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Linguistic Insights
Studies in Language and Communication

Catherine Resche

Economic Terms and Beyond: Capitalising on the Wealth of Notions

How Researchers in Specialised
Varieties of English Can Benefit
from Focusing on Terms

Peter Lang

This book, which is aimed at researchers in specialised varieties of English, provides an illustration of how linguists can use terms, i.e. the expression of concepts in specialised fields, as entry points to explore any specialised domain, whether academic or professional, and to get acquainted with its history, its culture, and the evolution of the ideas that have nurtured it. Choosing the field of economics as an example, the author approaches terms from a diachronic, descriptive and contextual perspective, focusing on neonyms, metaphorical, ambiguous or indeterminate terms, as well as interface terms likely to underscore the evolving character of the domain. The analysis points out the role of terms as milestones highlighting key discoveries that have shaped scientific fields; terms can also be considered as barometers of the evolution of knowledge in a specific field and of a changing social environment. Whoever thought terms were only interesting for their definitions or for translation purposes will no doubt be surprised at the insights that can be gained from considering them from a different angle and for other purposes.

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Economic Terms and Beyond: Capitalising on the Wealth of Notions



Linguistic Insights

Studies in Language and Communication

Edited by Maurizio Gotti,
University of Bergamo

Volume 176

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Bibliographic information published by die Deutsche Nationalbibliothek

Die Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data is available on the Internet at (<http://dnb.d-nb.de>).

British Library Cataloguing-in-Publication Data: A catalogue record for this book is available from The British Library, Great Britain

Library of Congress Cataloging-in-Publication Data

Resche, Catherine.

Economic terms and beyond : capitalising on the wealth of notions : how researchers in specialised varieties of English can benefit from focusing on terms / Catherine Resche.

pages cm. – (Linguistic insights – Studies in language and communication ; v. 176)
Includes bibliographical references and index.

ISBN 978-3-0343-1435-0

1. English language–Variation–English-speaking countries.
2. English language–Study and teaching–English-speaking countries.
3. Business communication–Cross-cultural studies.
4. English language–Globalization. I. Title.

PE1066.R45 2013

428.0071–dc23

2013028867

ISSN 1424-8689 pb.

ISSN 2235-6371 eBook

ISBN 978-3-0343-1435-0 pb.

ISBN 978-3-0351-0589-6 eBook

© Peter Lang AG, International Academic Publishers, Bern 2013

Hochfeldstrasse 32, CH-3012 Bern, Switzerland

info@peterlang.com, www.peterlang.com, www.peterlang.net

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Printed in Switzerland

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To my family

Acknowledgements

I wish to express my thanks to the many people who supported me throughout the development of this book.

I would particularly like to thank the anonymous reviewers of the manuscript for their insightful comments and suggestions; Maria Teresa Cabré, Rita Temmerman and John Humbley for their support from the very beginning; Rosalind Greenstein who so carefully proof read the manuscript; my colleagues Jacqueline Percebois, Shaeda Isani, Marie-Hélène Fries and Michel Van der Yeught, for their friendly support and my doctoral students Fanny Domenec, Caroline Peynaud and Séverine Wozniak who regularly expressed their interest in hearing how the project was progressing. They unknowingly helped me to go forward as I could not let them see when I had moments of doubt as to its viability.

Thanks also to the editorial staff of Peter Lang for their help and support; I owe a personal debt of gratitude to Adrian Stähli, commissioning editor and production manager at Peter Lang's, and of course to Maurizio Gotti, the director of the *Linguistic Insights* series.

I am especially grateful to my unfailingly patient, understanding, supportive and loving husband Marc, for accepting to give up so many family weekends, as well as winter, spring and summer holidays and to our daughter Anne-Sophie for her *joie de vivre* and reassuring optimism. I can truly say that this book could never have been written without them.

1. Introduction

This book is aimed at researchers in and teachers of English as a foreign language (EFL) in the field of specialised domains. Though the focus is on the field of economics in its broad sense, encompassing finance and management, the approach offered here can be adapted to many other areas of specialised knowledge. It can therefore be regarded as a case study and guide for the researchers and foreign language lecturers and professors who wish to acquire further knowledge in a specific domain and to understand the historical context beyond terms and expressions that are used in a given field. Underpinning this approach is, of course, my training as a linguist and my experience of teaching English for economics in a French university for well over two decades now. The point is that, since any specialised discipline or professional field is based on theory or practice that are expressed through language, language can serve as a starting point for further investigation into specific domains and specialised communities, and into their culture and discourse. Having the privilege to teach and do my research in the same field, i.e. English for economics, management and finance, I¹ have studied the domain systematically, from terminology and neology through phraseology to corpus-based genre and discourse analyses, always approaching language as a living, evolutionary process. All the paths I gradually explored were suggested by the terms I came across over the years for, as will be illustrated here, terms convey much more than the concepts they denote.

Devoting time and energy to tracking and studying terms most certainly does bring return on investment, to borrow from the terminology of finance, hence the second part in the title. The choice of “notions” rather than “concepts” was of course dictated by the allusion

1 Although I am French, I have chosen to write the book in English in order to make it easier for researchers in specialised discourse and domains and teachers of specialised varieties of English as a foreign language to understand my approach, whatever their mother tongue.

to Adam Smith's well-known contribution to economic theory through his study of the *Wealth of Nations* (1776). It should be noted, however, that for a long time the French translations of ISO standards seemed to waver between "*notion*" and "*concept*", though the English versions used "concept" from the start. Since 2001, "*concept*" has been used more consistently in the French translations. Nevertheless, I took the liberty of using "notion" in the title in order for the allusion to Adam Smith to make sense, hoping to be forgiven by the proponents of "concept", which has been adopted in the rest of the book.

As announced in the subtitle, the focus is clearly on research – not teaching – even though ideally research and teaching should be mutually enriching, provided the researcher's centre of interest matches her teaching activities. The decision not to use the term "ESP" was deliberate, since it is too often associated with analysing the needs of the workplace and devising tasks to prepare learners to communicate in an international professional setting. For reasons that are explained at greater length in the second part of Chapter 2, the phrase "Specialised Varieties of English" (hereafter referred to as SVE) was chosen in preference to ESP. The intended message is that, for a researcher in SVE trained as a linguist, the object of research is of course language – or more precisely specialised discourse actually used in a given field – but the ultimate goal is to provide as detailed and comprehensive a description as possible of a given specialised field through language as an entry point. As language is rooted in culture, whether pertaining to a discipline, an occupation, or any other specific activity, the work of the researcher implies understanding the various players, the specialised milieus, their origins, history and conventions: terms cannot be dispensed with and the multiple questions they raise are a perfect starting point for such investigation.

"Terminology" also needs to be defined, especially for younger researchers opting to investigate a specialised domain. In today's fast-advancing technical and scientific world, more and more people seem to be aware that the needs for terminological resources are growing. The use of the word "terminology" is currently widespread, even among ordinary citizens. Yet it seems that many of those who have added the word to their existing stock only have a vague idea of what "terminology" actually refers to: they mostly use it either as a syno-

nym for “lexicon” or for “jargon”. The main difference between a lexical and a terminological unit can be apprehended through the way they are defined. The definition of a terminological unit is the definition of the linguistic expression of a concept which is itself related to other concepts in a specialised field. Admittedly, the meaning of “terminology” can be confusing for the layperson as terminologists themselves seem to use the term in various ways, depending on whether they are referring to theoretical research or practical aspects (Humbley 1997). Bergenholtz (1995: 52) lists four meanings while de Bessé mentions five (1994: 136). It is true that it is not uncommon to read “terminology” instead of “terminography” to mean “the recording, processing and presentation of terminological data acquired by terminological research” (ISO 1087). Apart from this, terminology can correspond to any of the following definitions:

- “A theory, i.e. the set of premises, arguments and conclusions required for explaining the relationships between concepts and terms” (Sager 1990: 3). This body of theoretical knowledge is also referred to as “Terminology science” or “the scientific study of the concepts and terms found in special languages” (ISO 1087: 1990).
- The discipline dealing with the theory defined above. According to Sager again (1990: 3) “Terminology is also an interdisciplinary field of research because it is highly influenced by the activities and methods of the areas it serves”.
- A field of activity “concerned with the collection, description, processing and presentations of terms, i.e. lexical items belonging to specialised areas of usage of one or more languages” (Sager 1990: 3).
- “A set of terms representing the system of concepts of a particular subject field” (ISO 1087: 1990). It is sometimes used to describe an author’s idiolect or that of a school of thought (as in ‘Marxist terminology’).

In addition, terminology has become a specialised aspect of computational linguistics and information science. It can also find specific applications in standardisation and language planning, in specialised translation as well as in information retrieval.

In the circles of researchers and teachers in the field of SVE, terms should be considered as the core elements of specialised discourse in specific domains; unfortunately, too few colleagues seem to pay enough attention to terms as such and especially to the wealth of information that they can provide. To take an example that is familiar to me, it is also regrettable that, at the present time, students of English in higher education in France – and especially future teachers of and researchers in English – are not introduced to terminology through some theoretical and practical classes in the course of their studies, especially as more and more of the would-be teachers and researchers will be working with students specialising in domains other than languages. As statistics have shown, the number of students studying towards foreign language degrees² *per se* in French universities has been falling steadily in the past decade, while the number of students who need foreign languages related to their particular branch of studies has been rising substantially. In the fields of legal English, English for economics, medicine, physics, or biology, for example, demand has been growing lately for English teachers willing to become more knowledgeable about the subjects their students have chosen to study. The coming generation of foreign language teachers in higher education – and especially teachers of English as a foreign language – will need to orient their research accordingly if they are to find jobs. If researchers and colleagues only realised what a wonderful resource terms can be, they would be more willing and would find it easier to explore specialised domains and milieus in order to broaden their horizons. And as anyone who has ever endeavoured to delve into a new field of knowledge knows, this can turn out to be a worthwhile, fascinating experience.

Major differences exist in the way foreign language researchers approach and investigate a specialised domain, depending on the traditions and research paradigms of the countries and circles they work in. For many, and it is to be deplored, terminology remains a vague concept. For some, terms are only interesting for their definitions. But the

2 i.e., traditionally enrolling in courses such as English or American literature, English linguistics, and cultural studies (known as “*civilisation*” in French, in a somewhat different approach).

point is that terms are just the tip of the iceberg and they have a lot more secrets to reveal about their origins, their creators, and the historical, cultural and scientific environment that motivated them, especially in a discipline like economics which is highly social and political. It is the duty of researchers to unveil those secrets. Metaphors provide a good example: though surface metaphors found in the specialised press may attract people's attention and be worthy of interest in some cases, theory-constitutive metaphors – expressed by metaphorical terms – should not be overlooked. As root metaphors, they may actually have inspired metaphors used for popularisation purposes, but their specificity lies in the great stories they can tell us about the influence of one science over another or about the prevailing paradigm at a given period. In this respect, theory-constitutive metaphors are pure gems and metaphorical terms can be a gateway into a specialised field of knowledge. Likewise, terms created by theorists and great figures in a specific field can be seen as signposts that guide the linguists' steps on their way to discovering more about how theories were born, why they emerged at a particular period of time, how they developed and came to be challenged.

Based on the lessons of several decades of research into the domain and the discourse of economics, this book is meant to show how, by choosing terms as a starting point, a language teacher of and researcher in SVE can explore promising avenues of research. Choosing the example of a soft science, I wish to highlight a different approach to terms as a multi-faceted source of information. Not only do they enable us to discover and understand how concepts are inter-related and how a domain is structured, but they can also open up new vistas on the history of ideas, on current developments, and on the preoccupations of a society at different points in time. They can also serve as signposts and draw our attention to potential paradigm shifts and scientific evolution. In this respect, terms can be considered as both mirrors and motors of change.

At this point, the reader who might only be familiar with the Vienna School and Wüster's recommendations – and might have overlooked more recent approaches to terminology – might rightly feel destabilised as the above-mentioned approach to terms seems to challenge several principles that lie at the basis of the General Theory

of Terminology (GTT). After all, suggesting a focus on terms to discover the concepts they denote – in other words giving priority to a semasiological approach – means diverging from Wüster’s onomasiological approach or “conceptual perspective” (L’Homme 2004: 24). Likewise, suggesting that terms evolve over time and should be interesting for what they tell us about the way concepts can be called into question in a given domain implies considering a diachronic perspective whereas Wüster advocated focusing on synchrony. A synchronic perspective is not, however, excluded for all that in the approach offered here. What is more, metaphorical terms – as well as euphemistic, oxymoronic or indeterminate terms – seem to contradict the idea that terms should be devoid of connotation or ambiguity. Obviously, the approach to terminology and language that is offered here reflects more recent strands in terminology and is thus based on a descriptive rather than a prescriptive stance. In this perspective, terms are observed *in vivo* and *in situ*, not *in vitro*, which means in their linguistic and discursive context, taking into account the situation in which they are produced, not to mention their social and historical environment. Again, such a position clearly diverges from Wüster’s principles, but is in accordance with more recent corpus-based approaches to terminology: all the examples quoted in the various chapters of the book result from the corpus-based terminological investigations which I have been conducting for close to two decades now.

The above notwithstanding, the perspective offered here should not be interpreted as a total rejection of Wüster’s tremendous contribution. As chapter 2 reminds the reader, his most-cited principles have left many of his insightful comments in the shadows, probably because too few people could read German. Although, at some time and in some circles, his recommendations were severely criticised for being too rigid and unrealistic, one should bear in mind that he paved the way for future approaches, and broke new ground in distinguishing between the terminological unit and a mere lexical item. It is also important to recall the context in which Wüster worked and his motivations. Obviously, a soft science like economics cannot be compared to an exact science or to a technical field, nor can it be approached by the layperson from the same angle as that which a domain-specialist would choose; the purpose is also very different, since research here is

not guided by concerns for standardisation. Wüster's principles, however, have been very helpful through the many questions they triggered whenever economic terms struck me as anomalies and stimulated further research. Whatever the researcher's approach and motivation may be, terms remain fascinating insightful guides into any unfamiliar specialised domain.

The organisation of the book

Chapter 2 provides background on Wüster's contribution to terminology science and practice – beyond the five most-cited principles that have ignited criticism – with a view to highlighting his purpose and the circumstances in which he worked, and to doing justice to his writings. It introduces more recent approaches and explains the stance that has been adopted in this book. It also explains the difference between ESP and SVE, and clarifies these different strands. Finally, it offers an overview of the various approaches to research in SVE, with a discussion of such notions as specialised community and specialised discourse.

Chapter 3 is intended as a reference for the reader to better understand the following chapters. It should be noted that much of the information provided here resulted from investigations prompted by terms. Chapter 3 offers a brief summary of the evolution of economics, from social philosophy through political economy to economics. It highlights the quest for scientificity in the nineteenth century, hence the adoption of methods borrowed from physics and mechanics, and the heavy reliance on mathematics. Alongside the physics envy, it also reviews the biological analogies that have tempted a number of economists as an alternative to mechanical physics. It relativises the notion of economics as a science and stresses the specificity of economics as a soft science.

Chapter 4 focuses on the role of neology. It first analyses a number of economists' concerns with concepts and definitions. It then

provides examples of key terms in economics and management whose origins can be dated and associated with the people who coined them: they can be seen as milestones and barometers of the evolution of scientific postures. The case of the 2008 housing and financial crises is also studied to evaluate the neonyms that emerged at the time and the insight that can be gained from examining them more closely. Economics and terminology seem to share a parallel development in terms of an orthodox set of theoretical assumptions that has since been questioned and enriched by a number of new approaches. A review of recently created branches of economics and their new names echoes the new branches in terminology described in Chapter 2. The example of green economics is studied at length to show how new terms can translate major changes and possibly signal paradigm shifts.

Chapter 5 explains how metaphorical terms can provide an entry point into the history of economic thought as introduced in Chapter 3. Metaphors can play different roles: there are heuristic metaphors, pedagogical metaphors, etc. Emphasis is laid on theory-constitutive metaphors – root metaphors, dormant metaphors – that help us understand how theory evolved and what influenced economics, and serve as indicators of turning points in the history of economic thought. Metaphors can also be seen as mediators or even revolutionaries when introducing new perspectives and can be analysed as mirrors of social changes. This approach calls for metaphors to be monitored, which would help the community of researchers detect new trends.

Chapter 6 broadens the perspective by taking into account the discursive context. Paradoxically, terms adapt to their textual environment and can be said to be at the service of discourse. The specificity of economic discourse is analysed at length in order to account for variability, concept fuzziness, loose meaning, vagueness and ambiguity. Terms naturally evolve along with concepts and ambiguous terms are no coincidence. Uncertainty being an essential feature of economics, this gives rise to euphemistic terms. In this respect, euphemistic as well as oxymoronic terms are to be analysed for what they tell us about the doubts, conventions and expectations of a given period. Examples of terminological correctness in economics are also provided. Another advantage offered by extending the observation of terms to their textual and discursive environment is that paying atten-

tion to how frequently they are used and to any sudden changes in their frequency may well alert us to imminent problems or new preoccupations.

Chapter 7 expands on the idea of interface terminology, opening borders and multi-, inter- and transdisciplinary fields and analyses the phenomenon of cross-fertilisation of economics and other sciences. It provides examples of three different categories of interface terms through the analysis of the fields of neurofinance, green management and the applications of chaos theory to various domains, including sub-fields of economics. Finally it suggests exploring the notion of interface terms further on the diachronic axis, as a means to trace the movement of intellectual trends through various disciplines, and to have a more holistic view of their influences. This means adopting a broader approach to terminology, against a background of scientific and technological progress that seems to introduce new assumptions, new sets of ideas and a new philosophy across disciplines. Interface terms remain the most reliable signals of such changes.

Understandably, the decision to devote separate chapters to neonyms, metaphors, indeterminate and interface terms may seem artificial since these categories are not mutually exclusive, and the same term could justifiably have a place in each of the chapters. However, for the purposes of clarity and precision, it seems necessary to highlight one particular phenomenon at a time, even if this means running the risk of analysing a topic in one chapter and then returning to it in another. In each case, the examples are chosen with a view to providing additional, complementary information or concentrating on a sub-field from a different angle so that, for example, economists' preoccupations with clear terms are mentioned in Chapter 4 when dealing with economists as wordsmiths and again in Chapter 7 when discussing clarity vs. indeterminacy in economics. Each time, these points are illustrated by different examples which highlight a different approach. Likewise, environmental considerations are used to illustrate the emergence of new branches of economics and identify potential paradigm shifts in Chapter 4; they are mentioned again in Chapter 7 through a different focus on the corporate world to underline the influence of environmental considerations on this sub-field. The same principle underpins the introduction of the chaordic metaphor in man-

agement in Chapter 5 and the choice of chaos theory and its concepts to illustrate cross-disciplinary interface terms in Chapter 7. It is to be hoped that the various angles and the echoes from one chapter to the other can help the reader have a more holistic view of the knowledge that can be gleaned by focusing on terms that may once have seemed anomalous.

2. Terminology and ESP/SVE

The real journey of discovery consists not in
seeking new lands, but in seeing
with new eyes.³

Marcel Proust
A la recherche du temps perdu (1918)

The way to do research is to attack the facts at
the point of greatest astonishment.

Celia Green
The Decline and Fall of Science (1972)

Terminology, like any field of knowledge, cannot be dissociated from the social and political environment that triggered its emergence. If today's approach to terminology differs somewhat from the original recommendations that were made by Wüster in a specific context, it would nevertheless be unfair and unrealistic to disregard his foundational approach: today's researchers owe a lot to the pioneers in the field and the distance that has been taken by some in the past decades only translates the necessary evolution in the needs for and applications of terminology. Hence the great many possible approaches, methods and uses that depend precisely on people's activities, purposes, fields of interest and needs. Undoubtedly, a member of a standardisation committee, a translator, a trainee for a particular job, a student in a specific scientific or technical field, or in translation, interpretation or communication (Nuopponen 1996), a researcher in a given domain, a journalist reporting on a special topic or contributing

3 Translated from the French by C. K. Scott Moncrieff (Vol. 5 *The Captive*); original text in French: *Le seul véritable voyage, [...] ce ne serait pas d'aller vers d'autres paysages, mais d'avoir d'autres yeux [...]*.

to the popularisation of techniques or science, or any citizen just practising a particular sport or leisure activity all have different purposes when it comes to terminology: they simply do not and cannot share the same perspective.

It is obvious from the above-mentioned list that not all the people are subject-specialists in the fields they are dealing with, so that they cannot be expected to be familiar with the concepts and the conceptual structure of a given field right from the start. Terms can then become a way in to further investigate a field, if need be. The same applies to researchers in and teachers of Specialised Varieties of English (SVE) whom this book addresses primarily: not only are they unlikely to all have a background in the specialised domain they are investigating, but very few of them have really been exposed to terminology theory and / or practice in the course of their studies. Therefore, they may well have a vague and simplified idea of terminology and terms, which makes it necessary to offer them a cursory overview of past and present approaches to terminology in this chapter. To this end, Section 1 describes Wüster's original perspective and position, before mentioning the various branches of terminology that have arisen since. Section 2 begins with a discussion of ESP and SVE and goes on to define the specificity of SVE. Several possible approaches to SVE research are analysed in order to show how a focus on terms may be useful for SVE researchers.

2.1. From Wüster onwards

Wüster's preoccupation with recording the names assigned to objects or the designations of concepts and organising them into tree structures was not altogether new: the need for scientific knowledge "to be organised around systems of technical concepts arranged in strict hierarchies of kinds and parts" (Halliday & Martin 1993: 6) emerged in

the seventeenth century with Leibniz's⁴ interest in classifying sciences and languages – not to mention ancient and medieval classifications⁵. However, the first major attempts at rigorously recording and classifying objects date back to the late eighteenth century with Linnaeus's⁶ binomial nomenclature of minerals, plants and animals, Guyton de Morveau's⁷ chemical nomenclature and Lavoisier's⁸ classification of elements. The term “taxonomy” itself is said to have been coined by Swiss botanist Augustin Pyramus de Candolle in his 1813 *Traité élémentaire de la botanique*. As for “terminology”, it was first used in the nineteenth century by W. Whewell⁹ in his *History of the Inductive Sciences* (1837). It was then reused in international scientific conferences by botanists, zoologists and researchers in chemistry.

For all that, the former attempts have little to compare with the research and activity that took place at the end of the nineteenth century and, above all, in the first half of the twentieth century, when industrial development called for a consensus on definitions. Terminology soon emerged as a separate field, as technical progress and increased international exchanges triggered concern for unambiguous interna-

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- 4 Gottfried Wilhelm von Leibniz (1646-1716) was a German mathematician and philosopher.
 - 5 It must be noted that Dürer (1471-1528) had also worked on mathematics, and Vesalius (1514-1564) on anatomy.
 - 6 Carl Linnaeus (1707-1778) was a Swedish botanist.
 - 7 Louis Bernard Guyton de Morveau (1737-1816) was a French chemist who published a method aimed at systematically basing chemical nomenclature on the chemical components of compounds. Before that, chemical elements used to be named after the people who had discovered them, after places or any enigmatic property.
 - 8 Antoine Laurent de Lavoisier (1743-1794) was a chemist, a philosopher and an economist (1743-1794).
 - 9 Charles Whewell (1784-1866) wrote extensively on a number of subjects (mechanics, mineralogy, geology, astronomy, political economy, etc.). Many scientists such as Charles Darwin, Charles Lyell and Michael Faraday frequently turned to him for terminological assistance. He invented the terms “anode,” “cathode,” and “ion” for Faraday. Upon the request of the poet Coleridge in 1833, Whewell invented the English word “scientist”; before this time the only terms in use were “natural philosopher” and “man of science”. (adapted from the *Stanford Encyclopedia of Philosophy* <<http://plato.stanford.edu/entries/whewell>>)

tional professional and scientific communication. In those days, Wüster was not alone in showing interest in the discipline and the Vienna school was one of three schools of terminology to be involved in terminological research and practice: the other two were the Czech and Russian schools. Although Wüster was not the only researcher to be interested in terminology, his efforts to have terminology recognised as a communication tool between specialists paid off and the role he played at the International Standardisation Organisation (ISO) and as the director of UNESCO's INFOTERM Centre in Vienna was prominent. He also worked hard towards achieving recognition of terminology in the academic sphere – which turned out to be a much greater challenge – but he eventually succeeded in creating and teaching a general terminology course at the University of Vienna, a course that still exists today. Later, the School of Vienna greatly contributed to the development of the General Theory of Terminology (GTT) and interpreted Wüster's ideas, thus helping to spread his influence.

Wüster's concern with terminology was born out of the need felt by technicians and scientists to harmonise and unify the concepts and their designation by terms in their respective fields. Wüster espoused the dreams of Esperantists and his multilingual dictionary (*The Machine Tool. An Interlingual Dictionary of Basic Concepts*, 1968) led him to systematise the methods for compiling terminological data. From his own practical experience, he later derived theoretical and methodological recommendations in the hope that they would ensure flawless international technical communication.

Although many researchers have already synthesised Wüster's principles (Cabr   1998: 30-32; Temmerman 2000: 5; L'Homme 2004: 24-26), it seems impossible to deal with terms – whatever one's approach or goal – without providing an overview of the main aspects of his contribution to the field of terminology, before mentioning more recent developments in the field. The following remarks are meant to remind the reader why he is considered as a founding figure of terminology studies. Actually, as pointed out by Cabr   (2003: 165-166), he never himself used the word “theory” in the many articles he wrote or in the lectures he gave. Instead, he preferred *Terminologielehre*, which translates his concern for practical applications and knowledge transfer. It is only after Wüster died that Felber gathered his lecture notes

and published them under the title *Einführung in die allgemeine Terminologielehre und Terminologische Lexikographie* in 1979. The expression General Theory of Terminology (GTT) was only coined later to refer to Wüster's legacy.

2.1.1. Wüster's most-cited recommendations

The following recommendations will be discussed below in the context of Wüster's activities and goals.

- 1) Terminology starts with concepts which are given priority over terms in an onomasiological perspective, translating a preference for systematic ordering.
- 2) Concepts are defined clearly and belong to a conceptual system; the one-term/one-concept – one-concept/one-term rule, also known as bi-univocal relationship, is most important in order to guarantee stable definitions (monosemy and mononymy).
- 3) Terms must be studied on the synchronic axis.
- 4) Priority should be given to written registers.
- 5) Terms should be standardised to ensure efficient communication and international forms of designation should be preferred.

Starting with the primacy of onomasiology, it is to be remembered that, as a trained engineer, Wüster had a thorough knowledge of his domain; thus, he naturally considered that only the field-specialist was in a position to be familiar with the conceptual structure of his field and able to find the appropriate terms to name those concepts. Understandably then, field-specialists were in the best position to cater to the needs of their peers in search of normalised terms in their own fields and of their equivalents in foreign languages. Wüster brought evidence of this by compiling his *Machine Tool Dictionary*. Consequently, a prescriptive approach was the natural outcome: terms were to be seen as tools to facilitate communication between specialists. Clearly delineated concepts were to be expressed by terms with stable definitions for communication to be free of misunderstanding; logically, fuzziness, variability and connotation were to be banned. In this respect, it is worth keeping in mind that the Latin root “term” (*terminus*)

shares the idea of limit or boundary with that of “definition” (*finis*). Wüster’s wish to avoid ambiguity or variability led him to advocate a synchronic approach – disregarding historical or textual context – and to erect barriers between domains or fields. The ultimate goal was to endow each scientific or technical field or sub-field with sets of terms systematically recorded in multilingual glossaries and accompanied by precise definitions respectful of international norms.

Wüster’s recommendations were derived from his personal experience and goal, so that seen in the light of the constraints of the dictionary genre, they seem quite logical. Obviously, the approach adopted to compile a dictionary cannot be expected to take into account a number of real-life exchanges between experts, which explains why oral communication was ignored, for example. Working on a dictionary also greatly limited his consideration for any textual or social environment. Given the restricted frame that served as a basis for Wüster’s recommendations, his “traditional” theory has been blamed for being reductionist. Criticism was first levelled at the overall conception of the terminological unit and its strictly denominative role. The fact that neither the syntactic aspect nor the communicative nature of terms was envisaged was considered as another flaw. In addition, Wüster’s failure to acknowledge that concepts as well as terms could be subject to variation was condemned. Admittedly, many aspects of Wüster’s prescriptions, when taken literally, can be – and have been – questioned but it is worth mentioning a number of points that show that he was aware that his principles could not always be heeded; the spectrum of his considerations was much broader than the few points on which criticism seems to have crystalised.

2.1.2. Another approach to Wüster’s writings

The researchers who could read the original German version of his writings (Humbley 2004; Budin 1998) made a point of insisting that he qualified his position, conscious as he was that his recommendations were but an ideal to aim at. According to Candel (2004: 19), although he strongly insisted that his principles be implemented, he resorted to such verbs as *anstreben* or *trachten* (aim at) several times,

as if he knew that the goal he had set would not always be easy to reach. For example, Candel (2004: 23) quotes his tolerance of a certain kind of synonymy as regards abbreviated forms: “*Gelegentlich kann es von Nutzen sein, eine ausführliche und eine kürzere Form nebeneinander als Synonyme zur Verfügung zu haben (...) ¹⁰ (47)*”. Wüster recommended the longer, more transparent form when addressing people who are less familiar with the domain; when specialists communicated with their peers, the longer form was also to be preferred when first used in a text, as an introduction to the concept, and then to be replaced by its abbreviated form in the rest of the text.

Those who have only had access to a second-hand, simplified version of his main ideas should realise that Wüster did not altogether reject phraseology or context (Antia 2001; Humbley 2004): he even stated that in specialised dictionaries, information about phraseology was too limited. Furthermore, he did not refuse to take some oral aspects into consideration, insisting, for example, that indications concerning the pronunciation of abbreviations in various countries should be provided. Still, pronunciation has little in common with consideration for oral exchanges and their impact on the terminology actually used. His position as regards metaphor also seems to have been caricatured. Evidence of his awareness that his principles could not always be implemented as rigorously as would be necessary is brought to us by the following quotation: “*Auch in der Terminologie muss das Verlangen nach vollständiger Eineindeutigkeit ein frommer Wunsch bleiben*”¹¹. More broadly, Antia (2002: 103) draws our attention to the fact that Wüster’s contribution should not be confined to terminology. He was “an early contributor to modern linguistics thought, particularly synchronic semantics, and a pioneer of LSP who also tried to claim a place within linguistics for LSP research”. Antia (2002: 105) stresses that he was also a pioneering figure in German Applied Linguistics: “Wüster writes that he was the first to use the term ‘*angewandte*

10 [Occasionally, it can be useful to have a shorter form next to the longer term as synonyms]. My translation

11 [Even in terminology, the desire to achieve a perfect one-term/one-concept – one-concept/one-term relationship is to be considered as wishful thinking]. My translation

Sprachwissenschaft’ (applied linguistics) in his 1931 book”. Though he was an engineer, he was quite familiar with linguistics and many of his articles were actually published in linguistics journals or in the proceedings of linguistics conferences. It is a great pity that an English version of many of his writings should not have been available earlier: many researchers who suggested other paths for terminology would then have realised that he had anticipated a number of questions that have been raised in the past two decades. By bringing together texts that would otherwise have been hard to access, Picht and Schmitz (2001) have shown how broad the scope of Wüster’s preoccupations was.

Whatever his critics’ arguments, Wüster’s contribution is undeniable in the field of terminology and specialised language (Van Campenhout 2006). He raised the numerous questions linked with technological changes and the linguistic needs they brought about, with new concepts and the elaboration of technical language, with knowledge transfer, with international technical communication. Any multilingual perspective implies analysing concepts and defining them precisely. Wüster drew people’s attention to the fact that, prior to translation, it is important to agree on the concept, as reality can be apprehended differently from one language to another. He also insisted on the importance of the concrete object: in technical fields, for example, it is easy to add a drawing of the object being described to make sure everyone is referring to the same physical part. Of course, this is not possible with more abstract fields of knowledge, which makes translation more difficult. But even in monolingual terminological research, depending on the domains under scrutiny and the perspective adopted by the researchers, Wüster’s goals may seem unattainable. This has given rise to a number of new branches in terminology that should be mentioned before explaining the approach underlying this particular book.

2.1.3. More recent approaches

It might be confusing for the layperson to encounter, among other designations, “textual terminology” (Slodzian 1994, 1995), “socioter-

minology” (Gaudin 1993, 2003), “terminochrony” (Møller 1998), a “Communicative Theory of Terminology” or “CTT” (Cabr   1999), “sociocognitive terminology” (Temmerman 2000), “termontography” (Temmerman & Kerremans 2003), “pragmaterminology” (De Vecchi 2004), “terminometrics” (Quirion 2003, Resche 2004a), or “ontoterminology” (Roche 2007). Such a list translates a number of new positions among researchers in the field of terminology and is restricted to the designations that still include terminology or the “term/termino” root.

According to Myking (2001: 55), researchers in terminology fall into three categories: (a) moderate and loyal, (b) radical and subversive, and (c) radical and loyal. The moderate and loyal position (a), represented by Picht and Myking himself, is in favour of bringing terminology and linguistics closer, explaining and analysing the classical theory “without abandoning the established methodological and theoretical tenets – such as, in particular, the onomasiological approach to conceptology”. The radical and subversive (b) position, as the adjectives imply, is much different as it “seems to reject traditional terminology completely”, maintaining the divide “between *traditional* terminology and *current* linguistics”. This position is exemplified by socioterminology and socio-cognitive terminology. Position (c) seems to combine some aspects of positions (a) and (b), advocating changes but not calling into question the foundations: it expresses its “explicit intention of analysing W  ster on the background of his historical context – hence the label ‘loyal’”. Among the radical and loyal, Bertha Toft (2001) is often quoted as stating that the W  sterian tradition needs adjusting, for example through cognitive and functional approaches, but she insists that this does not require complete rejection of W  ster’s position. Myking’s categorisation seems somewhat rigid and perplexing: I must admit I do not really know which category I belongs to. Can one be at once loyal, acknowledging W  ster’s contribution and the historical context that motivated his principles, and, at the same time, be “subversive”, adopting a semasiological, diachronic, descriptive stance?

A short explanation of the main alternative approaches will help understand what motivated the sometimes diverging paths taken by researchers. Textual terminology, as the term implies, is linked with

the idea that the application of terminology should mostly be based on textual analysis under the principle that the specific knowledge of an expert community is contained in the texts it produces and is thus accessible through this very source. Whatever the goals being pursued, analysing text corpora is required (Pearson 1998; Bourigault, Jacquemin & L'Homme 2001) – whether one is involved in translation, terminological extraction, indexation, bilingual or multilingual term alignment, or automatic and semi-automatic retrieval of information from texts or the web. Textual terminology involves text mining and computational terminology: terminology must emerge from texts to better return to texts (Bourigault & Slodzian 1999: 30; Slodzian 2000). This approach, which avoids confining the extraction of terms to noun forms, thus distances itself somewhat from the classical approach where noun forms only were considered as the norm: verbs, adjectives, etc. can be taken into account and larger units as well. The textual approach is descriptive, and challenges the idea that the term is a sort of tag assigned to a concept; it also rejects the principle of a preexisting conceptual system and considers that terms and concepts appear simultaneously.

Socioterminology, as a term, was born in the early 1980s, associating sociolinguistics and terminology. It stems from the realisation that the classical approach, influenced by Leibniz's logic and the vision of a perfect universal and artificial language, failed to reflect the social dimension and richness of language. It called into question a number of principles laid down by Wüster, pointing out that domains or fields cannot be clearly delineated since knowledge has flexible borders and is often interdisciplinary. As progress is made, a lot of overlapping takes place. Specialised discourse comes under various guises, depending on whether scientists address their peers, or engineers, technicians, students, politicians, etc., so the terminology used cannot be considered as a fixed set. Furthermore, language cannot be cut off from its historical roots: likewise, terms are connected to their creators and must be analysed from the point of view of diachrony; polysemy and synonymy are a natural part of a living language. Socioterminology also insists that definitions cannot be static since theories evolve. Language itself evolves and, in the context of language

planning, it is important to observe whether users accept or reject new terms and to relate the data to their social or professional status.

Like socioterminology, sociocognitive terminology differs from the traditional standardisation-oriented and concept-centred approach: it can be defined as a communication-oriented and discourse-centred approach (Temmerman 2000). It suggests a pragmatic and realistic description of terms, inspired by the cognitive sciences. Logically, it maintains that synonymy and polysemy are functional in language and cannot be artificially excluded from specialised areas. It advocates combining semasiological and onomasiological approaches; it underlines the fact that cognitive models play a role in the development of new ideas, insisting for example that metaphorical models are worth analysing. It thus considers that concepts and terms should be studied diachronically. In addition, it states that the form and content of definitions are not set in stone and can vary depending on the user's needs.

Ontoterminology is claimed to offer “a new paradigm for terminology” (Roche *et al.* 2009: 1-3) although it shares its onomasiological approach with classical terminology. The proponents of ontoterminology have observed that whenever communication problems occur – especially in technical domains – experts turn to “technical diagrams or formulae rather than texts or standards”. They conclude that “experts agree on concept definitions when they are written in a formal (logical) or semi-formal (e.g. conceptual graph) language. These definitions are objective since their interpretation is ruled by a formal system”. Consequently they insist that “terms i.e. the ‘verbal definition of a concept’ [ISO 1087] need to be separated from concept names since they belong to two different semiotic systems”: a linguistic system on the one hand and a conceptual one on the other. Once the definition of the term (its linguistic explanation) is separated from the definition of the concept, it is then possible to account for the use of different words to denote the same concept. In this respect, ontoterminology diverges from the GTT.

Termonography is described by Temmerman and Kerremans (2003: 3) as a result of “cross-fertilisation between the disciplines of ontology engineering and terminology”. It is therefore a multidisciplinary approach combining the theories and methods pertaining to the