seem—a sign for a content-substance and a sign for an expression-substance. It is in this sense that the sign can be said to be a sign for something. On the other hand, we see no justification for calling the sign a sign merely for the content-substance, or (what nobody has thought of, to be sure) merely for the expression-substance. The sign is a two-sided entity, with a Janus-like perspective in two directions, and with effect in two respects: "outwards" toward the expression-substance and "inwards" toward the content-substance.

All terminology is arbitrary, and consequently nothing prevents us from using the word *sign* as a special name for the expression-form (or, if we wished, for the expression-substance, but this would be both absurd and unnecessary). But it appears more appropriate to use the word *sign* as the name for the unit consisting of content-form and expression-form and established by the solidarity that we have called the sign function. If *sign* is used as the name for the expression alone or for a part of it, the terminology, even if protected by formal definitions, will run the risk of consciously or unconsciously giving rise to or favoring the widespread misconception according to which a language is simply a nomenclature or a stock of labels intended to be fastened on pre-existent things. The word *sign* will always, by reason of its nature, be joined to the idea of a designatum; the word *sign* must therefore be used appropriately in such a way that the relation between sign and designatum will appear as clearly as possible and not be subjected to distorting simplification.

The distinction between expression and content and
54] their interaction in the sign function is basic to the structure of any language. Any sign, any system of signs, any system of figuræ ordered to the purpose of signs, any language,

contains in itself an expression-form and a content-form. The first stage of the analysis of a text must therefore be an analysis into these two entities. To be exhaustive, the analysis must be so organized that at each stage we analyze into the parts that are of greatest extension, *i.e.*, of lowest number, either within the analyzed chain in its totality or within any arbitrary section of it. If a text, for example, includes both sentences and clauses, we can show that the number of clauses is greater than the number of sentences; therefore we must not proceed directly to an analysis into clauses, but first analyze into sentences and then analyze the sentences into clauses. When this principle is carried through, it will appear that any text must always be analyzed in the first stage into two and only two parts, whose minimal number guarantees their maximal extension: namely, the *expression line* and the *content line*, which have mutual solidarity through the sign function. After that, the expression line and the content line are each analyzed further, naturally with consideration of their interaction in the signs. In the same way, the first articulation of a linguistic system will lead us to establish its two most inclusive paradigms: the *expression side* and the *content side*. As common names for *expression line* and *expression side*, on the one hand, and for *content line* and *content side*, on the other, we have used respectively the designations *expression plane* and *content plane* (designations chosen with reference to Saussure's formulation cited above: "le plan . . . des idées . . . et celui . . . des sons").

Through the whole analysis, this method of procedure proves to result in great clarity and simplification, and it also casts light on the whole mechanism of a language in a fashion hitherto unknown. From this point of view it will be easy to organize the subsidiary disciplines of linguistics according to a well-founded plan and to escape at last from the old, halting division of linguistics into phonetics, morphology, syntax, lexicography, and semantics—a division that is unsatisfactory in many respects and also involves some overlapping. But besides, when the

analysis is carried through, it shows that expression plane and
content plane can be described exhaustively and consistently as
being structured in quite analogous fashions, so that quite
identically defined categories are foreseen in the two
55]   planes. This means a further essential confirmation of the
correctness of conceiving expression and content as co-
ordinate and equal entities in every respect.

The terms *expression plane* and *content plane* and, for that
matter, *expression* and *content* are chosen in conformity with
established notions and are quite arbitrary. Their functional defi-
nition provides no justification for calling one, and not the other,
of these entities *expression*, or one, and not the other, *content*.
They are defined only by their mutual solidarity, and neither.
of them can be identified otherwise. They are each defined only
oppositively and relatively, as mutually opposed functives of one
and the same function.

14. Invariants and variants

This insight into the structure of the sign is an indispensable
condition for conducting the analysis precisely and, especially,
for recognizing the figuræ of which a linguistic sign is composed
(p. 46). At each stage of the analysis an inventory must be made
of entities with uniform relations (p. 41). The inventory must
satisfy our empirical principle (p. 11): it must be both exhaustive
and as simple as possible. This requirement must be met at each
stage, because, among other reasons, we cannot know beforehand
whether any given stage is the last. But the requirement has a
double importance for the concluding stage of the analysis, be-
cause there we come to recognize the ultimate entities which are
basic to the system, the entities of which we must be able to
demonstrate that all the other entities are constructed. And here
it is important, not only for the simplicity of the solution in this
last stage, but for the simplicity of the solution as a whole, that
the number of these ultimate entities be as low as possible.

We formulate this requirement in two principles, the *principle*

of economy and the *principle of reduction*, which are both deduced
from the principle of simplicity (p. 18).

*The principle of economy: The description is made through a
procedure. The procedure shall be so arranged that the result is the
simplest possible, and shall be suspended if it does not lead to
further simplification.*

*The principle of reduction: Each operation in the procedure shall
be continued or repeated until the description is exhausted, and shall
at each stage lead to the registration of the lowest possible number
of objects.*

56]   We shall call the entities that are inventoried at each
stage *elements*. In respect of the analysis we give the fol-
lowing *refined formulation of the principle of reduction:*

*Each analysis (or each analysis complex) in which functives are
registered with a given function as basis of analysis shall be so made
that it leads to the registration of the lowest possible number of
elements.*

In order to satisfy this requirement we must have at our dis-
posal a method that allows us under precisely fixed conditions
to *reduce* two entities to one, or, as it is often put, to *identify*
two entities with each other.[18] If we imagine a text analyzed into
sentences, these into clauses, these into words, *etc.*, and an in-
ventory taken for each analysis, we shall always be able to ob-

[18] In this latter formulation, the theory presupposes on this point a closer
analysis of the concept of *linguistic identity*. This has been treated from many
points of view in the recent literature (*e.g.*, by F. de Saussure, *Cours*, 2nd ed.,
pp. 150 ff., and, on the basis of Russell's hierarchy of types, by A. Penttilä (*Actes
du IVe Congrès international de linguistes*, København, 1938, pp. 160 ff.) following
U. Saarnio, *Untersuchungen zur symbolischen Logik* (*Acta philosophica Fennica* I,
Helsingfors, 1935); *cf.* Penttilä & Saarnio in *Erkenntnis* IV, 1934, pp. 28 ff.).
The provisional results thus obtained seem, however, sufficient to indicate that
this is a difficult way of arriving at the method through formal definitions, and
that we can do so more simply through the concept of *reduction*. The problem of
identity can therefore be dismissed in this connexion as an unnecessary com-
plication.