

Text Topics and Their Intercultural Discourse Variation

A Sample Analysis using Text Maps

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Abstract. *The article proposes a methodological tool for describing the topic structure of texts and their potential intercultural variation. After positioning topic structures within the field of interculturally varying discourse patterns, the problems inherent in text topic identification and representation are briefly outlined. On the basis of this discussion, the notion of text map and the procedure for establishing text maps is introduced and exemplified with a sample analysis of a passage from the introductory chapters of the English Introduction into Psychology by William James (1890/1975) and the German Grundriss der Psychologie by Wilhelm Wundt (1896). The analysis exemplifies the procedure of establishing text maps; its potential value is heuristic. After visualizing the text topic structures contrastively, their differences are presented and discussed. On the basis of the parameters yielded in the analysis it is suggested that text maps provide a verifiable methodological tool for larger-scale empirical studies into the nature and scope of varying topic and discourse structures.*

1. Intercultural differences in discourse patterns and the role of text topics

Variations in discourse patterns have been much discussed in intercultural communication and pragmatics (e.g. Kaplan 1966; Galtung 1985; Agar 1992; Clyne 1994; Luchtenberg 1994; Ventola 1995a, 1995b; House 1996 1998, 1999; Bührig 2004),¹ and House's suggestion of scalar differences between English and German conversational attitudes has been widely accepted for written academic texts. House differentiates five dimensions along which differences in discourse patterns can be identified and described: German speakers tend to be more direct, self-oriented, content-oriented, and explicit while English speakers lean towards indirectness, orientation towards the other, addressee orientation, implicitness and the use of routine formulas (House 1999:49). The linguistic manifestations of these dimensions are described using lexico-semantic, syntactic and pragmatic categories (e.g. Baumgarten 2003). The selection and development of topics in texts is generally recognized as playing an important role when it comes to describing discourse structure (Clyne 1994). But although topic structure (or information sequencing as the broader term) has generally been accepted as an important dimension when describing potentially varying discourse patterns using such broad terms as 'linear' or 'digressive' (Clyne 1994), theoretical and methodological deficits of the theme/rheme notions have so far impeded larger-scale empirical studies into the nature of intercultural differences in the topic structures of texts. It is therefore suggested here that the concept of text maps provides an operationalizable instrument to depict and visualize topic structures in texts and as such lends itself to functioning as a comparative standard when interculturally contrasting topic structures in discourse patterns.

Against the background of House's dimension of content versus addressee-orientation, it is assumed that the more or less content-oriented nature of utterance topics in a text contributes to a more or less content- or addressee orientation in texts, which can then be described and illustrated by the way utterance topics are developed in discourse. The resulting (contrastive) text topic patterns as dimensions of discourse are visualizeable as text maps

¹ With reference to translation, cf. also Gerzymisch-Arbogast (1993, 1997, 2003); see also Buhl (1999).

which enhance understanding the organization of texts around concepts and lend themselves to in-depth analysis and comparison. Text maps are thus considered an operationalizable indicator for the degree of content-orientation vs. addressee-orientation in texts, as will be exemplified and illustrated by the sample analysis in section 4. Preceding this application and illustration, the theoretical status of text topics and the problems of their identification and representation will be briefly discussed in the following section.

2. Text topics and their representation

2.1 Theme identification

Generally speaking, that which is known or given in sentences or utterances is called **theme** and that which is not known, the new elements, are called **rheme**. For **theme**, **topic** or **given information**, and for **rheme**, **comment** or **focus** or **new information** are also used.²

The many theme-rheme definitions so far suggested in the literature can be classified according to the kind of criteria they apply (Wiegand *et al.*, forthcoming). These criteria can be differentiated as sentence-internal, text-internal and situation-specific:

- Sentence-internal criteria for the differentiation of theme and rheme are:³
 - subject vs. predicate or
 - logical subject vs. predicate
 - or
 - that which is presupposed vs. that which is asserted.
- Text-internal criteria are:⁴
 - Previously mentioned in the text or contextually bound or
 - Under question in context or retrievable from context
- Situation-specific criteria, i.e. criteria related to a speaker and hearer in an utterance are:⁵
 - Present in the awareness of the participants at the time of utterance or
 - identifiable by the hearer from the perspective of the speaker or
 - (expressed as a metaphor): on stage/off stage.

A comparative analysis of the merits and shortcomings of these approaches can be found in Mudersbach (2003). What is relevant here is that none of these approaches considers the following:

- (1) the functional interrelationship between these criteria (e.g. the text-internal criterion **previously mentioned** and the speaker/hearer criterion **identifiable by the hearer**) or
- (2) the inferred world knowledge that interacts with the verbalized message in the selection and development of topics.

With respect to (1) this means that topic structures cannot be described by syntactic, semantic, text or situation categories alone and in isolation but that pragmatic categories need to be used for their description, interrelating the communicative constellation between a

² For an overview of terms, see Gerzymisch-Arbogast (2003).

³ Authors who use sentence-internal criteria include Allerton (1978), Chomsky (1971), Daneš (1970), Gundel (1977), Halliday (1967/68), Hockett (1958), Lyons (1977), de Beaugrande and Dressler (1981), and recently Musan (2002).

⁴ See Daneš (1974), Fries (1971), Halliday (1970, 1974), Sgall (1974, 1975a, 1975b, 1976), Sgall (1973).

⁵ See Allerton (1987) and Chafe (1976).

speaker and a hearer in a given situation verbalized in the text. Such (interrelated) pragmatic categories include, for example, the information constellation of the communicative partners and their respective stock of knowledge and attention focus.⁶

Topics (for the purpose of establishing text maps as used in the sample analysis in section 4) are therefore identified by using Mudersbach's pragmatic model (Mudersbach 1981, 2004; for an application, see Gerzymisch-Arbogast 1985, 1987).

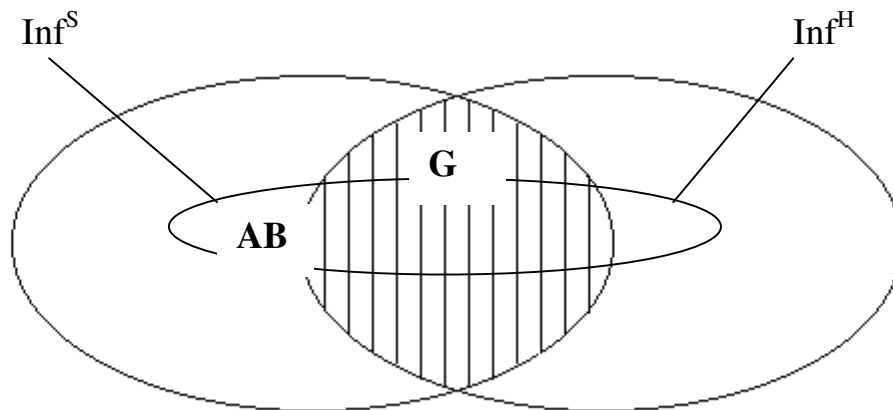


Figure 1. Pragmatic Parameters in Theme-Rheme Identification (*Inf/S* = Information stock of speaker; *Inf/H* = information stock of hearer; *G* = overlapping information stock of communicating partners, *AB* = focus of attention of speaker and hearer)

With respect to (2), it is generally accepted that successful communication depends to a large extent on implicit (world) knowledge, inferences and individual hypotheses. Topics can therefore be assumed to contain a substantial amount of inferred knowledge, and topic identification needs to take this into account. None of the above sentence-, text- or situation-specific criteria for topic identification allows for the interplay of explicit and implicit knowledge, however. Describing topic structures in texts therefore needs to depict the interrelationship of the knowledge stock implicit in a speaker/hearer constellation, their (overlapping) world knowledge and focus of attention in a given situation (Gerzymisch-Arbogast 1985, 1987, 1994, 2003; Mudersbach 2003). Comparing and structuring speaker/hearer stocks of (implicit) information is theoretically based on the principles of communicator and individual semantics (**Kommunikatensemantik**, Mudersbach 1984).

2.2 Theme representation

Once utterance topics are identified, their sequential development or progression in texts can be represented graphically in various forms (Daneš 1970; Gerzymisch-Arbogast 1987). While several types of theme progressions as suggested by Daneš (1970) are representable by linear graphs, **thematic gaps** (the least developed progression type in Daneš 1970), which presuppose world knowledge and seem to resemble what is otherwise understood by inferences (Bellert 1970) or implications (Dressler 1973) or hypotheses (Mudersbach 1983), resist representation by linear graphic depiction. Their representation is possible by leksemantic networks, i.e. text maps. World knowledge hypotheses are not included in the traditional set-up of semantic networks (de Beaugrande & Dressler 1981; Sowa 1984). Within leksemantic networks (Mudersbach 1983; Gerzymisch-Arbogast 1996) they are characterized

⁶ A detailed pragmatic analysis of the theme-rheme distribution in an utterance (as exemplified in Gerzymisch-Arbogast 1987:131ff) is required, unless the language system calls for an obligatory theme indicator – as for example ‘-wa’ in Japanese, cf. Kuno (1972) – or a corresponding rheme indicator.

as those relationships between concepts (or arguments) in a text that are not connected explicitly but need an implicature for establishing connectivity with other relationships in a text. Thus, while losing the linear description parameters (e.g. the semantic relations between a sequence of topics), leksemantic networks provide transparency of how world knowledge relationships interact with verbalized information in the text as so called concretizations. This is the *added* value of text maps, as illustrated in the structural graph in Figure 2: the partial network in the box shows that the set of relations inside the box is unconnected with the rest of the relations that make up the text and require a (world knowledge) hypothesis to establish connectivity (for a classification of hypotheses, see section 4 below).

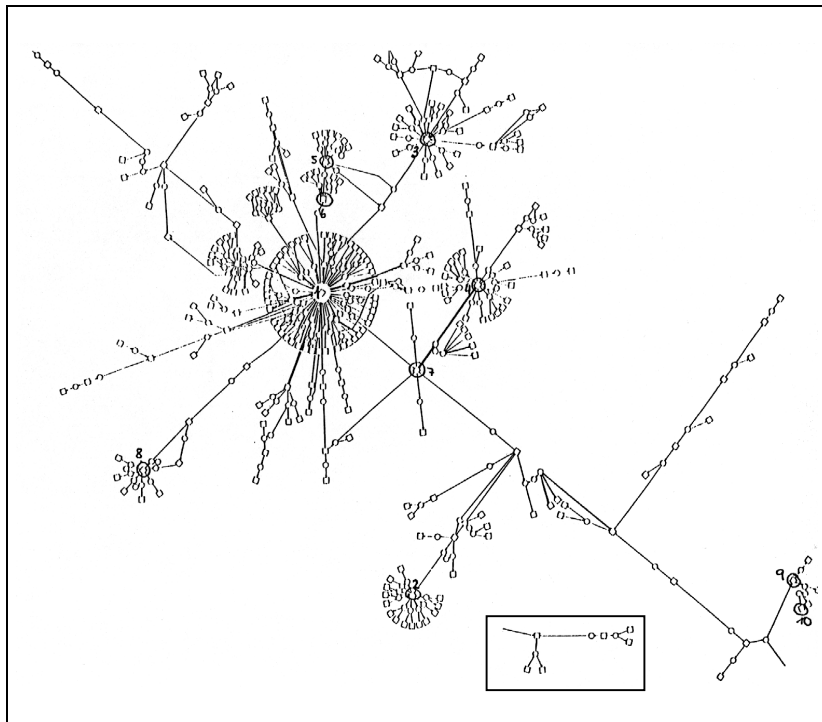


Figure 2. Text Map – Connected Relations plus 'Island' (structural graph)

3. Text Maps as visualizations of discourse structure

Text Maps⁷ can thus be described as a particular kind of semantic networks, visualizing the complexity of all relations in a text, including world knowledge hypotheses. They consist of:

- (1) the complete inventory of verbalized utterances in a text, organized as relations
and
- (2) individual, potentially reader-specific hypotheses⁸ necessary to understand a text as a coherent whole.

⁷ The concept of **Text Map** is identical with the semantic network representations based on the leksemantic meaning concept as depicted in Gerzymisch-Arbogast (1994a, 1996) and Gerzymisch-Arbogast and Mudersbach (1998). It should not be confused with the concept of **Topic Map** used in the domain of artificial intelligence research (cf. especially Lobin 2001). Without going into too much detail here it should nevertheless be pointed out that the concept of **Text Map** only serves the purpose of visualizing text structures, in contrast to the concept of **Topic Map** which also includes the representation of knowledge structures on a systems level.

⁸ Hypotheses are virtually the same as **inferences**, **implications**, **presuppositions**.

A text is thus represented as a relational network, consisting of the utterances of a text and the potential implicatures that are needed (by the individual reader) to understand the text as a coherent whole. The hypotheses may be classified as intra-textual (endogenous) and extra-textual (exogenous) and lend themselves to making the individual interpretation of a text transparent and accessible for description and analysis (see section 2.3).

While semantic networks have been well-established since 1968 in the description of meaning in computational linguistics,⁹ they have proved problematic in depicting text structure,¹⁰ mainly due to a mix of heterogeneous (metalinguistic) categories used in their set-up and description. Text Maps, by contrast, depict text structure as natural language utterances in the form of relations, which may be connected or not connected and thus (via the unconnected relations) make a text open for individual interpretation. The degree of connectivity (connected relations vs. unconnected relations, i.e. **islands**) of a text determines its degree of **coherence** or, in more general terms, its degree of openness for interpretation through individual hypotheses.

3.1 Establishing Text Maps¹¹

Conceptually, the text maps as they are presented here proceed from the leksemantic meaning concept as proposed by Mudersbach (1983). In contrast to the traditional bilateral concept of meaning as an inseparable entity of *signifiant* and *signifié* (de Saussure 1916), leksemantics was developed with the intention of describing contextual meaning (Mudersbach 2002:53). The concept uses the idea of interrelated meaning relations on various levels of depth in the analysis and has been extensively described for its use in translation studies (Gerzymisch-Arbogast 1994 a, 1994b, 1996, 1999; Gerzymisch-Arbogast and Mudersbach 1998; Gerzymisch-Arbogast *et al.* 1999) so that we can limit ourselves to a broad outline of the following sequence of steps when extracting semantic networks from natural-language texts:

Step 1: Segmentation of the text into utterances.

Step 2: Transformation of natural language utterances into relations and preparation of data entry forms (if the analysis is computerized)

Step 3: Enter relations into data bank (with simultaneous listings of lexical arguments and relators), including possible hypotheses

Step 4: Analysis of connectedness of relations, including the quantity and quality of arguments, relators and hypotheses

Step 5: Establishing Text Maps by graphically centering all arguments and the connecting relations (including the hypotheses) around the concept (argument) which enters into

⁹ For an overview, see Mehl (1993), Leinfellner (1994).

¹⁰ The semantic networks introduced by de Beaugrande and Dressler in 1981 have found little acceptance in the text linguistic literature, mostly due to their heterogeneous descriptive categories and set-up.

¹¹ Due to restrictions on space, the procedure can only be roughly outlined here. For further details, see Gerzymisch-Arbogast (1996) and Gerzymisch-Arbogast and Mudersbach (1998).

the largest number of relations in the text. A coherent, multi-level sample text map is graphically depicted in Figure 4.

Presupposed in representing texts as text maps is the hypothesis that natural language utterances can be translated into relations consisting of at least one argument (usually a NP) and one relator (usually a VP). Text maps are constructed by interpreting a natural language utterance, for instance ‘Professors read books’, as a two-valency relation consisting of the concepts ‘professors’ and ‘books’ and connected by the relator ‘read’. The formal representation and visualization of ‘Professors read books’ would thus be depicted as in Figure 3.

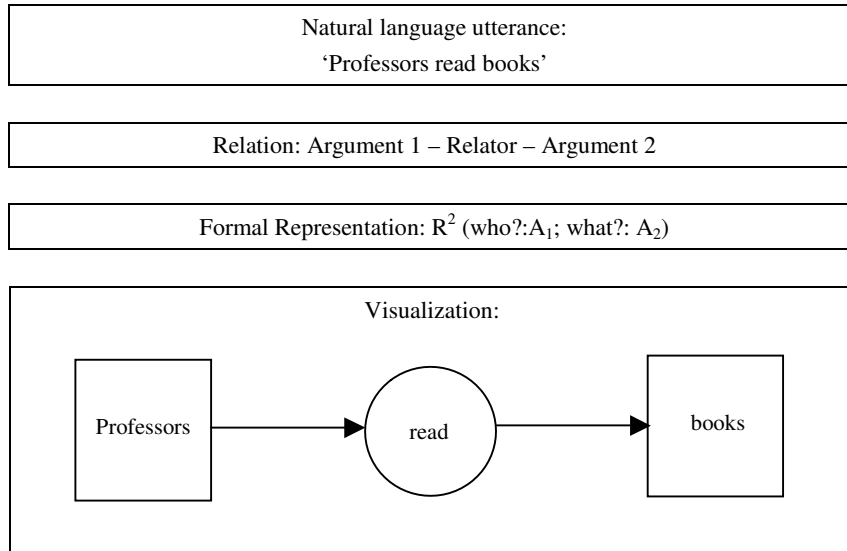


Figure 3. Transformation of a natural language utterance into a relation (Gerzymisch-Arbogast 1994a:64)

The segmentation of a text into utterances and the listing of all utterances in a text – represented as relations – yields a linear representation of a text (Gerzymisch-Arbogast 1999:84ff). On the basis of this linear representation (see Appendix), it is possible to determine which arguments in the text are connected with each other, which arguments form **islands** and into how many relations an argument enters in a text. The text used to exemplify the analysis here is a passage from the introductory chapters of the English *Introduction into Psychology* by William James (1890/1975) and the German *Grundriss der Psychologie* by Wilhelm Wundt (1896), reproduced in the Appendix and further discussed in section 4.1 below.

3.2 Visualization

The visualization of text structures as text maps is illustrative of

- (1) the connected and unconnected (islands) relations in a text
- (2) the topic structure (i.e. quantity and quality of topics).

In the structural example in Figure 4, all relations are connected. Concept B is the central concept (primary topic) binding the largest number of relations; concept A is a secondary topic on a second meaning level of B and constituting several other dependent meaning levels.

Moreover, the sample text map in Figure 4 shows a heavy concentration of arguments (concepts) and relations on a first meaning level around the concept B, with hardly any second meaning (topic) levels. This means that concept B is not highly differentiated (except for its dependent concept) in the text but is treated almost exclusively on a first (i.e. conceptually superficial) meaning level.

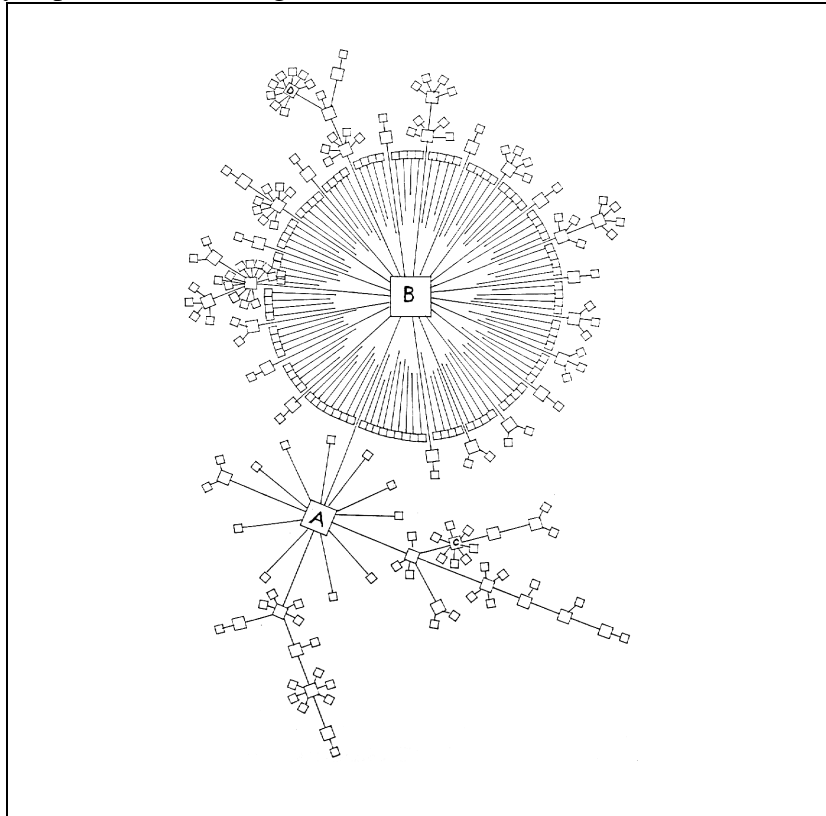


Figure 4. Text Map – Complete Connectivity (Structural Graph)

3.3 Hypotheses

We can differentiate several types of hypotheses. They may be characterized as follows:

- **grammatical hypotheses** are formed by connecting grammatical relationships, e.g. different case or plural endings, subject-verb concordances, etc.
- **semantic hypotheses** are formed by establishing semantic contiguity on a systems level of language (synonymy, hyponymy, whole-part, opposition; Lyons 1977:198ff, 270ff). Semantic hypotheses in the texts under comparison include, for example, *Begriffsbestimmung* and *Definition* (Wundt, utterances 2 & 9); *the associationist school* and *the associationist* (James, utterances 11 & 28).
- **text semantic hypotheses** are formed by establishing co-reference on a text level. Textsemantic hypotheses in the texts under comparison are, for example, *such things as feelings, desires, cognitions, reasonings, decisions* and the co-reference with *the material* (James, utterances 2,3 & 5); *the spiritual faculties of memory* and its co-reference with *its successes* (James, utterances 16 & 22).
- **text external hypotheses** are formed by integrating elements of the reader's world knowledge into the text. These are reader-specific hypotheses which are formed for coherence purposes and may vary across individual readers.

4. Sample analysis

The following sample analysis will represent and compare the topic structures of the German and English text using text maps as an analytical tool. It shows and discusses differences in the organization of topic structures and suggests that the varying quantity and quality of topics is indicative of a stronger **addressee**-orientedness of the topic structure of the English text versus stronger **content**-orientedness in the German text. After describing the text samples (4.1), the 5-step analysis in the extraction of text maps from natural linear texts is shown (4.2) and the topic structures are visualized by text maps (4.3). Problems in the analysis and possible perspectives for further research are then discussed (4.4).

4.1 The text samples

Finding comparable original text (passages) in the language pair under consideration was very difficult. Since translated texts are unacceptable for our purposes, we chose text passages from comparable academic works in English and German. With the introductory paragraphs of William James' *Introduction into Psychology* (1890/1975) and Wilhelm Wundt's *Grundriss der Psychologie* (1896) we were able to establish comparability in terms of academic subject, authority of author, text type (introductory chapters) and approximate time of publication. As a basis for our analysis we took the first two paragraphs of the introductory chapters (German text: 13 sentences; English text: 16 sentences) so that we could reliably say that there were no **previously mentioned** items in the texts. We neglected the diachronic linguistic aspect in view of the fact that we were less interested in the phenomenon of a potential change in language use in favour of the structural organization of the texts. The segmented original text excerpts are given in the Appendix.

4.2 The analysis

The analysis was carried out along the 5-step procedure as outlined above (see also Gerzymisch-Arbogast 1999:82ff):

Step 1: Segmentation of text

The text was segmented into utterances. The English text contains 33, the German text 25 utterances (see Appendix).

Step 2: Transformation of natural language utterances into relations

The utterances were transformed into relations in their linear sequence (see Appendix).

Step 3: Data Bank entry

The analysis was carried out manually.

Step 4: Analysis

The analysis covered the following parameters: (a) how many topics were identifiable in the German and the English texts (topic quantity), (b) how many meaning levels these topics produced (topic quality), (c) how many hypotheses were needed to make the texts coherent (quantity of hypotheses), (d) how these hypotheses were differentiated (quality of hypotheses), and (e) to what extent the relations in the texts were connected (degree of connectivity).

Step 5: Text Maps

(1) Establishing topics:

Table 1 shows that the two texts established 9 (German) versus 16 (English) topics. For the purposes of visualization, the topics 1-9 (G) versus 1-16 (E) were arranged as central arguments with concentric circles featuring those arguments connected with the respective topic. The concentric circles represent the meaning levels of the topic. If an argument on a concentric circle in turn enters into relations with other arguments, it is considered as a secondary (or third – n) topic vis-à-vis the central topic, forming concentric circles as first to n-meaning levels.

- (2) Forming hypotheses:
Hypotheses were formed to connect those topics which were not connected by verbalized relations. They vary in type and quantity as shown in Table 1.
- (3) Determining the degree of connectivity:
The degree of connectivity was determined by the quota of connected relations vs. unconnected relations (**islands**) (Buengmoom 2001:54, 75ff).

4.3 Comparative visualizations

The visualization of the two text maps are shown in the Appendix. They illustrate the findings given in Table 1.

4.4 Results and interpretation

The results show that the English text features (1) more topics and thus a greater variety of topics with (2) more 1-meaning-level topics than the German text. The deeper meaning differentiation in the German topic structure suggests that the German text is conceptually more differentiated, i.e. more **content-related**.

4.4.1 TOPIC STRUCTURE

The higher quantity of topics in the English text corresponds to a greater variety of topics (*psychology; phenomena; we; the most natural way of unifying the material; another way of unifying the chaos; faculties; any particular cognition or recollection; successes <of memory>; the soul; this; we as spiritualists; I; the self or ego of the individual; the associationist schools of ...; the associationist; something*) versus fewer topics (*zwei Begriffsbestimmungen der Psychologie; die metaphysische Definition; die empirische Definition; ihr; es; "innerer Sinn"; Naturerscheinungen; Vorstellungen; die subjektiven Regungen*) with a greater conceptual differentiation on several meaning levels for the German text.

	Topic Maps	Wundt	James
1	Topics		
1.1	Quantity of topics	9	16
1.2	Quality of topics		
	<i>3-level topics (consisting of three topic environments)</i>	es (with <i>Naturerscheinungen</i> as 2nd and <i>Vorstellungen</i> as 3rd level)	psychology (with <i>phenomena</i> as 2nd and <i>we</i> as 3rd level)

	2-level topics (consisting of two topical environments)	ihr (with "innerer Sinn" as 2nd level)	the associationist (with <i>something</i> as 2nd level); most natural way of unifying the material (with <i>the soul</i> as 2nd level)
	1-level topics (consisting of one topical environment)	zwei Begriffsbestimmungen in der Psychologie; die metaphysische Definition; die empirische Definition; die subjektiven Regungen	another way of unifying the chaos; faculties; particular cognition or recollection; successes; this; we/spiritualists; I; self/ego of the individual; associationist schools
2	Hypotheses		
2.1	Quantity of hypotheses	5	10
2.2	Quality of hypotheses		
	<i>semantic</i>	5	7
	<i>text semantic</i>	–	3
	<i>text external</i>	–	–
3	Connectivity Degree		
3.1	<i>connected relations</i>	5	7
3.2	<i>unconnected relations</i>	4	9
3.3	<i>degree of connectivity</i>	5:4 (55,6%)	7:9 (43,8%)

Table 1. Comparison of Topics and Hypotheses in English and German Text Maps

We interpret the greater variety of topics with few meaning levels in the English text (around such concepts as *most natural way of unifying the material; another way of unifying the chaos; faculties; successes; the soul*) versus fewer meaning levels (and less varied) topics (around such concepts as *zwei Begriffsbestimmungen; die metaphysische Definition; die empirische Definition*) in the German text as indicative of a stronger content-orientedness in the German text versus a greater addressee-orientedness in the English text.

4.4.2 CONNECTIVITY DEGREE

Again, the two texts vary in their degree of connectivity: the English text shows more hypotheses than the German text and correspondingly a lower degree of connectivity (E: 43,8%; G: 55,6%). The hypotheses also vary in type with more text-semantic hypotheses in the English text.

5. Summary

For the purposes of this article, the sample analysis has shown that the English and German sample texts vary with respect to their topic structures. Using text maps as an analytical tool, the parameters of (1) quantity and (2) quality of topics, (3) quantity and (4) quality of

hypotheses and (5) degree of connectivity were isolated. These parameters lend themselves for use in broader (empirical) analyses of intercultural shifts in topic and text structures. Of course, the findings here are quantitatively not relevant and can only have a heuristic value. They show, however, that topic structures are accessible to systematic description, which is a pre-requisite for broader empirical studies. Visualization by text maps is helpful when illustrating the varying topic structures.

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6 Appendix

6.1 Original Texts

Wundt, Wilhelm (1896): Grundriss der Psychologie

Einleitung.

§ 1. Aufgabe der Psychologie.

1. Zwei Begriffsbestimmungen der Psychologie sind in der Geschichte dieser Wissenschaft die vorherrschenden. Nach der einen ist die Psychologie »Wissenschaft von der Seele«: die psychischen Vorgänge werden als Erscheinungen betrachtet, aus denen auf das Wesen einer ihnen zu Grunde liegenden metaphysischen Seelensubstanz zurückzuschließen sei. Nach der andern ist die Psychologie »Wissenschaft der innern Erfahrung«. Nach ihr gehören die psychischen Vorgänge einer besondern Art von Erfahrung an, die ohne weiteres daran zu unterscheiden sei, dass ihre Objecte der »Selbstbeobachtung« oder, wie man diese auch im Gegensatz zur Wahrnehmung durch die äußeren Sinne nennt, dem »inneren Sinne« gegeben seien.

Keine dieser Begriffsbestimmungen genügt jedoch dem heutigen Standpunkt der Wissenschaft. Die erste, die metaphysische Definition entspricht einem Zustand, der für die Psychologie länger als für andere Gebiete bestanden hat, der aber auch für sie endgültig vorüber ist, nachdem sie sich zu einer mit eigenthümlichen Methoden arbeitenden empirischen Disciplin entwickelt hat, und seitdem die »Geisteswissenschaften« als ein großes den Naturwissenschaften gegenüberstehendes Wissenschaftsgebiet anerkannt

sind, das eine selbständige, von metaphysischen Theorien unabhängige Psychologie als seine allgemeine Grundlage fordert.

Die zweite, die empirische Definition, die in der Psychologie eine »Wissenschaft der innern Erfahrung« sieht, ist deshalb unzulänglich, weil sie das Missverständniss erwecken kann, als habe sich diese mit Gegenständen zu beschäftigen, die von denen der so genannten »äußeren Erfahrung« durchgängig verschieden seien. Nun ist es zwar richtig, dass es Erfahrungsinhalte gibt, die der psychologischen Untersuchung zufallen, während sie unter den Objecten und Vorgängen derjenigen Erfahrung, mit der sich die Naturforschung beschäftigt, nicht vorkommen: so unsere Gefühle, Affecte, Willensentschlüsse. Dagegen gibt es keine einzige Naturerscheinung, die nicht auch unter einem veränderten Gesichtspunkt Gegenstand psychologischer Untersuchung sein könnte. Ein Stein, eine Pflanze, ein Ton, ein Lichtstrahl sind als Naturerscheinungen Objecte der Mineralogie, Botanik, Physik u. s. w. Aber insofern diese Naturerscheinungen Vorstellungen in uns erwecken, sind sie zugleich Objecte der Psychologie, die über die Entstehungsweise dieser Vorstellungen und über ihr Verhältniss zu andern Vorstellungen sowie zu den nicht auf äußere Gegenstände bezogenen Vorgängen, den Gefühlen, Willensregungen u. s. w., Rechenschaft zu geben sucht. Einen »inneren Sinn«, der als Organ der psychischen Wahrnehmung den äußeren Sinnen als den Organen der Naturerkenntniss gegenübergestellt werden könnte, gibt es demnach überhaupt nicht. Die Vorstellungen, deren Eigenschaften die Psychologie zu erforschen sucht, entstehen gerade so gut mit Hilfe der äußeren Sinne wie die Wahrnehmungen, von denen die Naturforschung ausgeht; und die subjectiven Regungen, die bei der naturwissenschaftlichen Auffassung der

Dinge außer Betracht bleiben, die Gefühle, Affecte, Willensacte, sind uns nicht mittelst besonderer Wahrnehmungsorgane gegeben, sondern sie verbinden sich für uns unmittelbar und untrennbar mit den auf äußere Gegenstände bezogenen Vorstellungen.]

2. Hieraus ergibt sich, dass die Ausdrücke äußere und innere Erfahrung nicht verschiedene Objecte, sondern verschiedene Gesichtspunkte andeuten, die wir bei der Auffassung und wissenschaftlichen Bearbeitung der an sich einheitlichen Erfahrung anwenden. Diese Gesichtspunkte werden aber dadurch nahe gelegt, dass sich jede Erfahrung unmittelbar in zwei Factoren sondert: in einen Inhalt, der uns gegeben wird, und in unsere Auffassung dieses Inhalts. Wir bezeichnen den ersten dieser Factoren als die Objecte der Erfahrung, den zweiten als das erfahrende Subject. Daraus entspringen zwei Richtungen für die Bearbeitung der Erfahrung. Die eine ist die der Naturwissenschaft: sie betrachtet die Objecte der Erfahrung in ihrer von dem Subject unabhängig gedachten Beschaffenheit. Die andere ist die der Psychologie: sie untersucht den gesammten Inhalt der Erfahrung in seinen Beziehungen zum Subject und in den ihm von diesem unmittelbar beigelegten Eigenschaften. Demgemäß lässt sich auch der naturwissenschaftliche Standpunkt, insofern er erst mittelst der Abstraction von dem in jeder wirklichen Erfahrung enthaltenen subjectiven Factor möglich ist, als derjenige der mittelbaren Erfahrung, der psychologische dagegen, der diese Abstraction und alle aus ihr entspringenden Folgen geflissentlich wiederaufhebt, als derjenige der unmittelbaren Erfahrung bezeichnen.

3. Die daraus entspringende Aufgabe der Psychologie als einer allgemeinen, der Naturwissenschaft coordinirten und sie ergänzenden empirischen Wissenschaft findet ihre

Chapter I

THE SCOPE OF PSYCHOLOGY

PSYCHOLOGY is the science of mental life, both of its phenomena and of their conditions. The phenomena are such things as we call feelings, desires, cognitions, reasonings, decisions, and the like; and, superficially considered, their variety and complexity is such as to leave a chaotic impression on the observer. The most natural and consequently the earliest way of unifying the material was, first, to classify it as well as might be, and, secondly, to affiliate the diverse mental modes thus found, upon a simple entity, the personal soul, of which they are taken to be so many facultative manifestations. Now, for instance, the soul manifests its faculty of memory, now of reasoning, now of volition, or again its imagination or its appetite. This is the orthodox "spiritualistic" theory of scholasticism and of common-sense. Another and a less obvious way of unifying the chaos is to seek common elements *in* the divers mental facts rather than a common agent behind them, and to explain them constructively by the various forms of arrangement of these elements, as one explains houses by stones and bricks. The "associationist" schools of Herbart in Germany, and of Hume, the Mills and Bain in Britain have thus constructed a *psychology without a soul* by taking discrete "ideas," faint or vivid, and showing how, by their cohesions, repulsions, and forms of succession, such things as reminiscences, perceptions, emotions, volitions, passions, theories, and all the other furnishings of an individual's mind may be engendered. The very self or *ego* of the individual comes in this way to be viewed no longer as the pre-existing source of the representations, but rather as their last and most complicated fruit.

Now, if we strive rigorously to simplify the phenomena in either of these ways, we soon become aware of inadequacies in our method. Any particular cognition, for example, or recollection, is accounted for on the soul-theory by being referred to the spiritual faculties of cognition or of memory. These faculties themselves are thought of as absolute properties of the soul; that is, to take the case of memory, no reason is given why we should remember a fact as it happened, except that so to remember it constitutes the essence of our recollective power. We may, as spiritualists, try to explain our memory's failures and blunders by secondary causes. But its *successes* can invoke no factors save the existence of certain objective things to be remembered on the one hand, and of our faculty of memory on the other. When, for instance, I recall my graduation-day, and drag all its incidents and emotions up from death's dateless night, no mechanical cause can explain this process, nor can any analysis reduce it to lower terms or make its nature seem other than an ultimate *datum*, which, whether we rebel or not at its mysteriousness, must simply be taken for granted if we are to psychologize at all. However the associationist may represent the present ideas as thronging and arranging themselves, still, the spiritualist insists, he has in the end to admit that *something*, be it brain, be it "ideas," be it "association," *knows* past time *as* past, and fills it out with this or that event. And when the spiritual-

ist calls memory an "irreducible faculty," he says no more than this admission of the associationist already grants.]

And yet the admission is far from being a satisfactory simplification of the concrete facts. For why should this absolute god-given faculty retain so much better the events of yesterday than those of last year, and, best of all, those of an hour ago? Why, again, in old age should its grasp of childhood's events seem firmest? Why should illness and exhaustion enfeeble it? Why should repeating an experience strengthen our recollection of it? Why should drugs, fevers, asphyxia, and excitement resuscitate things long since forgotten? If we content ourselves with merely affirming that the faculty of memory is so peculiarly constituted by nature as to exhibit just these oddities, we seem little the better for having invoked it, for our explanation becomes as complicated as that of the crude facts with which we started. Moreover there is something grotesque and irrational in the supposition that the soul is equipped with elementary powers of such an ingeniously intricate sort. Why *should* our memory cling more easily to the near than the remote? Why should it lose its grasp of proper sooner than of abstract names? Such peculiarities seem quite fantastic; and might, for aught we can see *a priori*, be the precise opposites of what they are. Evidently, then, *the faculty does not exist absolutely, but works under conditions*; and *the quest of the conditions* becomes the psychologist's most interesting task.

However firmly he may hold to the soul and her remembering faculty, he must acknowledge that she never exerts the latter without a *cue*, and that something must always precede and *remind* us of whatever we are to recollect. "An *idea!*" says the associationist, "an idea associated with the remembered thing; and this explains also why things repeatedly met with are more easily recollected, for their associates on the various occasions furnish so many distinct avenues of recall." But this does not explain the effects of fever, exhaustion, hypnotism, old age, and the like. And in general, the pure associationist's account of our mental life is almost as bewildering as that of the pure spiritualist. This multitude of ideas, existing absolutely, yet clinging together, and weaving an endless carpet of themselves, like dominoes in ceaseless change, or the bits of glass in a kaleidoscope,—whence do they get their fantastic laws of clinging, and why do they cling in just the shapes they do?

For this the associationist must introduce the order of experience in the outer world. The dance of the ideas is a copy, somewhat mutilated and altered, of the order of phenomena. But the slightest reflection shows that phenomena have absolutely no power to influence our ideas until they have first impressed our senses and our brain. The bare existence of a past fact is no ground for our remembering it. Unless we have seen it, or somehow *undergone* it, we shall never know of its having been. The experiences of the body are thus one of the conditions of the faculty of memory being what it is. And a very small amount of reflection on facts shows that one part of the body, namely, the brain, is the part whose experiences are directly concerned. If the nervous communication be cut off between the brain and other parts, the experiences of those other parts are non-existent for the mind. The eye is blind, the ear deaf, the hand insensible and motionless. And conversely, if the brain be injured, consciousness is abolished or altered, even although every other organ in the body be ready to play its normal part. A blow on the head, a sudden subtraction of blood, the pressure of an

6.2 Segmentation

Wundt, Wilhelm (1896): Grundriss der Psychologie

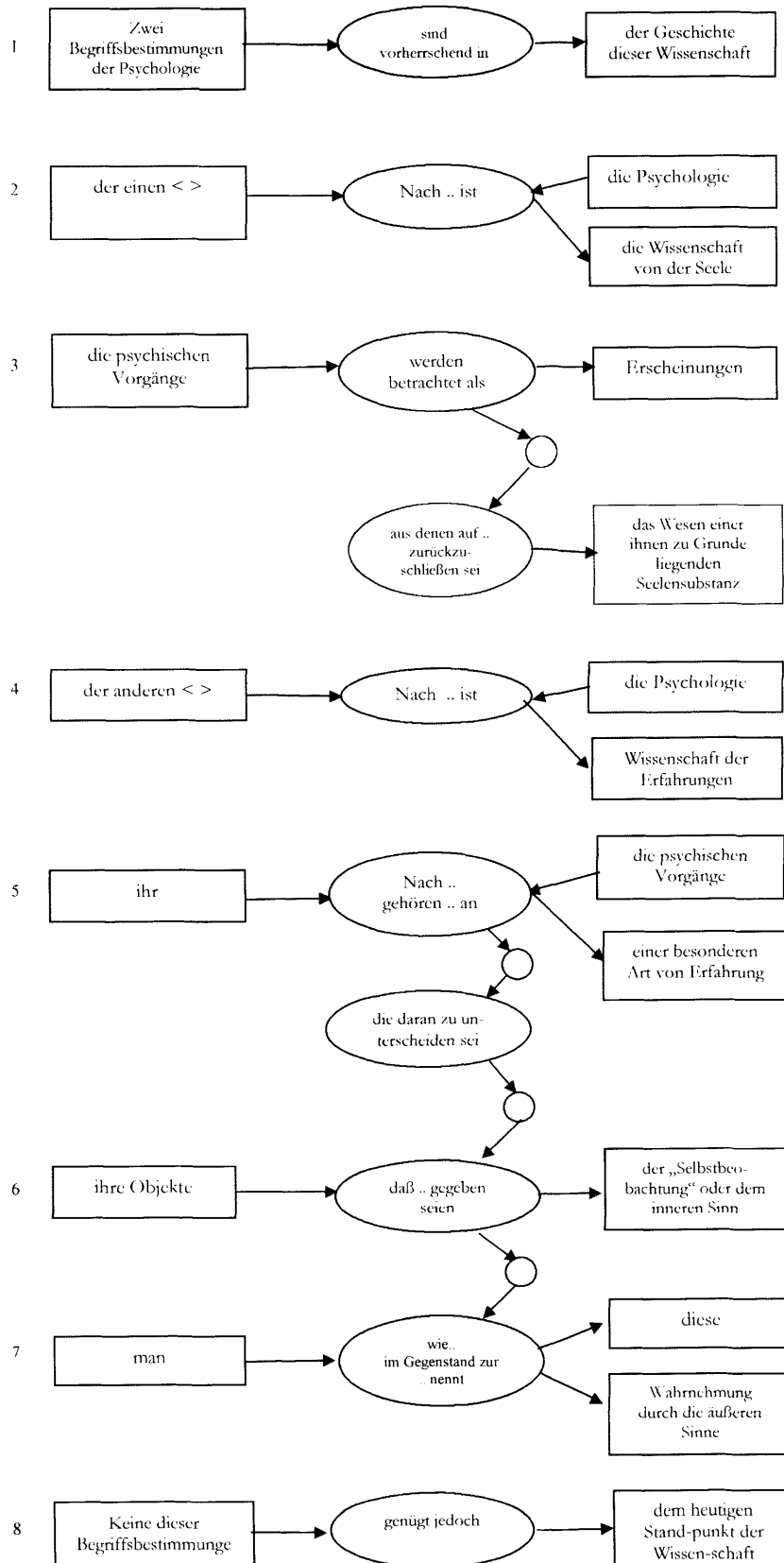
1. Zwei Begriffsbestimmungen der Psychologie sind in der Geschichte dieser Wissenschaft die vorherrschenden.
2. Nach der einen ist die Psychologie "Wissenschaft von der Seele":
3. die psychischen Vorgänge werden als Erscheinungen betrachtet, aus denen auf das Wesen einer ihnen zu Grunde liegenden metaphysischen Seelensubstanz zurückzuschließen sei.
4. Nach der anderen ist die Psychologie "Wissenschaft der inneren Erfahrung".
5. Nach ihr gehören die psychischen Vorgänge einer besonderen Art von Erfahrung an, die ohne weiteres daran zu unterscheiden sei,
6. dass ihre Objekte der "Selbstbeobachtung" oder dem "inneren Sinne" gegeben seien.
7. , wie man diese auch im Gegensatz zur Wahrnehmung durch die äußeren Sinne nennt,
8. Keine dieser Begriffsbestimmungen genügt jedoch dem heutigen Standpunkt der Wissenschaft.
9. Die erste, die metaphysische Definition entspricht einem Zustand, der für die Psychologie länger als für andere Gebiete bestanden hat, der aber auch für sie endgültig vorüber ist,
10. nachdem sie sich zu einer mit eigentümlichen Methoden arbeitenden empirischen Disziplin entwickelt hat,
11. und seitdem die "Geisteswissenschaften" als ein großes den Naturwissenschaften gegenüberstehendes Wissenschaftsgebiet anerkannt sind, das eine selbständige, von metaphysischen Theorien unabhängige Psychologie als seine allgemeine Grundlage fordert.
12. Die zweite, die empirische Definition, die in der Psychologie eine "Wissenschaft der inneren Erfahrung" sieht, ist deshalb unzulänglich,
13. weil sie das Missverständnis erwecken kann,
14. als habe sich diese mit Gegenständen zu beschäftigen, die von denen der sogenannten "äußeren Erfahrung" durchgängig verschieden seien.
15. Nun ist es zwar richtig,
16. daß es Erfahrungsinhalte gibt, die der psychologischen Untersuchung zufallen,
17. während sie unter den Objekten und Vorgängen derjenigen Erfahrung, mit der sich die Naturforschung beschäftigt, nicht vorkommen: so unsere Gefühle, Affekte, Willensentschlüsse.
18. Dagegen gibt es keine einzige Naturerscheinung, die nicht auch unter einem veränderten Gesichtspunkt Gegenstand psychologischer Untersuchung sein könnte.
19. Ein Stein, eine Pflanze, ein Ton, ein Lichtstrahl sind als Naturerscheinungen Objekte der Mineralogie, Botanik, Physik u.s.w.
20. Aber insofern diese Naturerscheinungen Vorstellungen in uns erwecken,
21. sind sie zugleich Objekte der Psychologie, die über die Entstehungsweise dieser Vorstellungen und über ihr Verhältnis zu anderen Vorstellungen sowie zu den nicht auf äußere Gegenstände bezogenen Vorgängen, den Gefühlen, Willensregungen u.s.w., Rechenschaft zu geben sucht.
22. Einen "inneren Sinn", der als Organ der psychischen Wahrnehmung den äußeren Sinnen als den Organen der Naturerkenntnis gegenübergestellt werden könnte, gibt es demnach überhaupt nicht.
23. Die Vorstellungen, deren Eigenschaften die Psychologie zu erforschen sucht, entstehen gerade so gut mit Hilfe der äußeren Sinne wie die Wahrnehmungen, von denen die Naturforschung ausgeht;
24. und die subjektiven Regungen, die bei der naturwissenschaftlichen Auffassung der Dinge außer Betracht bleiben, die Gefühle, Affekte, Willensakte, sind uns nicht mittelst Wahrnehmungsorgane gegeben,
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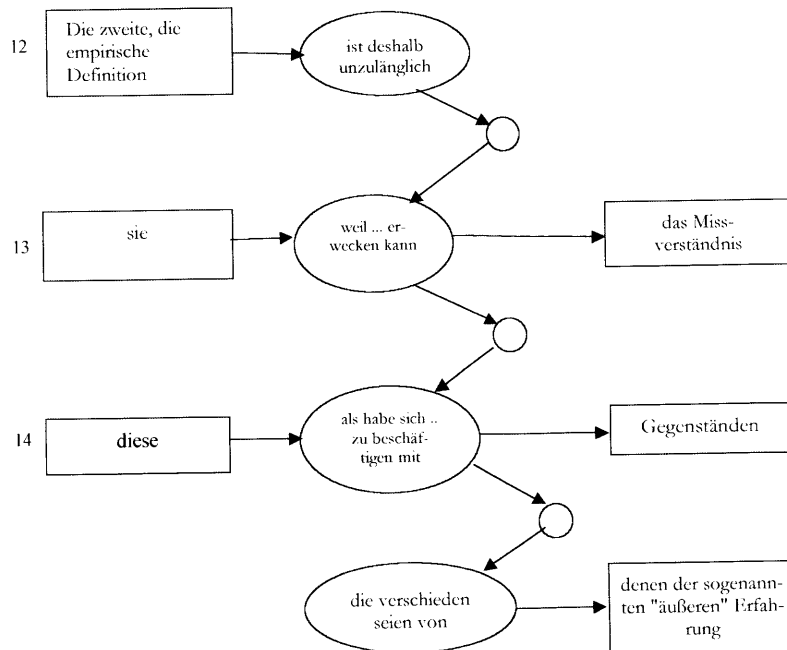
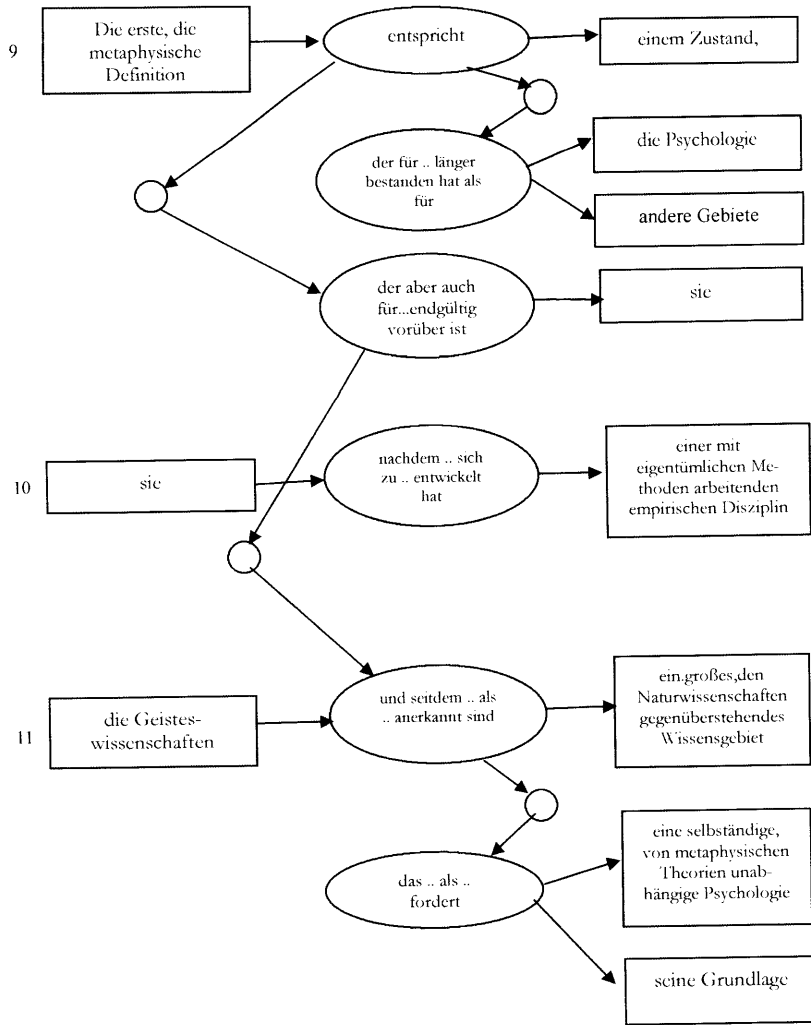
James, William (1890): The Principles of Psychology

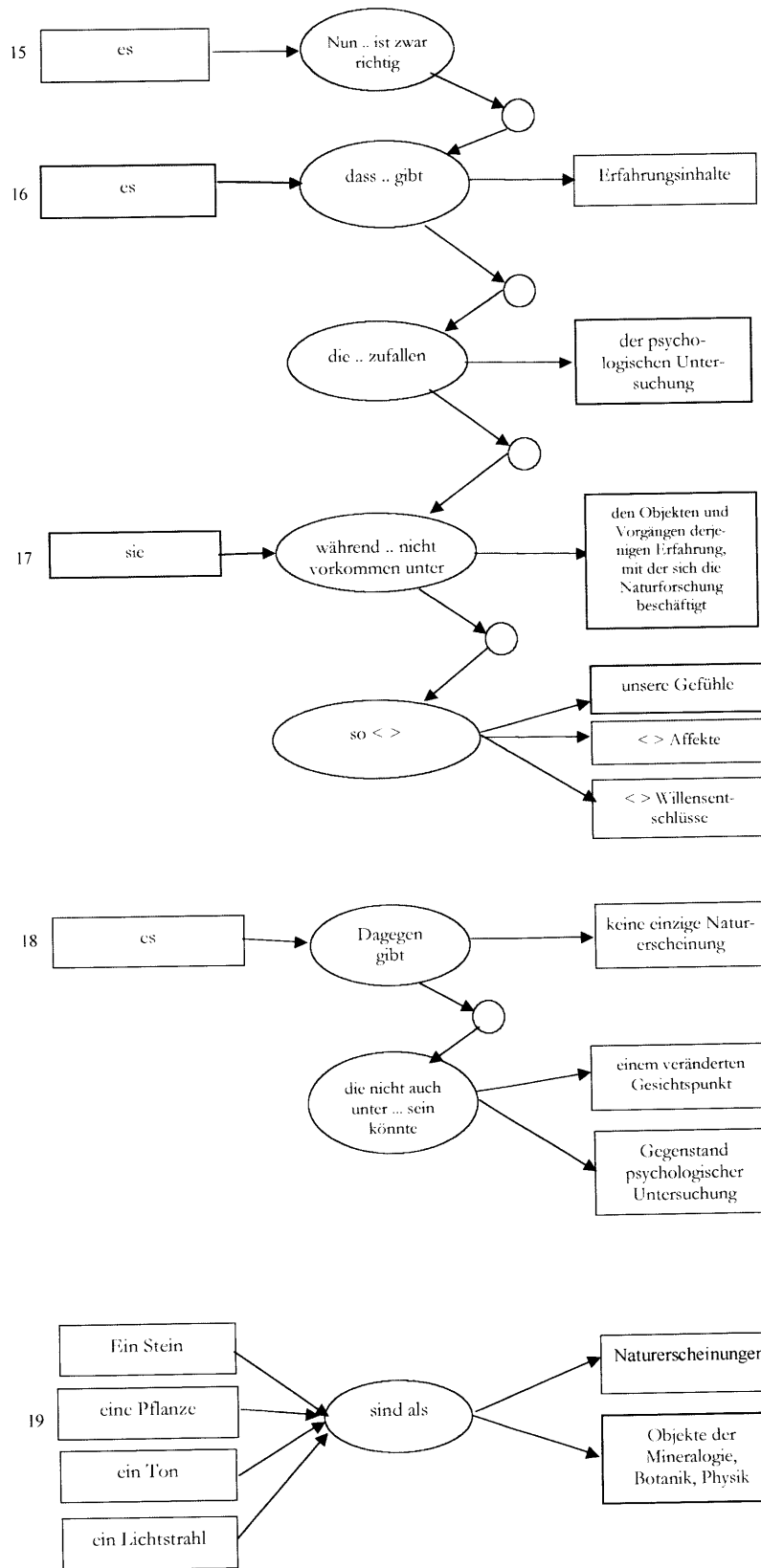
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21. We may, as spiritualists, try to explain our memory's failures and blunders by secondary causes.
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25. nor can any analysis reduce it to lower terms or make its nature seem other than an ultimate *datum*, which must simply be taken for granted
26. whether we rebel or not at its mysteriousness
27. if we are to psychologize at all.
28. However, the associationist may represent the present ideas as thronging and arranging themselves,
29. still, the spiritualist insists,
30. he has in the end to admit
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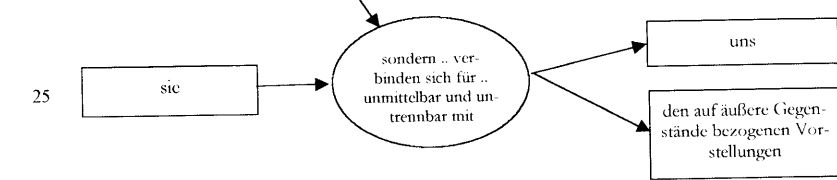
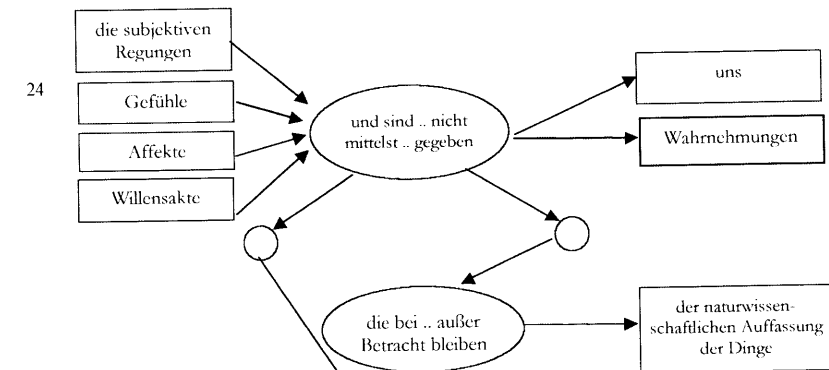
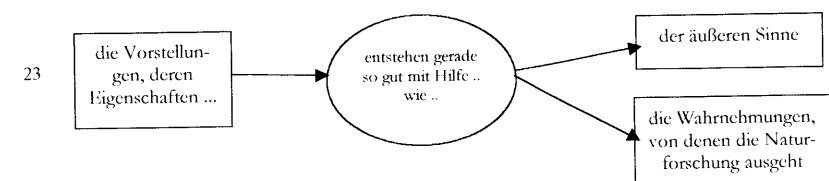
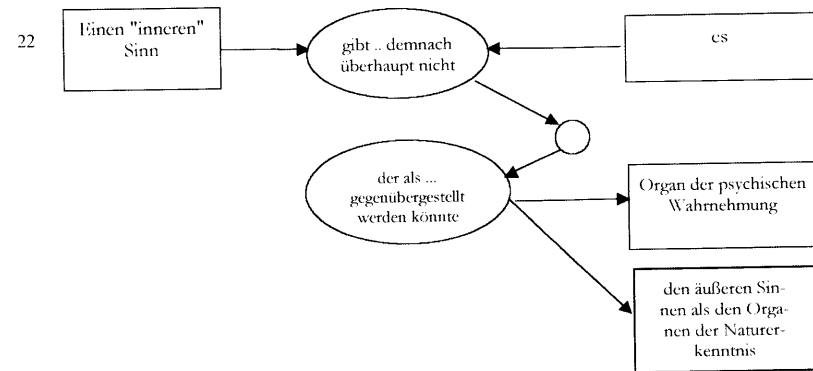
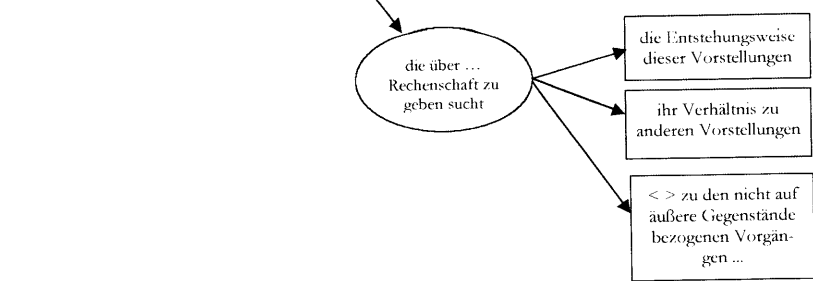
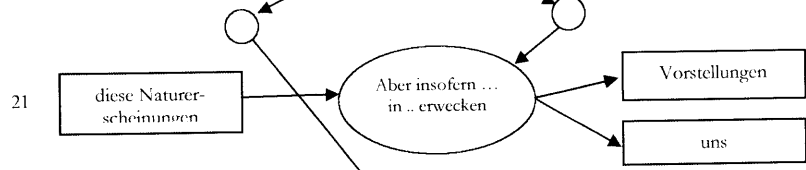
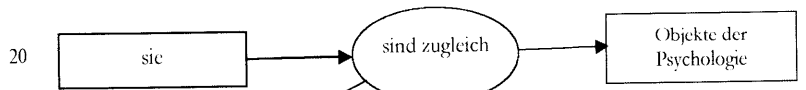
6.3 Transformation of natural language utterances into relations

Wundt, Wilhelm (1896): Grundriss der Psychologie

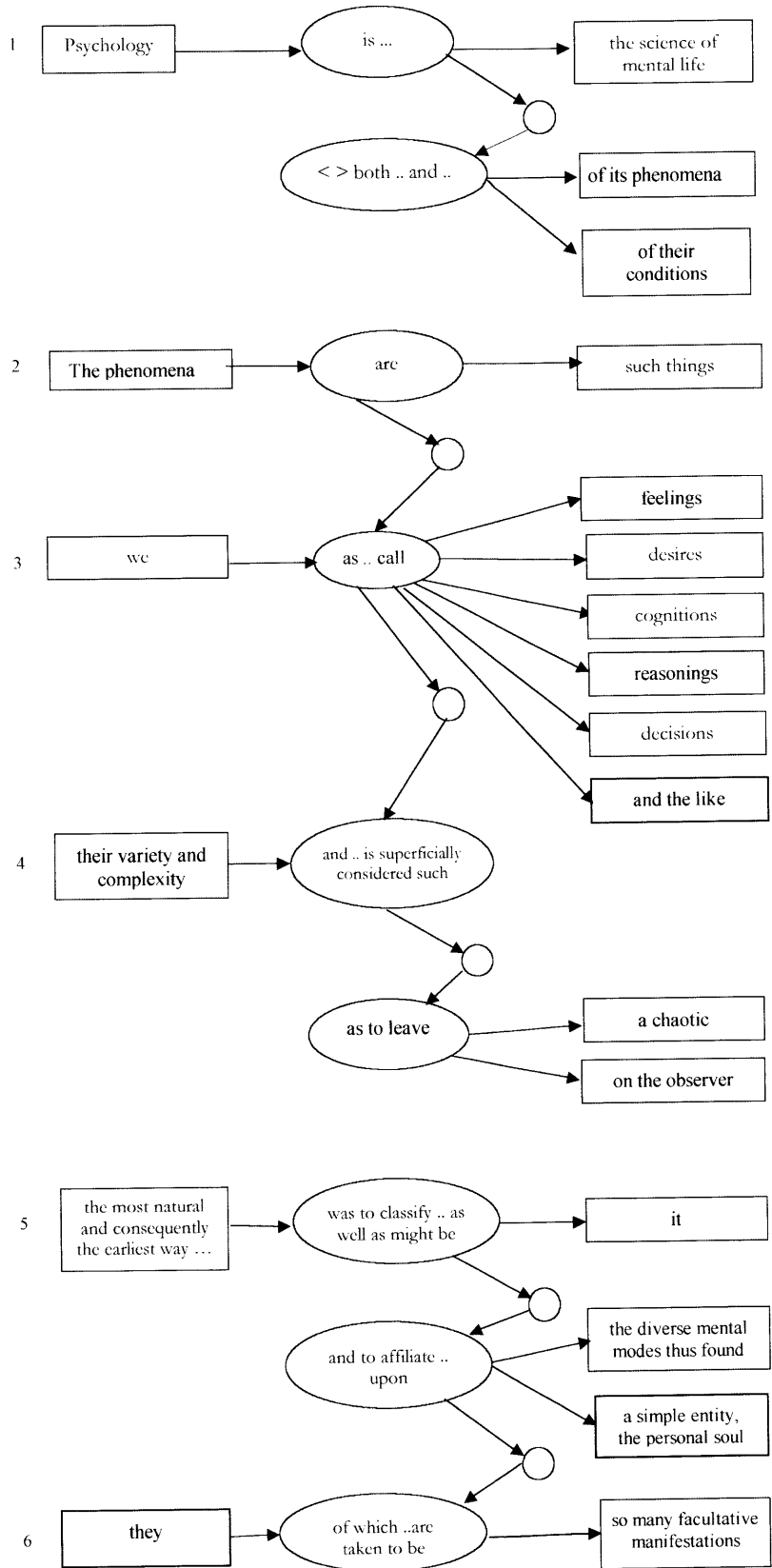


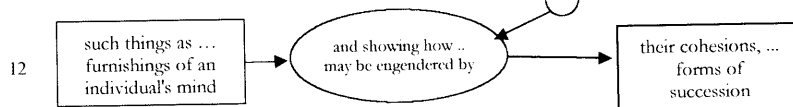
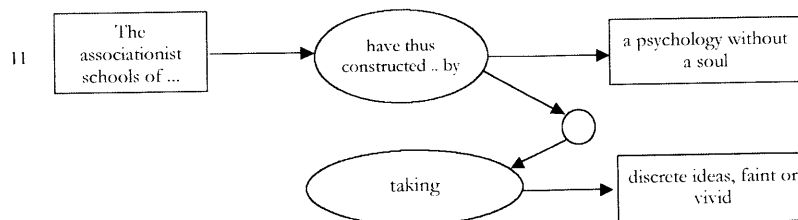
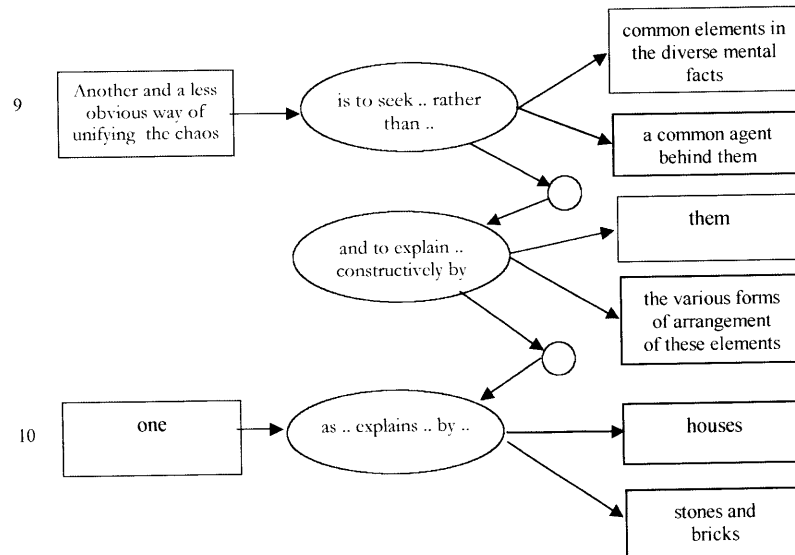
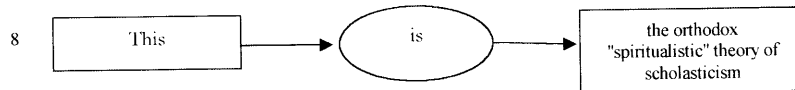
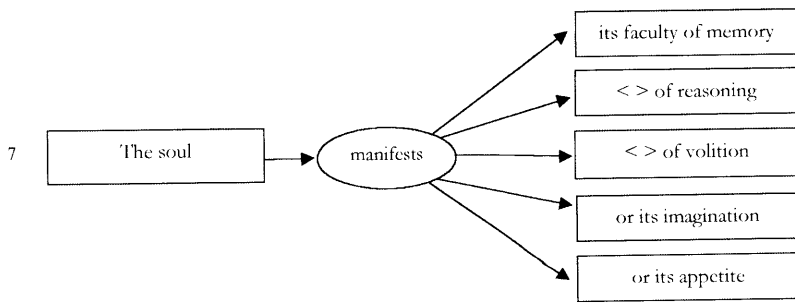


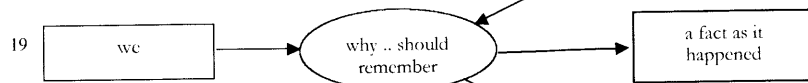
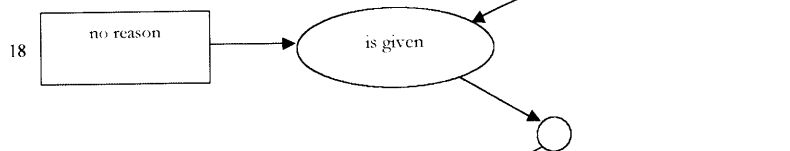
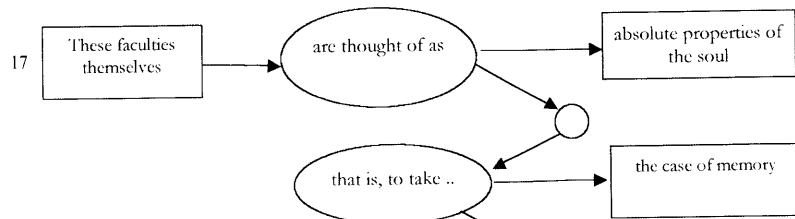
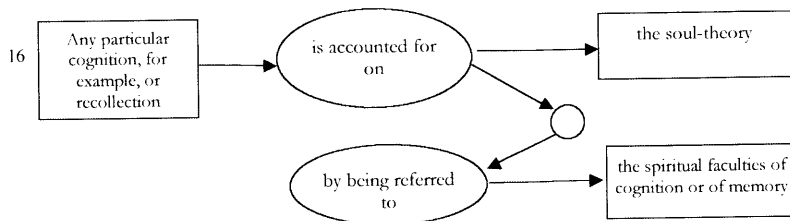
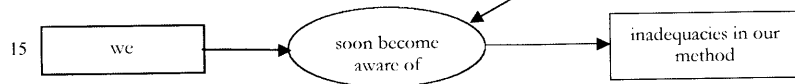
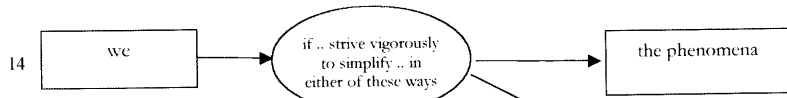
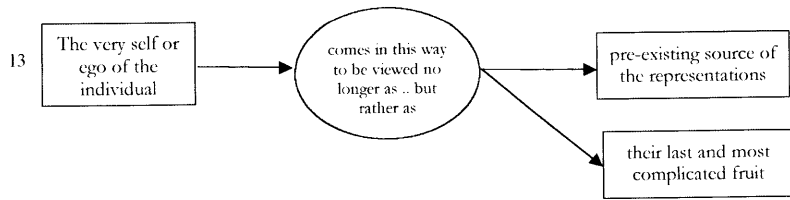


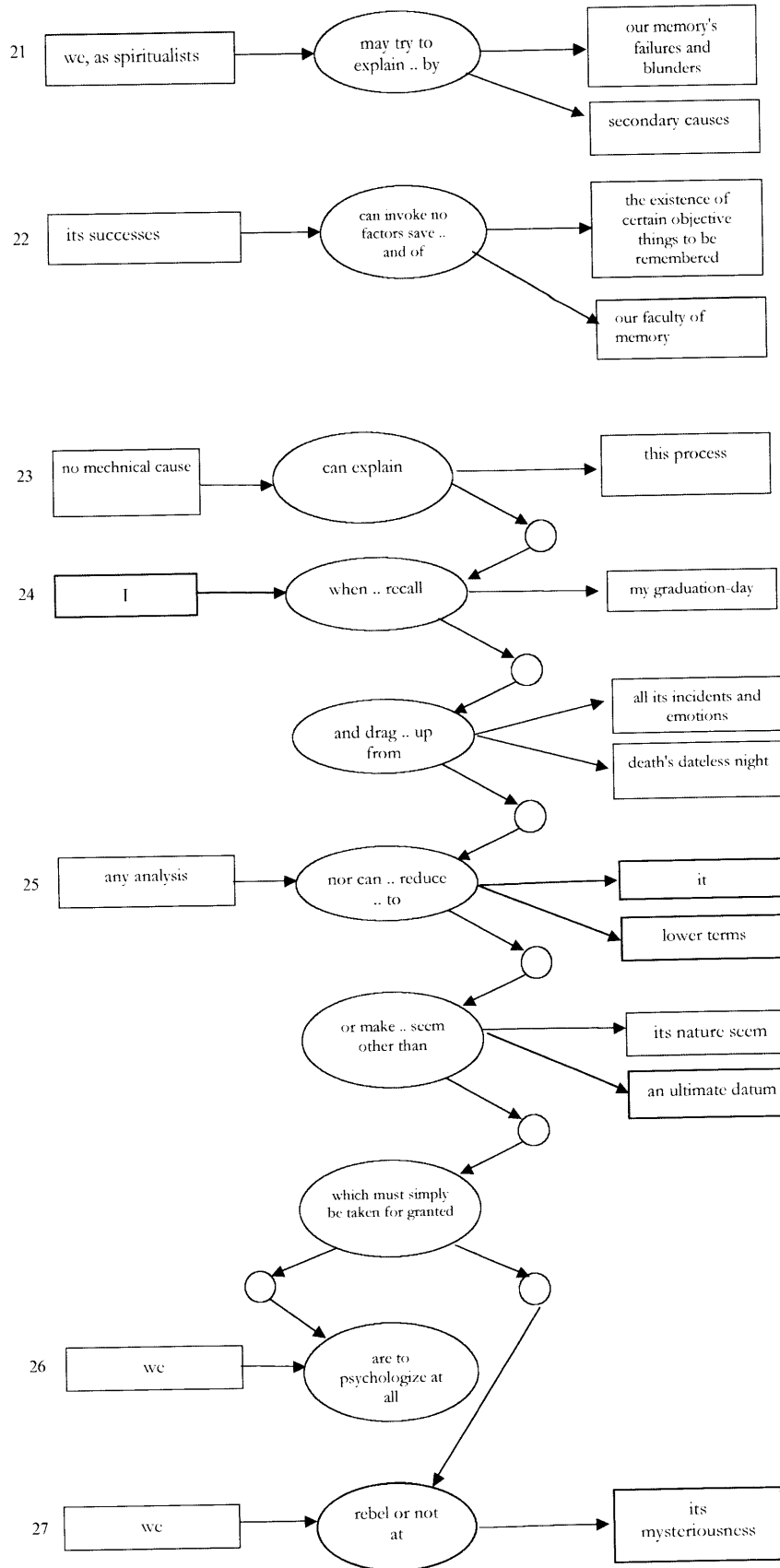


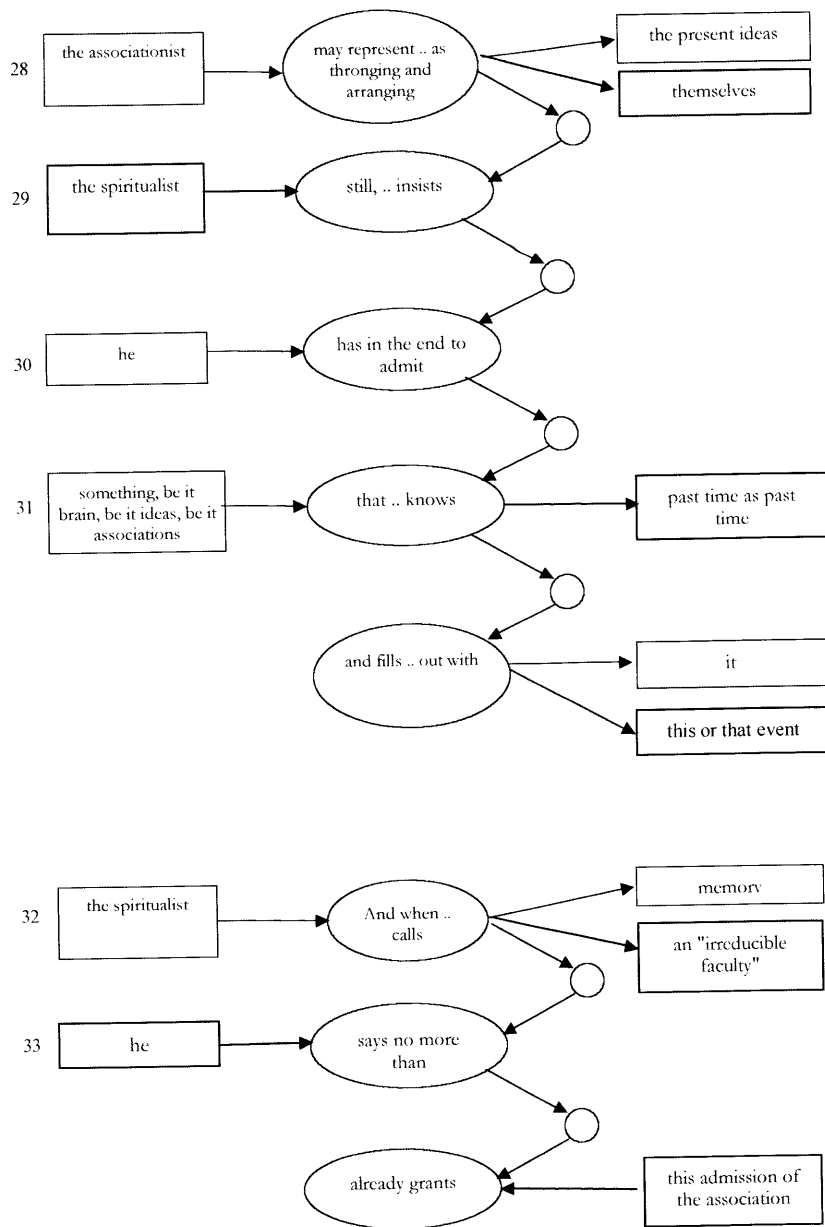
James, William (201975 [1890]): The Principles of Psychologie





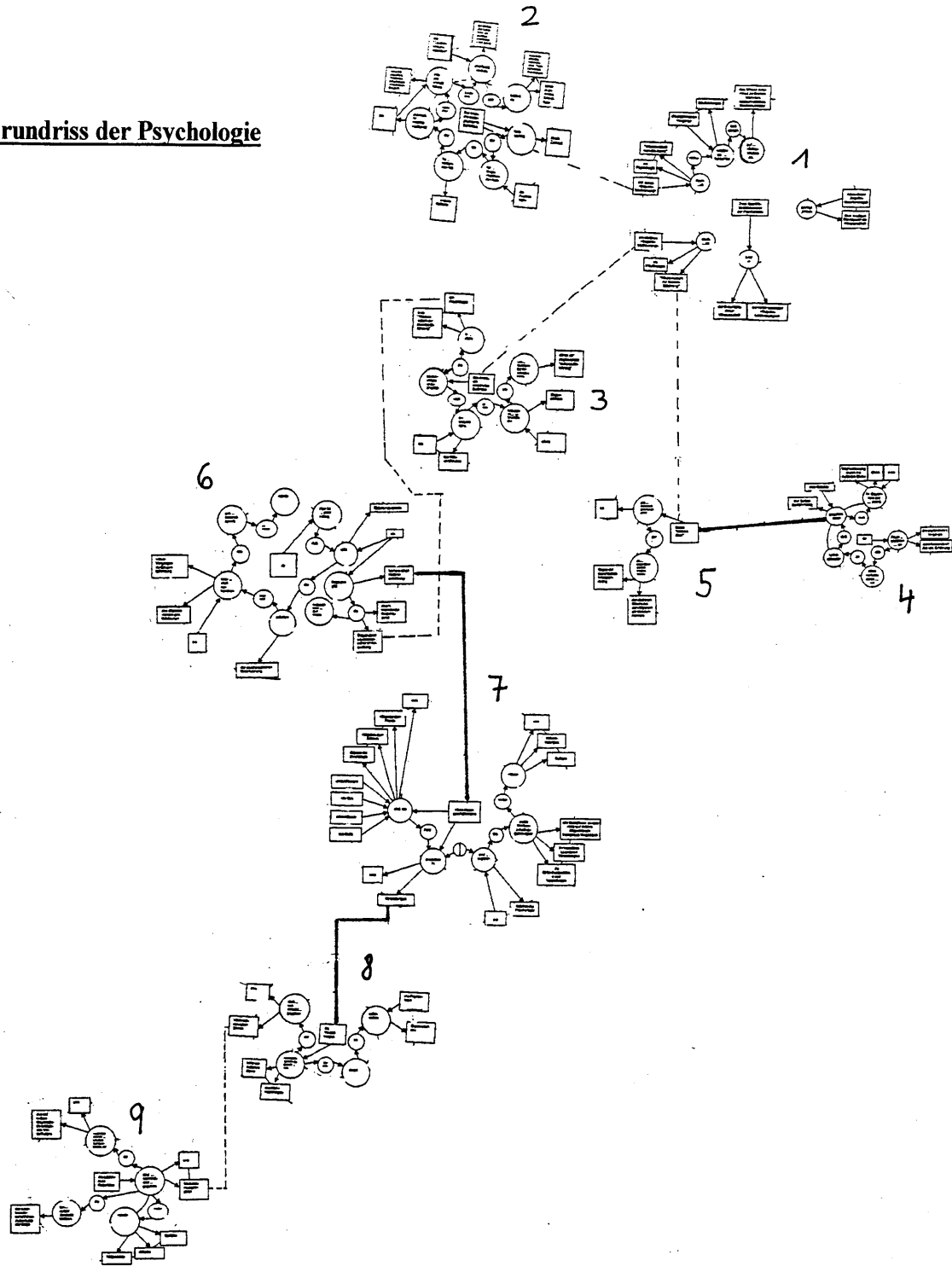






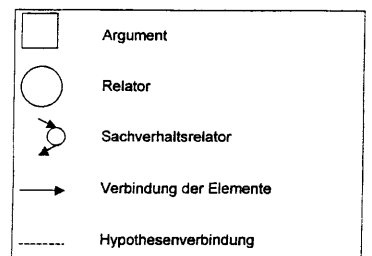
6.4 Text Maps

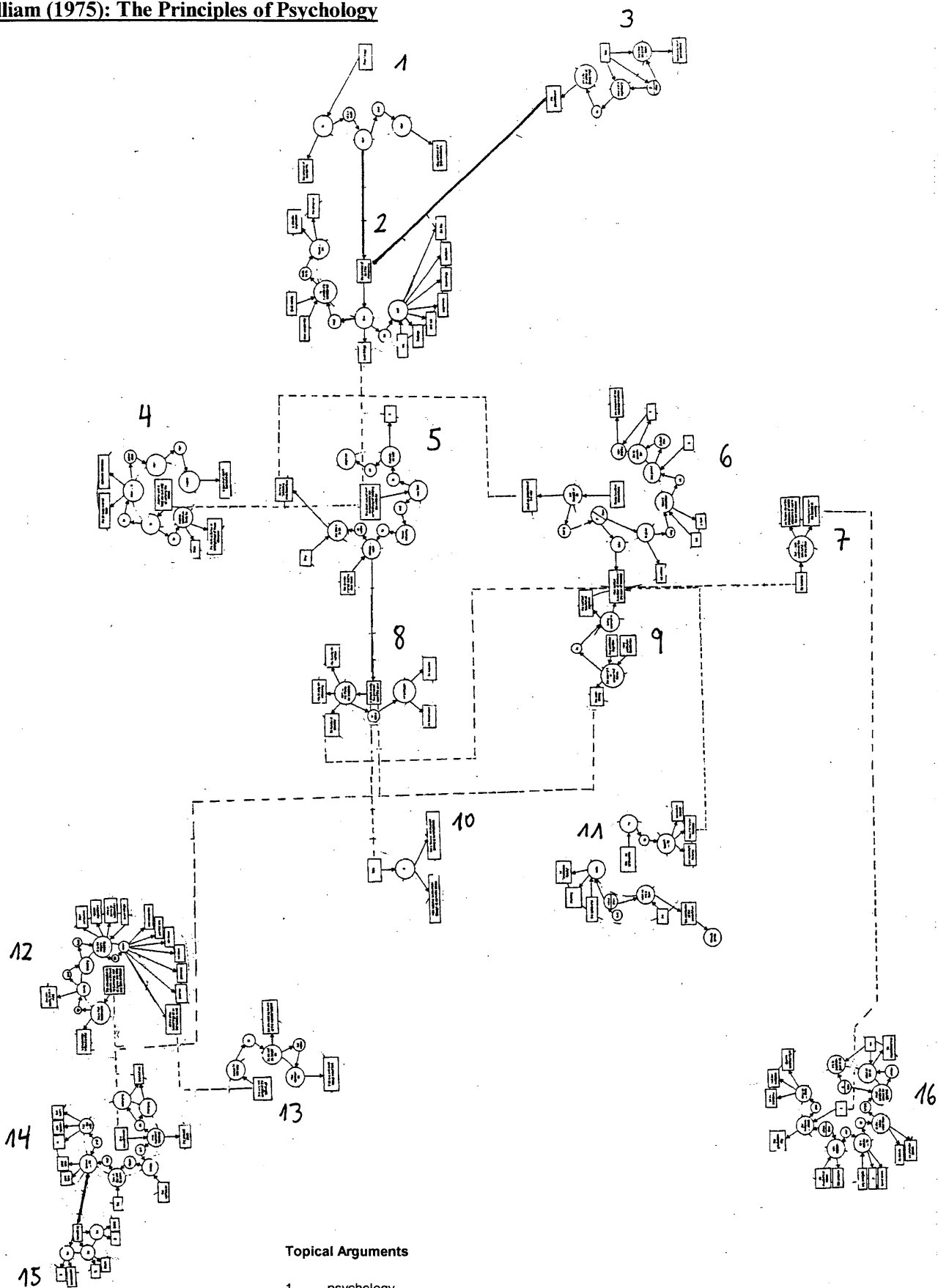
Wundt, Wilhelm (1896): Grundriss der Psychologie



Topical Arguments

1. zwei Begriffsbestimmungen der Psychologie
2. die metaphysische Definition
3. die empirische Definition
4. ihr
5. "innerer Sinn"
6. es
7. Naturerscheinungen
8. Vorstellungen
9. die subjektiven Regungen





Topical Arguments

1. psychology
2. phenomena
3. we
4. another way of unifying the chaos
5. the most natural way of unifying the material
6. faculties
7. successes <of memory>
8. the soul
9. any particular cognition or recollection
10. this
11. we as spiritualists
12. the associationist schools of ...
13. the self or ego of the individual
14. the associationist
15. something
16. I

