Università degli Studi di Padova

Dipartimento di Studi Linguistici e Letterari

Corso di Laurea Magistrale in
Lingue Moderne per la Comunicazione e la Cooperazione Internazionale
Classe LM-38

Tesi di Laurea

German Trade Terms in CAMEO: Revamping LWL Industry Museum's Murano Glass Publications

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Anno Accademico 2023 / 2024

Acknowledgements

Grazie alla mia Relatrice Federica Vezzani e alla mia Correlatrice Sabina Fata, per la fiducia riposta in me, i consigli e l'appoggio in questo progetto di tesi.

Grazie al mio amore, Luca, che mi ha supportato e sopportato nei mesi, dandomi sempre la forza necessaria per proseguire senza timore.

Grazie a tutta la mia famiglia, che ha sempre silenziosamente creduto in me e mi ha permesso di studiare a Padova.

Grazie alle mie amiche e ai miei amici, che mi hanno capito, ascoltato e rincuorato quando ce n'era bisogno.

Grazie all'Università di Friburgo, che mi ha accolto durante la mia esperienza Erasmus.

E grazie alla nonna Albertina, che nei momenti difficili mi ha ricordato quanto io sia "studentessa instancabile (e splendida)".

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Introduction

The dissertation aims at outlining a terminological project, within the discipline of the translation-oriented terminography. The main objective is to create standardized FAIR terminological data for the optimal dissemination of the bilingual terminology of the Murano artistic glass. The University of Padua, thanks to which this thesis has been developed, has always been attentive to the creation of terminological databases for a correct and conscious use of the multilingual terminology. Indeed, the work of this dissertation aims at contributing to an already existing terminological project, namely the one related to the commercial terminological database CAMEO (CommerciAl terMinology rEsOurce). The aim is to integrate the German language for the Murano artistic glass domain, by creating bilingual Italian-German terminological records. They want to be a valid support in the translation process of the documents related to the export of the Murano artifacts, but also during the technical drafting process. The commercial sector of the Murano glass is included in the domains covered by the database, as it is of great value for the exports of the Veneto region. Furthermore, the terminological data created will be used as a yardstick to assess the terminology used in two publications of the LWL Industry Museum of Dortmund. The books illustrate and describe the glass art of Murano, and they were published on the occasion of the exhibitions of some Murano glass wares. The publications have the source Italian text with the German parallel text on the opposite page. Therefore, they are an interesting object of study and a precious repository of technical terms to be evaluated, after having collected our terminological outcomes. The revamping of the terminology used therein will lead us to understand how much attention has been dedicated to the terminological aspect during the translation process and in the dissemination of knowledge. The LWL Industry Museum positively agreed with the purpose of this project and embraced the cause, since it kindly and personally sent us the books. The work does not want to presume that the publications contain incorrect terminology, but rather wants to improve its quality according to the results achieved. The terminological aspect in the transmission of knowledge, especially if there is a language barrier, becomes even more fundamental. It is important that

knowledge is transferred using correct, standardized terms, which define the concepts of a specialized domain. The body of work used focuses on the bibliography of the discipline of terminology science, and it covers various schools of thought. Not only the linguistic dimension, but also the conceptual one, will be considered beneficial for the good realization of the project. The references that will be used will range from paper bibliographic sources to those found online. Above all, the bibliographic research tools offered by the University of Padua and the University of Genoa will be mainly used. The research method therefore aims at exploring the field of terminology science, because the purpose is to provide new terminological data with respect to the current state of art. The research unfolds along a path of five chapters, which are the stages of the demonstration. In the first chapter, the discipline of terminology science will be introduced, in order to describe its main notions: the concept, the term and the object. Furthermore, the terminological perspective adopted within this work will be presented, namely that of the double dimension of analysis. The method used aims at drawing the best from both dimensions, as theorized by Santos and Costa (2015). Subsequently, the phenomenon of terminological variation will be discussed, as the terminological variants inserted in the terminological records will be then classified.

In the second chapter, the focus will be on the terminology resources, as the terminological results resulting from this work will flow there. In particular, their functioning and their organized structure will be outlined. In this regard, we will discuss the concept of standardization, which is the basis of the discipline. The role of the International Organization for Standardization (ISO) will be presented, together with the main ISO standards to be followed in terminology science. In particular, the ISO 1087: 2019 standard "Terminology work and terminology science – Vocabulary" and the ISO 704: 2022 "Terminology work – Principles and Methods", but also the ISO ISO 12620: 2019 standard, the ISO 30042: 2019 and the ISO 16642: 2017 standard will be introduced. Indeed, they contribute to the standardization of the meta-terminology and they provide the guidelines for their standardized and optimal diffusion. Standardization plays a fundamental role in the correct dissemination of terminology and in the structuring of the term banks. In this regard, the FAIR approach will be discussed, since it aims to create findable, interchangeable, interoperable and reusable terminological data. The FAIR principles are one of the strengths of the CAMEO project. The database will be discussed

later on in the chapter, and the project by the University of Padua will be introduced. The CAMEO database contains all the bilingual terminology of the major export sectors of the Veneto region. The key role terminology sconce has in the business sector will be explained, by witnessing its impact in facilitating the exports and benefiting the entire economy of a country.

In the third chapter, we will discuss our study domain, namely the artistic glass of the island of Murano: its origins, its dialectal aspect and its history, along with the reasons why it is included in the database as one of the major export sectors of the Veneto region. Its economic trend will be commented and the beneficial prospects that a work like ours has on it are outlined, thanks to the statistical data collected and interpreted. Germany is a central country in the trade of the Murano products and the interest and great love of this country for Italy has always been alive and economically fruitful. The relations between the two countries must therefore be protected and fed. In the same chapter, the two books published by the LWL Industry Museum of Dortmund, in Germany, will also be introduced, along with the purposes behind their realization. The Museum, its work objectives and its permanent exhibitions will be briefly described.

Then, the fourth chapter will be addressed; it is the heart of the dissertation and the terminological work. The project will be dealt with in all its phases: the conceptual system, the compilation of the corpora and the lexical networks. Firstly, the concept diagram of the domain will be created. The system will try to organize all the concepts belonging to the domain and all the hierarchical and non-hierarchical relations existing between them, trying to be as complete and clear as possible. During this phase, the visits to the Murano Glass Museum and the Colleoni artistic glass factory have been fundamental in acquiring the specialized domain knowledge. Subsequently, the working corpora will be created, one for each language of study. This will allow us to study the linguistic part of the domain and to create a list of the relevant terms to be inserted into the database. The corpora and the parallel texts will also be paramount in finding the correct German equivalents for most of the Italian technical terms. The criteria for choosing the texts of the corpora and the method with which they were found will be outlined. Moreover, the tool used for compiling the collections of texts and their automatic extraction will be presented in its main parts and functions. The lexical systems of the domain will then be the final part of the terminological work: the terms considered

to be relevant are shown into the lexical systems, one for each language of study. The intersection of the three systems will be fundamental to have all the information needed to approach the creation of the terminological records. Indeed, the conceptual and linguistic work complete each other.

The final chapter will then present the results of the work. The terminological sheets, containing all the terms considered useful for the objectives of the CAMEO project, will be created. The process of compilation will be complex, since the records will contain all the linguistic and terminological information needed for translators and technical communicators. The Italian terms, with their German equivalents, will flow into the database. In this regard, the application that allows the process of compilation of the records, the FAIRterm Web Application, will be presented. The terminological data created is intended to be interchangeable and reusable in the future, thanks to the implementation of the TBX format. It will be seen that most terminology resources are not completely FAIR and they offer terminological results that do not benefit the research and the entire community of terminologists. Furthermore, a quantitative and qualitative analysis of the records will be done, trying to focus on some interesting case studies and note some peculiarities of the terminologies of both languages. Subsequently, an in-depth analysis on the terminological variants found and inserted in the records will also be approached. The terminological variants will be divided according to the classification of the causes of variation made by Freixa (2006), in her article *Causes of denominative variation in terminology*. Finally, the last part of the thesis will be presented. It will aim to evaluate and revamp the terminology of the LWL Museum's publications, thanks to the correct and appropriate terminological results achieved thanks to the project. The first publication object of analysis was published in 2013, and it is entitled *Spuren der Vergangenheit. Drei Glasshütten auf Murano – Le tracce del passato. Tre vetrerie a Murano*. The second book is entitled *L'arte del vetro. Glas des 19. Jahrhunderts aus Murano - Il vetro di Murano dell'Ottocento*, published in 2014. The work done will witness the benefits that a terminological project could have on the translation process and the quality of the terminology selected. It will test the correctness of the existing technical terms of the Murano glass domain and their German equivalents. Particular cases of incorrect technical equivalents used will be presented and some corrections or

alternative translation proposals will be given, based on the terminology data previously collected and created.

1 Terminology

This first chapter aims to give a global and introductory overview of terminology science, which is intended to be exhaustive and clear to those who have never approached the discipline. The first section introduces the notion of terminology science: its origins and the definitions, which have been formulated over the years, are illustrated. Moreover, a distinction between terminology and terminography is offered. The second section focuses on the basic elements of the discipline: the term, the concept and the object. This part is paramount, since it is necessary to understand all the relations existing between them. These three elements stand for the pillars of the subject. However, we will see that different definitions of them, not always agreeing with each other, have been provided. The third section presents the approach related to the double dimension of terminology; this method is indeed embraced in the terminological project of this dissertation. We will focus on the differences between the onomasiological and semasiological approaches and we will witness how the linguistic dimension and the conceptual one complement each other, according to the so-called mixed methodology, theorized by Santos and Costa (2015). This will allow us to note the weaknesses and strengths of both approaches. Finally, the phenomenon of terminological variation is discussed, since a considerable part of this work will be devoted to it.

1.1 The Discipline of Terminology

From its origins until today, terminology has been defined differently, depending on the analyzed perspective and the theoretical approach to its basic notions. Moreover, it has

always been influenced by the disciplines to which, by nature, it is related.[1] Indeed, as Dubuc (1978: 13) states: "comme toute notion relativement nouvelle, celle de la terminologie est encore très fluctuante, si bien qu'elle varie selon les théoriciens et selon les spécialistes qui la pratiquent [as with any relatively new concept, terminology is subject to change, which depends on the theorists and specialists that practice it]."[2] First, it is important to note that what is shared by all the different definitions of terminology is its object of study: the term used within special domains and in special languages. Etymologically speaking, the term "terminology" is composed of the lat. *termĭnus* and -*logia*.[3] It is, therefore, 'the science of terms.' A wider and more complete definition of terminology proposed by Sager (1990) will be provided later in this section. Now, since it is of our interest to reflect the term's central role, the following one is enough: "Terminology is the study of, and the field of activity concerned with the collection, description, processing and presentation of terms, i.e., lexical items belonging to specialized areas of usage of one or more languages" (Sager 1990: 2). L'Homme (2020: 2) similarly declares: "terminology studies terms which can be defined as linguistic expressions that designate items of knowledge within special subject fields." Both definitions introduce another fundamental feature of terminology, namely its role in defining and shaping special knowledge and enabling experts to communicate in their specialized languages. Cortelazzo (1994) defines them as *lingue speciali*, 'languages for special purposes'. Here are his words, which allow us to better understand what is meant by this term:

> *per lingua speciale si intende una varietà funzionale di una lingua naturale, dipendente da un settore di conoscenze o da una sfera di attività specialistiche, utilizzata, nella sua interezza, da un gruppo di parlanti più ristretto della totalità dei parlanti la lingua di cui quella speciale è una varietà, per soddisfare i bisogni comunicativi (in primo luogo quelli referenziali) di quel settore specialistico; [a special language is defined as a functional variety of a natural language; it depends on a special field of knowledge or on a sphere of special activities and it is entirely used by a smaller group of speakers than the total number of speakers of the language of which that special language is a variety, in order to satisfy communicative needs (primarily referential needs) of that special field;]*[4] (Cortelazzo 1994: 16)

[1] According to Cabré (1999), terminology is closely linked to different fields, such as lexicology, lexicography, cognitive science, communication, documentation, computer science and knowledge engineering. Different orientations thus exist, due to all these spheres of influence.

[2] Translation by Cabré (1999: 9).

[3] For more information visit https://www.etymonline.com/search?q=terminology.

[4] The translation is ours.

So, terminology is closely linked to special knowledge. This assumption reflects one of the principles of terminology science, whereby a term cannot be considered as such if it cannot be classified within a domain (Depecker 2015).[5] Terminology thus emerges because of a strong need to communicate without any ambiguity, often through a multilingual lens. The discipline aims to facilitate and support exchanges in transferring knowledge between different communities, who speak different languages. In particular, the final objective is to structure knowledge of any special domain and make it accessible and clear to both experts and anyone approaching it. Kageura (2015) shows the link that exists between terminology, the term and the special knowledge, by summarizing what is the goal of terminology described above (Figure 1).

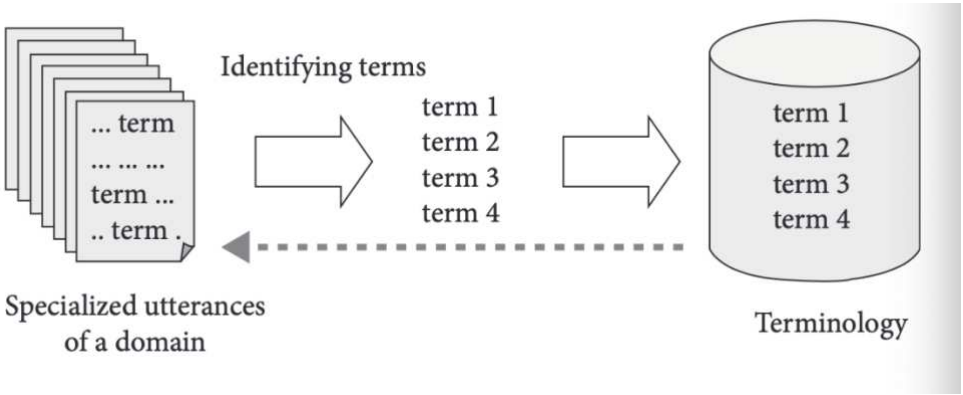


Figure 1 – Specialized utterances, terms and terminology (Kageura 2015: 50)

Due to its nature, terminology can be considered as an interdisciplinary field, as it develops relations with lots of different domains. Terminology organizes special knowledge of a potentially unlimited number of them and has therefore several practical applications. As L'Homme (2020: 3) states: "terminology is deeply rooted in applications, such as specialized dictionary compilation, specialized translation, document indexing and/or classification, knowledge modeling, language planning and standardization." As a result, it is "vital to the functioning of all sciences, it is concerned with designations in all other subject fields, and it is closely related to a number of specific disciplines" (Sager

[5] The term "domain" is defined by the ISO 1087: 2019 standard as a "field of special knowledge".

1990: 2). Although terminology is not treated as a discipline by all experts, it relies on a sound and solid body of theoretical principles, first theorized by the engineer Eugen Wüster.[6] Thanks to his work, terminology became a discipline in the 1930s and it originally had the same goal as described so far. Here, it becomes interesting to note that the term *terminologue,* 'terminologist', was included and appeared in a lexicographic dictionary only in 1978 (Dubuc 1978), much later than expected if the date of origin of terminology science as a discipline is considered. Indeed, Dubuc (1978: 7) notes that "*Le Petit Robert* (1978) est le premier dictionnaire à consigner ce mot. […] Les dictionnaires viennent tout juste d'accueillir, à côté du nouveau mot « terminologue », auquel d'ailleurs il se rattache, un sens nouveau de « terminologie » [*Le Petit Robert* is the first dictionary to report this term. […] The dictionaries have just embraced, along with the new word "terminologist", to which it is attached, a new meaning of "terminology"]."[7] Eugen Wüster's view is considered the classical and traditional one and it is known as the General Theory of Terminology (GTT). His theory aims to classify, standardize and conventionalize the scientific knowledge. In 1931, Eugen Wüster published his PhD thesis entitled *Internationale Sprachnormung in der Technik, besonders in der Elektrotechnik*, which is regarded as the first terminological work ever produced. In 1936 he founded the Technical Committee ISO/TC-37 – "Language and Terminology." The International Organization for Standardization (ISO), which will be discussed in further detail in Chapter 2, pursues the development of standardization by establishing technical standards to facilitate cooperation in economic, cultural, and technological fields.[8] In particular, the ISO 1087: 2019 standard "Terminology work and terminology science – Vocabulary" is about meta-terminology and defines "terminology" as a "set of designations and concepts belonging to one domain or subject" and "terminology science" as "science studying terminologies, aspects of terminology work, the resulting terminology resources, and terminological data." In 2019 the two terms were distinguished, since the term "terminology" conveyed both meanings until then (Vezzani 2022).

[6] Sager (1990: 1) in *A Practical Course in Terminology Processing* states: "This book denies the independent status of terminology as a discipline".

[7] The translation is ours.

[8] https://www.treccani.it/enciclopedia/iso/ [last visited: 8/11/2024]

The above-mentioned Wüster's classical paradigm underwent a deep crisis around the end of the 20th century, after having been influenced by three different factors: the computer science, the lexical semantics and the cognitive theories. Different approaches arose out of this theoretical revision, which will not be analyzed here. By way of example, we mention a few of them:

- The Communicative Theory of Terminology (Cabré 1998-1999)
- Socioterminology (Gaudin 1993)
- Textual Terminology (Bourigault and Slodzian 1999)
- The Sociocognitive Terminology Theory (Temmerman 2000)
- Cultural Terminology (Diki-Kidiri 2000)

The definition of "terminology" proposed by the standard ISO 1087: 2019 recall the one formulated by Sager (1990). According to him, "terminology" has three different meanings:

1. the set of practices and methods used for the collection, description and presentation of terms
2. a theory, i.e., the set of premises, arguments and conclusions required for explaining the relationships between concepts and terms which are fundamental for coherent activity under 1
3. a vocabulary of a special subject field.

Also, according to Cabré (1999: 32), "the word terminology refers to at least three different concepts: a) the principles and conceptual bases that govern the study of the term b) the guidelines used in terminographic work c) the set of terms of a particular special subject." As regards point (b) of the aforesaid definition, it introduces the term "terminographic", which certainly needs further attention. In the 1970s, Alain Rey suggested distinguishing between the applied and theoretical aspects of terminology and respectively labeling them as "terminography" and "terminology" (L'Homme 2004). Cabré (1999: 115) declares that "terminography involves gathering, systematizing, and presenting terms from a specific branch of knowledge or human activity." This means

that terminography gathers all activities that result from terminology, namely all practices and activities related to the analysis of terms. It is geared towards "collecting and describing terms, compiling terminological lexicons, establishing concept systems or ontologies, making thesauri, etc., which constitute an important aspect of terminology" (Kageura 2015: 56). Only if we define terminography, we will better understand how primary the practical applications of terminology are. In other words, terminology is the theory supporting terminography, which is instead focused on the practical dimension of terms and concept used in special language. It aims to design, implement and maintain terminology resources, structured as collections of terminological data related to a special language. In the ISO 1087: 2019 standard, "terminography" is defined as "terminology work aimed at creating and maintaining terminology resources." After having defined terminology and having distinguished it from terminography, we can now move on to the next section. It will deal with the three central elements of the discipline, which will help us to get to the core of how terminology works: the term, the concept and the object.

1.2 Terms, Concepts, and Objects

In the previous chapter, we pointed out how the term represents the main object of study of terminology, but it is not the only one that plays a key role within this discipline. Despite its central role, some researchers disagree on its nature or function and develop different points of view. In her article entitled *Sur la notion de "terme"*, L'Homme clearly witnesses what is declared:

> *Pour certains, le terme est l'objet central de la terminologie (par exemple, Cabré 2003 ; Kageura 2002) ; pour d'autres, le terme est une étiquette linguistique servant à matérialiser le véritable objet de la terminologie, à savoir le concept (Felber 1980 ; Wüster 1974). Cette distinction peut paraître réductrice, mais elle est à l'origine de la plupart des antagonismes, du moins dans les cercles terminologiques […]. Par ailleurs, l'emploi même de* terme *est ambigu dans la littérature spécialisée. Pour les uns, il s'agit de la composante formelle servant à communiquer un concept ; pour les autres, il s'agit d'un signe linguistique, donc du résultat d'une association entre un sens et une forme. Enfin, de nombreux spécialistes envisagent le terme sans considérations théoriques véritables : pour eux, il s'agit d'une entité formelle associée à un contenu informationnel (mot-clé pour la recherche d'information ; étiquette associée au nœud d'une ontologie ; entrée d'un index, etc.) [For some, the term is the central object of terminology (p. ex. Cabré 2003; Kageura 2002); for others, the term is a linguistic label aiming at materializing the real object of terminology, that is the concept (Felber 1980; Wüster 1974). This distinction may seem belittling, but it gives birth to lots of antagonisms, at least within terminological circles […]. Moreover, the use of the term itself is ambiguous in special literature.*

> *For some, it represents the formal component used to communicate a concept; for others, it is a linguistic sign, the result of an association between meaning and form. Finally, many specialists consider the term without any real theoretical consideration: for them, it's a formal entity associated with an information content (a keyword for information retrieval; a label associated with the node of an ontology; an index entry, etc.)].*[9] (L'Homme 2005: 1112)

Her words show that a wide range of schools of thought exist. This may sound a bit paradoxical within the discipline par excellence aiming at eliminating ambiguities. Here, we will not analyze all the differences existing between the various definitions of "term", due to the relevant number of theoretical approaches. For the purposes of this work, we are interested in stating that "a term has a linguistic form and a content representing a concept" (Cabré 1999: 95). Before defining the other two basic elements of the discipline, it is necessary to specify the difference between "term" and "word". Sager (1990: 19) clearly distinguishes the two: "the items which are characterized by special reference within a discipline are the 'terms' of that discipline, and collectively they form its 'terminology'; those which function in general reference over a variety of sublanguages are simply called 'words', and their totality the 'vocabulary'". "Word" refers therefore to the "general language", whereas "term" refers to the "special language" (see Section 1.1).[10] Depecker (2015: 37) likewise believes that "a word is a linguistic unit which, most of the time, is easily isolable in a language. The sense may be vague, multiple or changing. […] a term refers mostly to a technical or scientific reality." So, the terminologist deals with terms, because they fulfill the need of unambiguously conveying knowledge of a specific domain, since scientific knowledge must comply with much more transparency than the general language. Hence terms are unambiguous. Indeed, biunivocity represents one of the key principles theorized by Wüster in his General Theory of Terminology (see Section 1.1). The ideas belonging to a specific domain are conveyed by means of linguistic designations and represent the second basic notion this section aims to define.
Ferdinand de Saussure (1857-1913), considered as the father of linguistics, made a similar distinction to that existing between the term and the concept in terminology. For Saussure (1967: 84) the linguistic sign is defined as "la combinazione del concetto e dell'immagine acustica [the combination of the concept and the acousting image]".[11] Moreover, Saussure

[9] The translation is ours.
[10] The ISO 1087: 2019 standard defines "general language" as a "natural language characterized by the use of linguistic means of expression independent of any specific domain".
[11] The translation is ours.

(1967: 85) specifies what follows: “noi proponiamo di conservare la parole ‘segno’ per designare il totale, e di rimpiazzare ‘concetto’ e ‘immagine acustica’ rispettivamente con ‘significato’ e ‘significante’ [we propose to keep the words 'sign' to designate the total and to replace 'concept' and 'acoustic image' with 'signified' and 'signifier' respectively].”[12] It is needed to underline an important distinction: the concept is an extra-linguistic reality and the signified, namely the meaning of the term, refers instead to the linguistic dimension. They are thus two different elements and they refer to two different disciplines, terminology and linguistics (more precisely, semiotics) respectively. Indeed, terminology adopts and reflects a similar double identity: the term conveys or, in other words, points to one and only one concept. The terminological science wants to make this union as clear as possible; more specifically, as Sager (1990: 20) affirms, the effort is aiming at making “a deliberate attempt to impose uniformity of usage, by publicly fixing the relationship between the term and the associated concept and proposing the term as a standard”. L’Homme (2020: 3) defines the concept as “an item of knowledge, defined according to the place it holds in a conceptual structure”. Her definition enables us to introduce the notion of “conceptual structure”, which will be further explored along with that of “lexical system” in Chapter 3.[13] Concepts are, then, extralinguistic ideas: mental images we may potentially have of current or future objects, to which a term refers. The object (or referent) is the real thing, anything perceivable, which can be physical, immaterial or imaginary. What we are stating is reflected in Depecker’s words (2015: 36-37): “the concept is generally considered to be a unit of thought. It is a representation of a thing we conceive in mind […]. The aim of terminology is to ensure that a “sign” designates a precise “concept”, and that the “concept” fits the object it describes”. Within the normative framework of ISO standards, the definitions listed below are given (ISO 1087: 2019):

- The “term”, also called “linguistic designation”, is a “designation that represents a general concept by linguistic means”, i.e., the sequence of characters allowing a concept to be verbalized. This definition lets us grasp another important

[12] The translation is ours.

[13] Meanwhile, we can introduce that all concepts belonging to a domain are linked together by taxonomic or partitive relationships, which create a structured system reflecting all the knowledge experts have about a given domain.

distinction existing between "simple term" and "complex/multi-word term". The former is defined as "term that consists of a single word or lexical unit"; the latter is defined as "term of more than one word or lexical unit".

- The "concept" is a "unit of knowledge created by a unique combination of characteristics".[14]
- The "object" is defined as "anything perceivable or conceivable".

In this section we have thus defined the basic elements of terminology, which are the central features of any theory or approach to the discipline. We have shown that different ideas about them coexist and we have stressed the distinction between "term" and "word". The next section will be devoted to describing another key aspect of terminology, namely its "double dimension", which plays a vital role while working on every terminological project.

1.3 The Double Dimension of Terminology

After having defined which are the main objects of terminology science, it is now needed to describe the two main approaches on which the terminologist may base his work and what their main differences consist of. The two approaches come from different terminological theories.[15] Eugen Wüster mainly supported an onomasiological theoretical approach. He believed that concepts belonging to a given domain had to be analyzed first, and then the suitable terms designating those concepts had to be found, to construct and standardize special knowledge (Piccini et al. 2021). The onomasiological approach is presented by Kageura (2015: 54) as a process in which "concepts are identified, and the concept system is established first and then signs are mapped to the concepts. […] it is only the concept system that is of concern and terms are simply regarded as labels for concepts." So, according to this approach, the terminologist is first concerned with the exploration of the conceptual dimension and structure of a given domain, and then his

[14] We highlight that "knowledge" is intended as special knowledge and therefore it is shared by all experts in the field.

[15] The onomasiological approach is theorized by the General Theory of Terminology; the semasiological one arises later, when the traditional paradigm underwent a crisis and different approaches consequently emerged (see Section 1.1).

work focuses on the identification of all the terms designating those concepts (Vezzani 2022). This approach observes the object as well, whose concept is its extraction.

On the other hand, the starting point of the semasiological approach is the term: the terminologist thus analyzes terms within specialized texts and later he identifies the concepts to which they refer.[16] This approach can be briefly summarized as follows: "words are mapped to their meanings" (Kageura 2015: 54). Santos and Costa (2015) support a theory which allows, without penalizing or considering one less effective than the other, both approaches to be used. Their theory produces fruitful and worthwhile results, since the quality of every terminological work is maximized and a complete unambiguous knowledge of a specific domain is built. Therefore, terminology is a discipline with a double dimension of analysis: the conceptual and linguistic dimensions turn out to be both equally fundamental. Here are Santos and Costa's words, through which their "mixed methodology" is clearly explained:

> *Based on our conviction that knowledge is something that cannot be extracted and that texts contain designations but do not contain concepts, we have developed a mixed methodology on a specific domain to demonstrate that semasiology and onomasiology may be complementary. […] It is from this double dimension and from the study of the relationship between one and the other, that terminology acquires its status of an autonomous scientific subject. If attached to only one of those dimensions, it will lose its specificity, its autonomy and consequently its object of study* (Santos and Costa 2015: 154-155).

The terminologist should include in his work different steps, by focusing first on one dimension and later on the other, and then results should be integrated. The conceptualization of the domain is the starting point: Santos and Costa (2015: 177) state: "for knowledge representation purposes, it would be therefore convenient to depart from an onomasiological approach, followed by the semasiological approach to confirm the representation of conceptualizations." The terminologist should then start every terminological project by carefully studying a given domain and concepts belonging to it, even relying on the experts of that field as he cannot be an expert of every science. Next, he should give attention to the linguistic dimension, by focusing on specialized texts and analyzing all the terms they include. Above all, creating a conceptual system (which we will better analyze and describe in Chapter 4), allows the terminologist to approach terms

[16] Specialized texts are the natural environment where terms exist and appear.

more consciously. Indeed, after having created a conceptual domain system, it becomes easier for a terminologist to identify the proper relation between a term and its concept, since an own previous consciousness of the domain has been built. The term and the concept are thus two separate entities, but they are also linked together. If only one dimension is considered, the risk would be that of not being enough exhaustive and clear. The incompleteness in considering only one of the two approaches is also pointed out by Kageura (2015: 54), who notes that "as long as terms are a functional class of lexical items and the function of terms is to represent concepts inside a domain, it is almost logically not possible to take a pure semasiological approach in terminology, as the process of identifying terms as terms involves recognition of concepts." Moreover, "data about lexical units should not substitute data about concepts, since it is through the latter that we can reach the organization of conceptualizations" (Santos and Costa 2015: 177). Costa underlines how important the conceptual dimension is, by stressing the reason why it is taken as the first step of analysis:

> *Standardization has more to do with knowledge than with language or discourse and in the language/discourse couple, it has more to do with language. For the way in which we speak about a concept varies and depends on the communicative situation in which the expert-speakers find themselves. This communicative situation influences the choice of the term as a discourse unit, but it does not influence the stability of the concept which we are talking about* (Costa 2013: 32).

According to Roche (2012) as well, these two systems should be distinct but interdependent, so that one complements the other. This paradigm is defined by Roche "ontoterminology", which "propose donc un nouveau paradigme qui distingue et relie les deux systèmes sémiotiques (linguistique et conceptuel) qui composent chaque terminologie tout en conservant leurs identités et leurs différences fondamentales [proposes therefore a new paradigm, which distinguishes and links the two semiotic systems (the linguistic and conceptual one) that are part of every terminology, while preserving their fundamental identities and differences]" (Vezzani 2022: 53).[17] So "the semasiological and onomasiological approaches are two complementary terminological methodologies that should be used in the construction of knowledge representation tools" (Santos and Costa 2015: 153). After having underlined the importance of considering a

[17] The translation is ours.

double dimension in terminology, we move on to the next section. It will be devoted to another important theoretical aspect of this discipline, which represents *le fil rouge* of this work: the terminological variation.

1.4 Terminological Variation

This section deals with the study and analysis of the phenomenon known as terminological variation. First, we note that it can occur at both linguistic and conceptual level. According to the recent publication by Freixa (2022 in Vezzani and Costa 2024), conceptual variation is a type of terminological variation that covers different phenomena of variation affecting a concept, whereas denominative variation is strictly related to the different designations used for the same concept. By variants, we mean here all different linguistic forms designating the same concept. With his General Theory of Terminology, Eugen Wüster started from a very clear assumption: a stable and invariable biunique relation between concept and term should exist (see Section 1.2). Then, terminological research developed new approaches and theories, which were opposed to Wüster's ideas: terms began not to be considered as invariable and static labels. Indeed, Daille (1996: 2) states: "describing terms as fixed sequences is obviously an idealized viewpoint […]. Terms are subject to different kinds of changes." Concepts can change over time and sometimes even the terminology used to designate them. Moreover, there are terminological variants even if the variation at the conceptual level does not occur, merely for linguistic reasons. The linguistic sphere is dynamic as much as the conceptual one, especially if we consider special languages, which constantly evolve. So, it becomes essential for a terminologist to include all variants in his work, to fulfill the need of transparency this discipline has by nature. Furthermore, an approach considering variation is required when we think about one of the many applications of terminology: the translation. Indeed, according to Shreve (2001: 783 in Warburton 2015: 376), "documenting variants in translation-oriented term bases is essential." Since ambiguities can give rise to some translation problems, terminology variants must be included within databases for translators. Denominative terminological variation is about terms and the linguistic dimension of terminology; this supports the importance highlighted in Section 1.2 about integrating the two dimensions of terminology. It is required to carefully analyze

the linguistic sphere and texts where variants appear and not only the conceptual one, to build complete special knowledge and terminology resources. Denominative variation (i.e., linguistic variation) is discussed by Judit Freixa in her (2006) article entitled *Causes of denominative variation in terminology – A typology proposal*, where all different causes of terminological variation are classified. About denominative variation, Freixa (2006: 51) states: "denominative variation can be defined as the phenomenon in which one and the same concept has different denominations; this is not just any formal variation […], but is restricted to variation among different denominations, i.e., lexicalized forms, with a minimum of stability and consensus among the users of units in a special domain." Terminological variation is therefore a phenomenon to be looked at with a very broad perspective and deserves attention. It results from different causes influencing the language: Figure 2 lists Freixa's classification (2006) of all causes of terminology variation, which are divided into "type" and "subtype".

Type	Subtype
1. Preliminary causes	Linguistic redundancy
	Arbitrariness of the linguistic sign
2. Dialectal causes	Geographical variation
	Chronological variation
	Social variation
3. Functional causes	Adaptation to the level of language
	Adaptation to the level of specialisation
4. Discursive causes	Avoiding repetition
	Linguistic economy
	Creativity, emphasis and expressiveness
5. Interlinguistic causes	Cohabitation of the "local" term and the loanword
	Diversity of alternative proposals
6. Cognitive causes	Conceptual imprecision
	Ideological detachment
	Differences in conceptualisation

Figure 1 - Typology of causes of variation (Freixa 2006: 69)

The classification presented above will allow us to analyze and better understand the terminological variants that we will encounter in our terminological project; for this reason, they will be analyzed in detail later. Concerning conceptual variation, it is very interesting the approach theorized by Vezzani and Costa (2024), according to which we should not speak about "conceptual variation", but we should refer to "conceptual evolution", a more accurate term. Their words are here reported:

> *Reconceptualization can therefore be considered as the activity performed by domain experts of rethinking real-world objects and their properties. […]. Indeed, the process of reconceptualizing an object has an impact on the unique combination of characteristics that makes up the concept, thus causing variation. When there is a change (addition, modification, or suppression) of at least one characteristic of a concept, we face variation. Since the concept is a unit of knowledge created by a unique combination of characteristics (ISO 1087: 2019), this means that the change of at least one characteristic leads to the formation of a different concept that represents the new valid shared specialized knowledge about the object. […] For this reason, we prefer to talk about the variation of the characteristics of the concept leading to conceptual evolution (instead of "conceptual variation"). According to our approach, it is not the concept but its characteristics that vary (Vezzani and Costa 2024: 88).*

This theory would also support one of the axioms of Wüster's general theory, according to which knowledge is universal and the world exists regardless of the person who knows it. Indeed, we can't forget that concepts are extra-linguistic entities: what changes is how they are perceived by experts, who will name them differently. Reconceptualizations are the result of an attribution of a combination of different characteristics, and therefore the concept does not change.

1.5 Conclusion

This chapter introduced some of the core points of terminology science, so that it served as an introductive overview of the discipline. We approached some central notions and every section was a useful space to pave the way to delve more consciously into the following chapters. Indeed, the theoretical basis outlined above allows us to go further into the research and introduce which are the practical results of terminology. In particular, it will be further explored how terms defined earlier are actually organized and presented within terminology resources. They will be described along with the role of ISO standards in the management and structure of such resources and the discipline itself. Moreover, the exploration of the concepts of semasiology and onomasiology allowed to focus on the weaknesses and strengths of both approaches and consequently to choose to apply the method related to the double dimension when working on our terminological project. Finally, having presented the phenomenon of terminological variation was fundamental as it will represent a field of analysis in the framework of the terminological records we will compile. In the next chapter, some other key points will be added. It will be witnessed how the FAIR approach promises to be the solution for further

standardization and good management of terminology resources. Considering the clear benefits that it brings to terminological data, it will be embraced during our terminological work. The terminological records, compiled thanks to the FAIRterm Web Application (discussed in Chapter 5) will flow into the terminological data bank CAMEO, designed by the University of Padua. Such resource and the related research project will be then introduced in the next chapter.

2 Terminology Resources

The chapter aims at exploring how the results of most terminological works are arranged and where they are stored, along with the tools and methods that assure their best organization and use. As previously mentioned in Chapter 1, terminology science finds its practical application in the terminological resource, which is the environment where the outcomes of the terminological work predominantly converge. In the first section, the answer to the question "what is a terminological resource?" will be given and its function and structure will be illustrated. That is a key point, since it will be highlighted that not every resource share the same underlying structure. The incompatibility between terminology resources is a weakness of such tools, whereas terminological entries contained therein are not always interchangeable and reusable. The ISO standards' role will be then the topic of the second section. Indeed, the theoretical standardization of terminology science as a discipline is reached thanks to the international standards. Moreover, they offer the guidelines that should be adopted to optimally standardize and organize terminological data banks. The FAIR approach helps in such an ambition and will thus be presented in the third section. Its four principles, which will be better defined later, prescribe how to correctly manage terminological data. The FAIR paradigm is adopted by the University of Padua and it is embraced in our terminological project. Finally, the fourth section will introduce an academic recent project, which flourished in the creation of CAMEO, a terminological commercial data bank realized through the FAIRterm Web Application.[18] The CAMEO database results to be an extremely helpful tool, which wants to express the value of the term during technical communication between different countries. For that reason, the results of our terminological project will be there uploaded and the FAIR principles will be slavishly followed while working on it.

[18] The application will be further explored in Chapter 5.

2.1 What is a Terminological Resource?

This section is devoted to describing the terminological resource, by giving an overview of its main features and structure. It is primarily dutiful to underline a basic assumption, which has allowed terminology resources to flourish over the years. Indeed, computer tools have been increasingly used in terminology science: the need was and continues to be that of easily accessing and managing the terminological information. As Sager (1990: 142) states, "this awareness of the benefits of using computers in terms of their speed, flexibility and storage capacity has resulted in a growing trend towards the automation of terminological data processing which is evidenced by the existence of terminological data banks, some of which have been in existence since the early 1970s." So, even if the terminological data processing was originally manual, it nowadays comes from a computerized systematic research. The working corpus is indeed usually digital, the term identification is automatic and the encoding, organization and management of terminological data is processed thanks to databases and their functionalities (L'Homme 1996). The digital nature of technologies represents a great advantage for both end-users and terminologists themselves. Indeed, terminological records can always be consulted, and the reorganization and processing of new data are practical and timesaving. As already anticipated, it is worth pointing out that automated procedures and computer-assisted terminology compilation enable to easily use and store a large amount of data. As a result, Sager (1990: 113) explains that "a term bank can be as large as required, […] and have as many entries as necessary for covering the entire range of vocabulary of a subject field." Terminological databases often contain information about several domains, without this implying less precision or worse overall quality. Furthermore, Cabré (1999) observes that the latest systems allow to constantly update information, making the process also more convenient in terms of costs. It practically means that there are good economic reasons behind the decision of bringing terminology science nearer to computers. Thanks to the evolution of computer knowledge, a growing number of new resources have consequently proliferated, so much that when you think about specialized information something easily accessible, numerous and almost transferable comes to

mind.[19] The development of computer knowledge is beneficial and has thus positive effects on the world of terminology science. The terminology resources to which reference is made are the terminological databases (also known as terminological data banks) and the specialized dictionaries (Cabré 1999). The functions these resources promise to cover are many; the reasons why they are consulted are here briefly listed:

- *To resolve doubts about the existence of a term in a language.*
- *To know how to use a term grammatically, to know its meaning and its spelling.*
- *To know its equivalents in other functional or historical languages.*
- *To find out the name of an object.*
- *To find alternatives to a designation.*
- *To find out how many terms have been collected in a specific domain (Cabré 1999: 118).*

Furthermore, a terminological data bank assures to find out the definition of a term and identify the concept to which that term refers. A specific kind of terminological resource will be here investigated, namely the terminological data bank. According to Sager (1990), a term bank should be defined as follows:

> *a collection, stored in a computer, of special language vocabularies, including nomenclatures, standardized terms, and phrases, together with the information required for their identification, which can be used as a mono- or multilingual dictionary for direct consultation, as a basis for dictionary production, as a control instrument for consistency of usage and term creation and as an ancillary tool in information and documentation (Sager 1990: 169).*

A terminological data bank is also defined by Cabré (1999: 176) as a "structured collection of information about the units of meaning and designation of a special subject field addressed to the needs of a specific group of users." The terminological databank is a widely used resource and satisfies doubts on the nature, use and description of terms. All knowledge of a given domain is organized in records, where technical terms are

[19] Although terminological data is organized within terminology resources, it doesn't mean it is also transferable. The infrastructure of the resources is often different, so much that the FAIR paradigm (discussed in the following Section 2.3) has been created to improve the quality of the resources.

clearly described according to certain data categories. Specifically, terminological records contain all the relevant information about a term and they can be monolingual, monolingual with equivalents, bilingual or multilingual (Cabré 1999). Terminological data banks facilitate the understanding of specialized fields and contribute to making every communicative exchange more fluent, fair and conscious. Therefore, such resources are directly accessed by researchers and translators. Indeed, as specified by Sager (1990: 218), term banks "came from the need of large translation departments in government and industry and it appears that translation needs alone can justify the expenditure that is required for the regular maintenance of term banks." During the translation process, a translator strongly relies on term banks, which are widely considered to be essential for crafting and shaping high-quality translations. By using a terminological resource, he can earn time in finding the most suitable equivalent for a term. If he had to look up in a lexicographic dictionary, the process would be time-consuming and the percentage of terminology errors would be certainly higher. When translation problems come to the surface, term banks offer equivalents for such terms whose translation ends up being insidious. Indeed, one of the primary purposes of such tools is "to facilitate translation by giving translators a one-stop, user-friendly tool for queries […] and is capable of providing reliable suggestions." (Cabré 1999: 176) To be thorough, it will be now described how this precious terminological information is generally arranged. Thanks to the contribution of L'Homme (2004), a classification and explanation of the fundamental sections a term record usually contains is proposed:

- *Entrée : le terme faisant l'objet de la description.*[20] *[Terminological entry: the term described.]*
- *Information grammaticale : partie du discours. [Grammatical information: part of speech.]*
- *Marques d'usage : ces marques précisent les particularités d'emploi du terme, à savoir l'aire géographiques, le niveau socioprofessionnel, la sanction d'un organisme de normalisation, l'évolution dans le temps, etc. [Usage markers: markers that specify the specific use of the term, i.e., the geographical area, the socio-professional level, the sanction by a standardizing body, the evolution over time, etc]*
- *Indication du domaine ou du sous-domaine d'emploi du terme. [Indication of the field or sub-field in which the term is used.]*

[20] It is important to note that this section contains all the variants of the term, such as the alternative spellings.

- *Définition : explication du sens du terme dans le domaine de spécialité. La définition doit souscrire à des règles assez strictes.*[21] *[Definition: explanation of the meaning of the term in the subject field. The definition must comply with fairly strict rules].*

- *Note : un complément de nature linguistique, encyclopédique ou technique. [Note: a complement of linguistic, encyclopedic or technical nature.]*

- *Contexte : il s'agit le plus souvent d'une phrase dans laquelle le terme est utilisé [Context: usually a sentence in which the term is used.]* [22] *(L'Homme 2004 : 39-41)*

If the resource is multilingual, it will show the equivalents of the term in one or more languages.[23] (ISO 704: 2022) In that case, the language will be indicated and the above-mentioned list will be provided for the equivalents as well. A multilingual terminological record is thus composed of different equally fundamental sections, which accomplish to give a complete and satisfactory description of a term and its equivalent or equivalents. In other words, a term record describes a single concept, the terms designating the given concept in the selected languages and then it describes the terms themselves. The section *marques d'usage* needs to be further explored. If that information is checked out within some of the most consulted term banks, it is actually noticed that it gives important details on the usage of the term. For instance, term entries in the data bank IATE, which will be better analyzed later in this section, include the section "Evaluation". Here, labels such as "preferred", "admitted" or "deprecated" appear. In the ISO 1087: 2019 standard, that concept is defined with the term "Acceptability rating", whose definition is "rating that allows for designations to be placed in order of preference as a guide to users" (ISO 1087: 2019: 109). The information regarding the linguistic variation is fundamental for translators, since it represents a valid support when translating a specialized text.[24] If the functioning and structure of records within the most famous terminological databases is considered, they generally resemble each other. However, they slightly differ for some parameters: the layout, the distribution and naming of the information, the presence or absence of some sections. The reasons why there are such differences are to be found in different elements, such as the nature of the term bank, its functions and by whom it has

[21] Sager (1992: 146) suggests: "the definition is the first item that links the entry term to the concept which it represents." It can be extracted and copied from another source or formulated by the terminologist.

[22] The translation is ours.

[23] The equivalents are defined by ISO 704: 2022 standard as "designations characterized by equivalence" (ISO 704: 2022: 57).

[24] According to Berruto (1987) the linguistic variation has four dimensions: diatopic, diastratic, diamesic and diaphasic.

been designed and implemented. Sager remarks that (1990: 218) "the diversity among existing term banks is neither theoretical nor ideological but caused by the different purposes which determined their creation." As they will serve as examples later, a few of the most popular and consulted term banks are listed:

- IATE, the EU's terminology database, which contains term records regarding 24 official EU languages and covers multiple domains.[25]
- TERMIUM Plus, the Government of Canada's terminology and linguistic data bank. It includes English, French, Spanish and Portuguese. A wide range of domains is offered.[26]
- GEMET (General Multilingual Environmental Thesaurus), which manages the domain of the environment and counts 37 languages. It is managed by a supranational body: the European Environment Agency (EEA).[27]

IATE (Inter-Active Terminology for Europe) databank is one of the most representative for understanding how others work. It is the wider EU's multilingual terminology resource and has been used by the language services of the EU institutions and agencies since 2004 for the collection, dissemination and shared management of EU-specific terminology.[28] Its homepage offers a quick way to search: just by clicking on "Open expanded search", you can filter the results and change some default options, such as those under the headings "Matching", "Search by term types", "Search in specific fields". Moreover, through the option "Filters", you can select the domains in which you want to search for your term: by clicking on the "Add" button, the domain selector is opened and other domains are displayed. From now on, you can browse your domain tree, search for a keyword and then select your relevant domains. When searching for a term, the equivalent of that term in your selected language (the source and target languages) are found. As already stated above, almost all terminological data banks are pretty similar between each other. If the same entry term is analyzed first in TERMIUM Plus and then

[25] https://iate.europa.eu/home

[26] https://www.btb.termiumplus.gc.ca/tpv2alpha/alphaeng.html?lang=eng&i=1&index=alt&codom2nd_wet=1

[27] http://www.ricercasit.it/LabDatabase/Content.aspx?page=61 [last visited: 8/11/2024]
https://www.eionet.europa.eu/gemet/it/themes/

[28] https://data.europa.eu/data/datasets/iate?locale=en [last visited: 8/11/2024]

in GEMET, the differences are obvious but not significant. If you search for the term of example “cancer risk”, this is what you will come across within both resources (Figure 3 and 4).

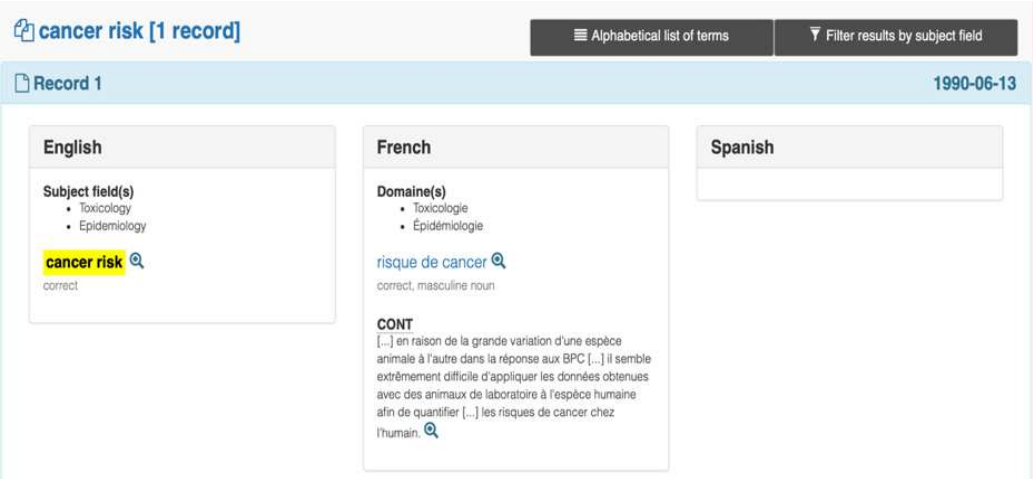


Figure 3 – Example 1 of a term record in TERMIUM Plus

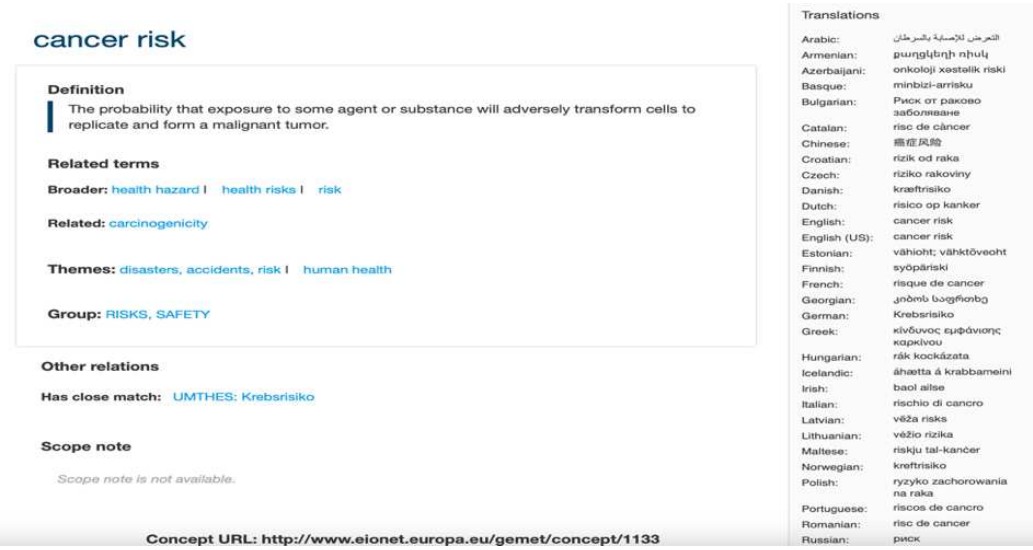


Figure 4 – Example 2 of a term record in GEMET

What jumps out at is the different layout and distribution of information. TERMIUM Plus shows the subject field(s) of the term and the equivalents at once. On the other hand, GEMET puts the equivalents of the term on the right side of the term record, under the section “Translations”. Furthermore, the definition is here seen briefly and, only after, the domains are listed. Discrepancies regarding the priority and the emphasis given to the

information and how it is placed and presented within both resources are thus immediately noticeable. As for what differs between them with a real negative impact is something invisible, namely their internal structure, which prevents terminological data from their interchangeability and re-use. Thanks to this point of reflection, it will be now dealt with another key issue of the discipline. The FAIR approach will indeed be discussed, since it is considered as being the solution for having accessible, reusable, findable and interchangeable terminological data (Vezzani 2022). Before finding out which are the four FAIR principles, it is important to spend a few words about standardization, to acquire an understanding of its role in terminology science and approach more consciously the standards at the basis of the aforesaid principles.

2.2 ISO, the International Organization for Standardization

Before discussing the importance of establishing a shared standardized infrastructure for terminological data banks, it is necessary to focus on the role of standardization in terminology science. Standards are like formulas that describe the best way of doing something and cover a huge range of activities.[29] Some important definitions by Bessé et al. (1997) are listed below in this regard:

- *A terminological standard is a document which prescribes the usage of a term or of terms.*
- *Standardization is the process of simplifying, regularizing, and unifying a diversity of products, processes, measurements, and services in order to reduce their variety.*
- *Terminological standardization is the process of defining a concept and establishing a term to designate it to the exclusion of other designations or in preference to other designations (De Bessé et al. 1997: 142-154).*

The theoretical framework of the discipline is founded on standardization. Considering that the aim of terminology science is regarded as the achievement of successful communicative exchanges comprising the terminology used by experts within subject domains, the relationship between terms and concepts should be agreed and standardized

[29] https://www.iso.org/standards.html [last visited: 8/11/2024]

(Pearson 1998). Communication in specialized fields must be therefore precise and unambiguous; in such a perspective, it can be easily assumed that by freezing each term with its concept, the aim can be fulfilled. It is interesting to specify that "the degree of agreement on the knowledge structure and its unequivocal linguistic representation upon which appropriate use of standards is based, can only be assumed in specialist communication." (Sager 1990: 122) In the framework of standardization, there's no place for interpretation of terms and knowledge they convey, and that is why experts only can get involved in this purpose.[30] Given its central influence in supporting such an intent, the role of the International Organization for Standardization (ISO) becomes central. ISO is the organization par excellence that works on developing universal standards to have successful communication in specialized fields and it was created in 1947.[31] Cabré (1999: 116) clearly explains its role in terminology science: "there are guidelines, published as standards, for unifying designations and concepts in terminological theory and practice, and for the methods to be applied for the presentation of terms and their respective data." Indeed, the standards are crucial in the process of standardizing knowledge, since they aim at minimizing (and hopefully, avoiding) superfluous redundancy and complexity when approaching to designations and the understanding of subject fields. It is worth clarifying that "terminological standardization […] is a part of general standardization, which includes both standardization of special terms and standardization of the principles and methods of terminology as a theory and practice." (Cabré 1999: 199) The principles established by the International Organization for Standardization regarding the motivation of standardization are seven and they are all equally fundamental. The third one is the most representative, as it explains the need of applying standards, since their mere publication has little value in itself (Sager 1990). Their observation is indeed fundamental: Sager's words underline the importance of applying the standards in the work as terminology specialists. Regarding the internal structure of the organization, ISO is composed of various Technical Committees, which are numbered; each of them manages a certain domain. In particular, "ISO Technical Committee 37 - Terminology (Principles and Coordination) is mainly charged with establishing the principles and methods for terminology and its specific objective is to standardize methods for creating,

[30] https://www.iso.org/standards.html [last visited: 8/11/2024]
[31] https://www.iso.org/about [last visited: 8/11/2024]

compiling, and coordinating terminologies" (Cabré 1999: 201-202). Every TC has then subcommittees. TC 37 has five subcommittees (SCs) comprising several working groups (WGs) (Mahr 2023). They are engaged in different branches and topics of terminology science:

1. Principles and methods
2. Terminology workflow and language coding
3. Management of terminology resources
4. Language resource management
5. Translation, interpreting and related technology

ISO/TC 37/SC 1 published two fundamental standards, which will be here briefly introduced. The ISO 1087: 2019 standard, whose name is *Terminology work and terminology science – Vocabulary*, focuses on standardizing the vocabulary about terminology science and every terminologist must rely on it. As the standard introduces:

> *The main purpose of this document is to provide a systematic description of the concepts related to terminology work and terminology science and to clarify the use of the terms in this field. This document is addressed to anyone involved in terminology work. In particular, its target group comprises standardizers, terminologists, other individuals involved in terminology work, terminology users as well as researchers and professionals dealing with terminology science and/or natural language processing (ISO 1087: 2019).*

The ISO 704: 2022 standard refers instead to the principles and methods of the discipline, on which every terminological project should base; its name is *Terminology work – Principles and Methods*. Both standards should be faithfully followed because they represent the guidelines to optimally mention and organize data, so that technical communication can be efficient and successful. A weakness has, however, to be seen in the scenario developed by the above-mentioned international agreements. In fact, they are formulated in few languages and "these agreements have to be translated into the languages of any other countries wanting to accept them." (Sager 1990: 17) Notwithstanding, universal standards have been thought to improve communication and cooperation among nations and specialists to transfer more easily knowledge and data; more languages should be then contemplated. The quality of the terminological

processing should be maximized as well. For that reason, another key aspect emerges in the achievement of homogeneity in methods and presentation of terminological data. In the next section, the role of the FAIR principles and their prominence in such an ambition will be brought to light. It will be witnessed how the FAIR approach combines a set of guidelines for organizing terminological data, which needs to be structured, codified and standardized.

2.3 The FAIR Approach

As widely underlined, the need of standardizing knowledge and making it accessible to everyone is at the basis of the discipline of terminology science, since its central aim is to achieve clarity and explicitness. Successful data management likewise "is the key conduit leading to knowledge discovery and innovation, and to subsequent data and knowledge integration and reuse by the community after the data publication process" (Wilkinson et al. 2016). Every aspect of terminology science strives to be standardized, even the infrastructure of the terminology resources, namely how terminological data is arranged and conveyed within different term banks. As anticipated in Section 2.1, the way terminological information is arranged in most of terminology resources has unfortunately never been projected to be compatible, transferable and integrated. They have been implemented without a shared standardized structure for terminological entries. Indeed, terminology databases usually have different structural models and interfaces, since there have never been coordination regarding formats and models (Budin and Melby 2000). It can be easily assumed that it is a drawback almost all resources share, because terminological data is not interchangeable. Sager (1990) tries to explain the reason behind:

> *Attempts at data exchange have not been very successful and cooperation in data development is not being actively pursued because of the different nature of their purpose and holdings and because of the difficulties encountered in determining genuine compatibility of data. Incompatibility consists largely in the different definitions of data categories which were established with specific user groups and uses in mind. Data exchanges fail because of the missing common theoretical basis that also prevents sharing of resources in lexicography (Sager 1990: 224).*

So, each term bank currently has its own way of organizing, storing and consulting information (Vezzani and Di Nunzio 2022). As Sager (1990) suggests, this structural difference is deep-rooted: there are different types of resources, given that there are different schools of thought in terminology science and different practices in terminology processing therefore exist. As a result, large databases have been developed without consideration for the compatibility of the system and much work has been unnecessarily duplicated. Steps have been recently taken forward, considering that further attention to this aspect has been developed over the years. The basic idea is the following: if different terminology resources share the same infrastructure and format, it will be easy and automatic to integrate terminological data from one resource to another. A model was thus created to provide principles and guidelines that any terminologist should follow to correctly manage terminology resources and structure FAIR terminological data and metadata (Vezzani and Di Nunzio 2022). Vezzani and Di Nunzio explain what the FAIRness of terminological data consists of, along with its origins:

> *una serie di linee guida è stata pubblicata da Wilkinson et al. (2016) nel quadro della piattaforma europea European Open Science Cloud1 (EOSC) per promuovere la FAIRness dei dati della ricerca. Queste linee guida sottolineano la necessità di mettere a disposizione dati trovabili, accessibili, interoperabili e riutilizzabili (Findable, Accessible, Interoperable, Reusable). I principi FAIR si riferiscono a tre tipi di entità: il dato (l'oggetto digitale d'interesse), i metadati (le informazioni sull'oggetto digitale) e le infrastrutture. Tutte le componenti del processo di ricerca dovrebbero beneficiare, quindi, dell'applicazione di queste linee guida al fine di garantirne la loro trasparenza, riproducibilità e riusabilità [a set of guidelines was published by Wilkinson et al. (2016) as part of the European Open Science Cloud1 (EOSC) platform to promote the FAIRness of research data. These guidelines emphasize the need to make Findable, Accessible, Interoperable, and Reusable data available. The FAIR principles refer to three kinds of entities: data (the digital object of interest), metadata (the information about the digital object), and the infrastructures. Therefore, all components of the research process should benefit from the application of these guidelines to ensure their transparency, reproducibility, and reusability]32 (Vezzani and Di Nunzio 2022: 153)*

Terminology science is facing a new specific demand, for which the FAIR approach is certainly the answer. Thanks to it, data, metadata and infrastructures are structured according to certain standardized conventions (Di Nunzio and Vezzani 2021). With its principles of Findability, Accessibility, Interoperability and Reusability, the FAIR paradigm allows to rethink the way terminology had been so far managed. As stated earlier, *The FAIR Guiding Principles for Scientific Data Management and Stewardship* is

[32] The translation is ours.

the name of the article by Wilkinson et al. (2016), where the principles were first expressed. Good data management is here deeply discussed, since it enables the integration and reuse of data and knowledge by the community. The principles are considered useful for conducting good research and enabling knowledge innovation for a successful and optimal diffusion of terminology. The FAIR approach is concretely based on the application of three *de jure* ISO standards for terminology management. The standards were developed by the ISO/TC 37/SC 3 to ensure the FAIRness of terminological data. They offer specific rules for the design and implementation of structurally homogeneous language and terminology resources (Vezzani and Di Nunzio 2022). Specifically, the three standards are exhaustively presented in the book *Terminologie Numérique* (2022) published by Federica Vezzani. The first is ISO 16642: 2017 standard. It is related to the Terminological Markup Framework (TMF) structural metamodel, which is the structure that a terminology resource should have. Vezzani and Di Nunzio (2022: 158) affirm: "questo standard internazionale promuove l'adozione di un modello comune per la rappresentazione di collezioni di dati terminologici in eXtensible Markup Language (XML), che dovrebbe essere uniformemente impiegato per facilitare l'interoperabilità, la condivisione e il riutilizzo dei dati [this international standard promotes the adoption of a common model for the representation of terminology data collections in eXtensible Markup Language (XML), which should be uniformly employed to facilitate the interoperability, sharing and reuse of data]." According to this standard, a terminology resource is conceived as a terminological data collection (TDC), which contains several terminological records. Each terminological entry refers to one single concept. For every concept there are n. Language Section(s) that allow to verbalize the concept. For each Language Section there are n. Term Section(s), which allow to designate the concept. There is also a smaller section, named Term Component Section(s), which is a section used to define the components of a complex term. In addition, a Data Category Repository contains all the specifications of categories that are included in a terminological record, to promote consistency of naming and implementation. Specifications of data categories provide the complete and formal representation, so that they all have a fairly established position (Romary 2001). The second is ISO 12620: 2019 standard: "Lo standard ISO 12620: 2019 descrive i meccanismi per documentare, armonizzare e gestire le categorie di dati contenute all'interno di una risorsa

terminologica [ISO 12620: 2019 standard describes the mechanisms for documenting, harmonizing, and managing the categories of data contained within a terminology resource].[33] (Vezzani and Di Nunzio 2022: 161) It refers to data category specifications and it aims to define the attributes and relations of the three central entities of terminology. As Warburton (2015: 385) affirms: "Terminologists world-wide have collaborated to prepare a large inventory of data categories for terminology databases. Terminologists should base their selection on this inventory." The third is ISO 30042: 2019 standard. It refers to the TermBase eXchange (TBX), which is the format of data implementation that is generally used for importing terminology glossaries for reuse in various computer-aided translation systems and it is part of the XML Language (eXtensible Markup Language). The standard allows to organize terminological data for their interoperability and reuse (Melby 2015). The importance of having a single format of data implementation is witnessed by Melby's words: "the terminology used in all stages of document production needs to be coordinated and formatted. TBX could be useful in carrying out this coordination task, especially when tools from multiple vendors are used together." (Melby 2015: 421) TBX model was thus created as a terminology exchange format for the reuse of terminology data to have a set of structured terminology data in a given format and reusable in different translation assignments and CAT-tools, when they are requested to be used. Moreover, as Melby (2015: 394) clearly explains, "TBX has multiple dialects to accommodate differences in terminological databases. However, all of these dialects share a core structure that promotes a higher level of interoperability than is possible through the use of multiple unrelated exchange formats." The FAIRterm Web Application complies with the three ISO standards analyzed and was developed for compiling terminological records that meet the principles of the FAIR approach (Vezzani 2021). In this dissertation, the terminological records are compiled to flow into the terminological data bank CAMEO, which is a "collezione di schede terminologiche multilingue per sostenere il processo di decodifica e transcodifica della terminologia di un dato dominio" [collection of multilingual term records to support the process of decoding and transcoding of terminology of a given domain] (Vezzani 2021: 51). The terminological resource, along with its origin and the project from which it was born, will be discussed in the next section.

[33] The translation is ours.

2.4 Commercial Terminology: the CAMEO Data Bank

The previous section dealt with the FAIRness of terminological data and metadata within terminology resources. If they are harmonized between each other, their reuse is facilitated and terminology is easily disseminated. The University of Padua has always contributed to the research progress in the field of terminology science and has therefore supported the idea of the FAIR approach to produce high-quality data banks. This model gains even more value if applied to the commercial terminology, since it allows to overcome and blur the terminological boundaries within a vast and interconnected international market. A FAIR multilingual terminological resource covering the terminology of the major export sectors of a country is an added value to its economy and it is beneficial for those who work with the technical documentation of exported products. In her (2015) article entitled *Managing terminology in commercial environments* Warburton shows the need to develop new approaches for managing terminology to optimize commercial communications into a multilingual society. Here, she underlines how fundamental is to manage terminology within linguistically diversified markets for commercial enterprises. In 2021, the University of Padua was therefore engaged in an ambitious project, which resulted in the creation of the CAMEO (CommerciAl terMinology rEsOurce) multilingual database. The resource was developed within the research project "La terminologia del commercio: progettazione e implementazione di una banca dati terminologica multilingue per le lingue speciali delle attività manifatturiere del Veneto".[34] CAMEO has been thought with the objective of having a FAIR standardized and an invaluable linguistic support, for the "professionisti del testo che si occupano della documentazione monolingue e multilingue del prodotto [text professionals who deal with monolingual and multilingual product documentation"] (Vezzani and Di Nunzio 2022: 155), especially technical translators. Thanks to this project, the value of the term in the technical and commercial documentation is emphasized. Concerning the structure of the resource, every multilingual term record lists all information regarding the morphological, syntactical, semantic and phraseological nature of terms and their equivalents (Vezzani and Di Nunzio 2022). In Section 2.1, data

[34] https://shiny.dei.unipd.it/fairterm/consultation.html [last visited: 8/11/2024]

categories that are usually found in most databases were widely outlined. However, CAMEO offers a wider range of categories and the description of terms and their equivalents is more detailed. The database gives further information, including morphology, phonetics, etymology, variation, semantics, phraseology, pragmatics, register and the domain. Figure 5 lists what is described under every area of analysis.

Asse di analisi	Categorie di dati
Morfologia	Parte del discorso, genere grammaticale, numero grammaticale, forme derivate
Fonetica	Trascrizione IPA
Etimologia	Derivazione, composizione
Variazione	Variante ortografica, abbreviazione, forma estesa, acronimo
Semantica	Definizione, analisi semica, sinonimo, quasi-sinonimo, iponimo, iperonimo, meronimo, olonimo
Fraseologia	Unità fraseologica, collocazione
Pragmatica	Contesto d'utilizzo
Registro	Nome popolare, nome scientifico
Dominio	Dominio, sottodominio

Figure 5 - Data categories in CAMEO (Vezzani and Di Nunzio 2022: 161)

The provided languages in CAMEO are four: Italian, French, English and Spanish. The terminological project of this dissertation will contribute to offering terminological records for the German language as well. Such an ambition is supported by an important data. In 2022, according to the Statistical Office of the Veneto Region (SISTAR), Germany was the leading export country, with 11.2 billion annual turnovers.[35] Indeed, "pur registrando un incremento delle vendite leggermente inferiore al dato medio regionale, il mercato tedesco rimane il principale punto di riferimento per le imprese venete [although the increase in sales was slightly below the regional average, the German market is again the leading reference for Venetian companies]", the annual report affirms. CAMEO results to be helpful for the economic sector of the Veneto region, which indirectly benefits from the existence of such a resource. In their paper *Elaborazione e gestione di (meta) dati terminologici* (2022) Vezzani and Di Nunzio, who created and implemented the resource, explain how their idea specifically came to the surface and list

[35] https://statistica.regione.veneto.it/Pubblicazioni/StatisticheFlash/statistiche_flash_luglio_2023.pdf [last visited: 8/11/2024]

the commercial domains for which the technical terms are collected and provided: agri-food, textile, leather and glass.[36] It is witnessed that the project was preceded by a statistical survey on the most exported products of the Veneto region. So, the knowledge and technical terminology regarding these four commercial sub-fields is described, collected, ordered and harmonized. As Warburton (2015: 389) affirms, "terminologists are expected to produce terminology resources that support the business goals of improving quality, increasing productivity, saving costs and gaining market share." Standardized terms are useful to promote the economic and commercial exchanges on the international level, thereby establishing a clear one-to-one equivalence between terms (Cabré 1999). Without multilingual terminology resources such as CAMEO, it would be more difficult to find a suitable equivalent for a technical term. A translator often has to work with the documentation of exported products and wares that require specific terminology (Vezzani and Di Nunzio 2022). A deep knowledge of the domains and their related terminology is something usually unknown and out of the competences of a translator, since he is not trained to be familiar with the vocabulary of every specialized text he is facing with. If he spends time on researching and studying a domain during the translation process, the quality of all the other translation's aspects besides terminology would be compromised. Warburton (2015: 367) notes indeed that "the most frequent mistakes in translated content are terminology-related (Woyde 2005; Wright 2001, 492), very few companies do any terminology management at all." Moreover, Sager (1990) underlines a central aspect concerned with the importance of providing a clear structure knowledge and offer multilingual data bank, while considering the commercial field. He specifies that, among the aims summarized as in the British Standards document BS 0: Part 1:1981, there is the "promotion of economy in human effort, materials and energy in the production and exchange of goods", the "protection of consumer interests through adequate and consistent quality of goods and services", and the "promotion of trade by removal of barriers caused by differences in national practices" (Sager 1990: 124). Standardizing terms referring to manufactured products results to be essential not only in translation, but also in managing knowledge by the experts themselves, since they can

[36] https://shiny.dei.unipd.it/fairterm/consultation.html [last visited: 8/11/2024]

use terms in accordance with common decisions, making communication unambiguous and successful.

2.5 Conclusion

The analysis that was carried out through the sections of this chapter tried to outline the role of terminology resources along with their organization, interface and functioning. The role of the International Organization for Standardization in the discipline was studied to better understand the prominence it has in getting the most out of the terminological data. Indeed, the FAIR paradigm is achieved thanks to its standards and it aims towards improvements in terminology science. The recent acquired awareness on the benefits of terminological data, if properly managed, culminated in the CAMEO project. Its presentation allowed us to understand the importance of terminology in the economic context, since it can support the export processes and the economic progress for business sectors. One of the CAMEO domains introduced earlier will be then explored in the next chapter: the Murano artistic glass. The domain of the study will be analyzed because the project of this dissertation aims to collect and study the Venetian glass terminology from a multilingual perspective. Specifically, the origins and history of this ancient glass art will be traced and its production process presented, with a focus on its power in terms of exports from the Veneto region. Indeed, the product is one of the most exported by the region and it generates a huge turnover. For that reason, the sector should be linguistically supported thanks to the multilingual terminological database presented in Section 2.4. Germany in particular is a country to which the Murano glass is widely exported; terminological entries for the German language will be then integrated for the first time to the CAMEO data bank. Germany's interest in Venetian craftsmanship is also evidenced by the publications of LWL-Industriemuseum, which will be presented at the end of the next chapter as a further subject of analysis.

3 The Domain of Study: the Murano Artistic Glass

The following chapter aims at introducing the domain of study at the core of the terminological project of this dissertation, namely the Murano artistic glass. The city of Venice is the cradle of this form of fine craftsmanship, whose German/Italian terminology will be collected to flow into the multilingual terminological database CAMEO. As stated in Chapter 2, the resource wants to support the work of those who are involved in the technical writing or translation of documents related to the most exported typical products of the Veneto region. In the first section, the ancient art of the Venetian glassmaking, which takes place in the glass factories of the Murano Island in the Venetian lagoon, will be described. Before getting to the heart of the terminological work, the domain will be introduced. This allows us to deal with the various stages of the project, which will be further discussed in Chapter 4. The second section will witness the profitable exporting activity related to the Murano artifacts that has always affected the economic power of the Veneto region. This section is relevant, as it shows the reason why the Murano glass domain is counted among the commercial domains of the CAMEO database and justifies the creation of terminological entries for the German language. The internationalization of the artistic products from the district of Murano is actually promoted by projects like ours, especially if we consider that the linguistic aspect is often overlooked in this regard. The third section aims to introduce two publications about the Venetian glass art, published by the LWL Industry Museum. The terminology used therein will be analyzed and studied, since it will be then evaluated thanks to the terminological results achieved and collected from the project.

3.1 Murano Glass Industry

The business of the glass-making industry in Murano draws its lifeblood from the master glassmakers' knowledge, which has been handed down for generations. Their technical know-how makes this productive activity a true art, being reckoned as one the most representative of the Italian cultural tradition. The glass makers have always spoken to each other using a jargon, as their art form has always been something private and covering the limited area of Murano. For Berruto (2004: 114), the jargon is "una varietà di lingua (o dialetto) che è marcata al tempo stesso in diafasia (in quanto è impiegata solo in determinate situazioni) e in diastratia (in quanto si forma all'interno di un gruppo sociale e ne diventa il contrassegno tipico) [a diaphasic (since it is used only in certain situations) and diastratic (since it is formed within a social group and becomes its typical hallmark) variety of language (or dialect)].[37] Every tool, type of glass and step of their work has a Venetian name: the glass masters' specialized knowledge has passed from father to son for centuries. Today, many terms have fallen into disuse, but most of them are still used in the working place. A list of some dialectal terms will be here provided by way of example (Table 1).[38] Some of them will be found and further explored during the terminological work of Chapter 4, where the terms will be extracted from the Italian corpus.

Dialectal terms of the artistic glass activity of Murano
Ballottòn
Morìse
Borsèlla da siègar; borsella da pissegàr
Pontéllo
Pulegòso
Rigadin
Serventìn
Pèa

[37] https://www.treccani.it/enciclopedia/gergo_(Enciclopedia-dell'Italiano)/ [last visited: 16/10/2024]
[38] https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/ [last visited: 16/10/2024]

Papaòr
Macie
Redexèllo
Serventìn
Bolo
Cotìzzo
Fenìcio
Impirarèssa
Levada
Marmorizar

Table 1 – Dialectal Venetian terms related to the Murano artistic activity

In the article *Murano e il distretto del vetro: aspetti socio-economici* by Andrea Tosi, the wide range of products offered by the Murano production district is listed, including home furnishings, jewelry, modern and traditional lighting.[39] (Tosi 2004) The inestimable value of the artistic glasswork products of Murano must be protected, as they are part of the Italian artistic, but also historical and cultural heritage. Indeed, particular attention has always been paid by the Veneto region to protect the roots and preserve the Venetian tradition of the Murano artistic glass. As cited on the online Veneto Region portal, the "Vetro Artistico Murano" is the trademark "filed and registered at the European Office for Harmonization in Alicante, no. 00481812 […] and is regulated by Regional Law no. 70/1994".[40] A trademark is necessary to boost the visibility of the products within an international market, which is increasingly dotted with fakes. The Murano artifacts impose a manufacturing complexity, which will be deeply analyzed when the concept diagram of the domain will be proposed in Chapter 4. As an introduction, it is here enough to briefly describe how glass is obtained. "What is Glass?" is an online document drawn up by the Fondazione Musei Civici di Venezia (MUVE), which manages the cultural and artistic heritage of Venice. Here, it is summarily explained that the glass is produced from

[39] Andrea Tosi is Professor of literature and history at the Abate Zanetti Glass School in Murano.

[40] https://www.regione.veneto.it/web/attivita-produttive/vetro-artistico-murano-inglese [last visited 12/09/2024]

a gradual solidification of a viscous paste, which is made by fusing together various crystalline minerals at a very high temperature. At room temperature, the viscosity of the paste changes according to the temperature: when it is red-hot, the paste is malleable and the glass can be moulded and modelled.[41] A section on the website of one of the most famous glass factories in Murano, the Venier glass factory, specifies how the working in the furnaces was organized in the past years, by giving important details on how the structure of the kilns has changed through the years:

> *In the 14th Century, the kilns for melting glass had three floors: the first was used for heating, the second for melting, and the third for slowly cooling the manufactured items. Silica was the basic ingredient for glass, which the Venetians obtained from sand or from river pebbles. Today the furnaces are gas-fired and great care is paid to choosing the kind of glass and in its composition.*[42]

On the MUVE website, an interesting focus on the origins of the Venetian glass art is also available. Here, one of the possible assumptions about the birth of the techniques of the glass-making industry in Murano is proposed: the inhabitants of the Veneto region, who had lived in the Roman centers of the Adriatic coastal strip and learned the Roman techniques of glass processing, transferred in the Murano Island.[43] More specifically:

> *Risale al 982 un documento firmato da un certo Domenico che, come attestato dal notaio, aveva esercitato l'attività di "fiolario", cioè la produzione di vetri cavi soffiati, in particolare bottiglie, appunto "fiole". Le sole testimonianze della fase arcaica del vetro veneziano sono costituite dai frammenti rinvenuti nel 1961-62, insieme con i resti di una fornace, negli scavi effettuati soprattutto nella "Piazza" di Torcello e dai frammenti restituiti dal sottosuolo di Murano (S. Donato) oltre che dalle acque della laguna. […] Dal XIII secolo poi i vetrai avevano avuto uno statuto, in latino, contenente le norme disciplinari che dovevano regolare l'attività della corporazione [In 982 a document signed by an unknown "Domenico" who, as attested by the notary, had been working as a "fiolario", i.e., in the production of blown flat glass, especially bottles, or "fioles". The only evidence of the archaic phase of the Venetian glass are the fragments found in 1961-62, along with the remains of a kiln from the excavations carried out especially in the "Piazza" of Torcello and the fragments extracted from the subsoil of Murano (S. Donato), as well as from the waters of the lagoon. […] From the 18th century, then, the glassmakers obtained a Latin statute, containing the disciplinary rules that were to regulate the activity of the corporation].*[44]

[41] https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WHAT-IS-GLASS-ENG.pdf

[42] https://www.vetreriavenier.com/en/the-furnace/woking-in-the-furnace [last visited: 12/09/2024]

[43] https://museovetro.visitmuve.it/it/il-museo/approfondimenti/origini-arte-vetro-veneziano/ [last visited: 12/09/2024]

[44] The translation is ours. https://museovetro.visitmuve.it/it/il-museo/approfondimenti/origini-arte-vetro-veneziano/ [last visited: 12/09/2024]

However, the important date that will mark the future of Murano's economy is the year 1291, in which the glass factories from the center of Venice are transferred in Murano because of fires and for safety reasons, with a decree of Pietro Gradenigo.[45] As claimed in the survey *Murano: un'economia fragile? I numeri, le problematiche, le prospettive* (2015), commissioned by Confartigianato Venezia to Centro Studi Sintesi and realized in collaboration with the Consorzio Promovetro Murano, the glass production consisted initially of everyday objects.[46] Concerning the different historical phases, an entire section dedicated to it is proposed on the already mentioned Venier glass factory website. Here, it is discovered that in the Golden Age the glass working reached its most sublime results and it was during the 16th and 17th century that new techniques (such as the 'filigrana') and materials (such as the 'avventurina') were discovered and developed, so much that they reached the courts in Europe. Then, in the 18th century, the production of glass consisted in different shapes and colors with workings such as the "murrine", fired enamels and etched gold decorations. In the 20th century, the production started to take advantage of the creativity of great contemporary Italian and European artists, giving rise to absolute outstanding pieces of excellence.[47] So, the technical execution around the Murano glassmaking has always seen the development of new techniques, styles and tools: from etched glass to filigree; from chalcedony to milk glass. One of the most important innovations was the invention of the crystal glass, attributed to the Venetian artist Angelo Barovier in 1450. He created the recipe for obtaining a type of glass which was completely transparent and crystalline.[48] Murano craftsmanship has thus always confronted with innovation, research, technological and digital progress.[49] Inasmuch as the Murano glass sector has always adapted to new demands and realities without losing sight of the traditional roots, it has flexibly responded to changes within different societies and needs. Nowadays, every glasswork product has a value bond to the tradition of the

[45] Pietro Gradenigo was the 49th doge of Venice (1251-1311).
https://www.originalmuranoglass.com/it/informazioni/551-storia-vetro-murano-palafitte.html?srsltid=AfmBOoqn0kO5qNpPEePfPHKJ8XcVTyvSvNDY6QMQ-GrvyX3hSY-Oh-Q4 [last visited: 16/10/2024]

[46] 2015_INDAGINE VETRO_confartigianato_centro sintesi.pdf

[47] https://www.vetreriavenier.com/en/glassmaker/history-of-glass-murano-venice [last visited: 12/09/2024]

[48] https://www.ilgiornale.it/news/litalia-scoprire/isola-murano-arte-vetro-soffiato-1291-1980435.html#google_vignette [last visited: 16/10/2024]

[49] The information is taken from the video of [Consorzio Promovetro] [https://www.youtube.com/watch?v=mzky5R2kXss] [consulted on 27 September 2024]

Island of Murano and should be promoted, as it results from great passion, dedication and innovation. The Venice Glass Week, the International Festival established in 2017 to celebrate, support and promote the art of glass, organizes in this regard different initiatives every year. One of them was "Upcycling Glass", an exhibition set up at the Murano Glass Museum in 2023.[50] The event focused on the theme of sustainability to give life to recycled works of crystal glass and educate on the environmentally conscious use of the resources and materials used, even in the world of local craftsmanship. This year, another interesting initiative has been organized for the Venice Glass Week: the "Glass Bateo". The event has been organized from Consorzio Promovetro Murano in collaboration with the Municipality of Venice, Vela Spa, Actv and the Veneto Region. The project is an exhibition-event held inside a steamboat in the Lagoon and entirely dedicated to celebrating the artistic glass activity. The floating space has hosted some events dedicated to glass and various exhibitions of artifacts coming from the glass factories licensed to the Vetro Artistico Murano trademark.[51] Such initiatives ensure the tradition being always alive, even more if they are promoted both nationally and internationally. The next section will witness the impact that the exports of the manufactured products in Murano have on the economy of the Veneto region: the Murano products are craved and appreciated all over the world as Italian unique excellences. Thanks to some important surveys, the export sector of the Venetian artistic glass will be explored, by interpreting some quantitative and statistical data. In particular, its economic development and placement on the international market of the last few years will be studied.

3.2 Venetian Glass, an Export Sector of the Veneto Region

The uniqueness and the brand recognition of the Murano glass have always had a positive impact on the regional exports of the Veneto region. In the above-mentioned survey, carried out by Confartigianato Venezia in 2015 (see Section 3.1), some relevant statistical data on the evolution of the sector in the years prior to 2015 emerge. Although they are not recent, they are still useful to compare the past trend with the current one. Such

[50] The website link of the Venice Glass Week is the following: https://theveniceglassweek.com/en/
[51] https://theveniceglassweek.com/en/eventi/glass-bateo/ [last visited 16/10/2024]

research has yielded some important results: in 2015, there were about 260 active glass factories located in the municipality of Venice. In 2013, the 40 % of the turnover from the Murano manufactured products came from sales abroad and it represented the 80% of the overall Italian exports of artistic glass to the world. From 2008 to 2015, however, the value of exports of the Murano glass gradually declined. Indeed, "il valore delle esportazioni è passato dagli oltre 88 milioni di euro stimati per il 2008 agli attuali 65,6 milioni [the value of exports has changed from over 88 million estimated for 2008 to the current amount of 65.6 million]".[52] In view of the discouraging figures, new marketing strategies have been developed. For instance, the strategy summarized by the word OMNIAGLASS 4.0 was built in 2020 to expand the business abroad through an omni-channel promotion and the adoption of new technologies from the industry 4.0.[53] Its main objective is described on the website of the InnovatiVE – Portale Veneto per l'Innovazione: "rafforzare la presenza sui mercati esteri chiave come USA, Russia e Penisola Araba. La strategia di internazionalizzazione si è basata non solo sulla presenza alle principali Fiere, ma anche sull'uso di strumenti innovativi come realtà virtuale, display olografici 3D, e-commerce e canali digitali per promuovere i brand e i prodotti [to strengthen the presence in the key foreign markets such as the USA, Russia and the Arabian Peninsula. The internationalization strategy has been based not only on the presence at the main trade fairs, but also on the use of innovative tools such as virtual reality, 3D holographic displays, e-commerce and digital channels to promote brands and products"].[54] Moreover, "attraverso […] piani di export il progetto si è prefisso di incrementare la conoscenza delle […] aziende in relazione ai mercati [through […] export plans, the project is aiming at increasing the familiarity with the companies in relation to the markets]".[55] The case study *Craft enterprises to foster generative local communities. An analysis of the Venice case study* by Ressia and Micelli (2024) from the Ca' Foscari University of Venice, presented within the project iNEST "Tourism, Culture and Creative Industries", witnesses the specific case of the Orsoni Venezia 1888 glass factory in this direction. Indeed, the company has been adopted innovative techniques, such as the technological involvement and the use of technological platforms to promote the events

[52] The translation is ours. 2015_INDAGINE VETRO_confartigianato_centro sintesi.pdf
[53] https://www.innoveneto.org/2023/12/segusogianni/ [last visited: 13/09/2024]
[54] The translation is ours. https://www.innoveneto.org/2023/12/segusogianni/ [last visited 13/09/2024] Among the main trade fairs, the *Maison et Objet* of Paris is to be reported.
[55] The translation is ours. https://www.innoveneto.org [last visited: 13/09/2024]

(Ressia and Micelli 2024), being an example in the embracement of the innovation and internationalization. Indeed, as evidenced by the annual report of 2024 that the Research Department of Intesa San Paolo devotes to the economic and financial development of district companies, in the following years the priorities to be set out are "rinnovabili ed efficientamento produttivo, tecnologia e innovazione, valorizzazione del capitale umano [renewable sources and efficiency programs, technology and innovation, optimization of human capital]".[56] As for the assessment of the recent economic development of the export value of the Murano artistic glass, it is needed to gather data of the last 4 years. In 2022, some economic operators of 11 nationalities met in Venice to discuss the project "Made in Venice", which aimed at supporting companies in the promotion of activities abroad thanks to the agreement between Confindustria Venezia and Ice Agenzia. In the online journal article by Veneziatoday, where the project is discussed, it is also declared what follows: "Secondo una elaborazione di Unioncamere del Veneto su dati Istat, l'export della provincia di Venezia per quanto riguarda il vetro e i prodotti in vetro ha avuto un valore di 95 milioni di euro nel 2021[…]. Francia, Stati Uniti, Polonia, Spagna, Regno Unito e Germania i mercati di riferimento [According to an analysis by Unioncamere del Veneto based on the Istat data, the export value of glass and glass products from the Province of Venice was 95 million in 2021[…]. France, United States, Poland, Spain, United Kingdom and Germany are the reference markets].[57] If the value of exports in 2015 is compared to that of 2021 (respectively 65,6 million and 95 million), an increase is clearly to be reported. At the hearing before the X Commission (Industrial Production, Trade and Tourism) of the Italian Chamber of Deputies on 22 February 2023, the critical issues faced by the Murano glass industrial district, along with some positive future prospects, were highlighted by the Consorzio Promovetro Murano. It was stated that a series of problematic situations have had a devastating impact on the entire sector, which was undermined: the high tide that hit the Venice lagoon in 2019 and damaged the production activities in Murano, the Coronavirus pandemic in 2020 that slowed down the tourist flows and the war in Ukraine in 2022, with a consequent increase in the cost of

[56] The translation is ours. https://group.intesasanpaolo.com/it/research/research-in-primo-piano/distretti-e-territorio/2024/16--rapporto-economia-e-finanza-dei-distretti-industriali [last visited: 13/09/2024]

[57] The translation is ours. https://www.veneziatoday.it/attualita/export-vetro-venezia-made-in-venice.html [last visited: 13/09/2024]

gas.[58] In the light of the difficulties encountered, the growth opportunities related to the increase of the international exports become even more central in the recovery of the Murano glass productive sector. The exports should be then encouraged and improved, in terms of volume and quality. A vast network of multilingual terminological records can only help and support the process, being indirectly beneficial for the economy. As for the current year, the SISTAN (Sistema Statistico Nazionale) published the Veneto's socio-economic bulletin of July 2024, which gives us important data. Here, it can be noticed that in the first quarter of 2024 a 5.1% decrease in all trade sectors, including the glass one, is to be recorded if compared to the same period in 2023. Indeed, "[…] si segnala il forte calo del fatturato estero in tutti i principali mercati di sbocco, con le eccezioni per l'export verso Belgio, Turchia e Emirati Arabi Uniti [a significant reduction in export turnover is reported in all major markets, except for the exports to Belgium, Turkey and the United Arab Emirates]".[59] Germany has thus lost its pole position in terms of imports if compared to the previous year. The integration of the German language in the terminological database CAMEO is, however, justified: Germany has always had a great and ever-present prominence as leader importing country of the Murano manufactured products, as shown and underlined in Section 2.4. Considering that its position has worsened in the current year, it becomes even more important to terminologically support the export conditions for the German language, since the linguistic aspect can actually accompany the recovery. As the report published by the Consorzio Promovetro Murano states, it is to be remembered that "il distretto è stato caratterizzato da una vocazione internazionale, ed ancora oggi è uno dei prodotti Made in Italy più riconosciuti al mondo [the district has been characterized by an international vocation, and still today is one of the most recognized Made in Italy products in the world]".[60] Indeed, two publications by the LWL Industry Museum prove the great interest Germans show in the Murano

[58] https://www.camera.it/application/xmanager/projects/leg19/attachments/upload_file_doc_acquisiti/pdfs/000/009/723/09_Promovetro.pdf [last visited: 13/09/2024]

[59] The translation is ours. https://www.sistan.it/index.php?id=88&no_cache=1&tx_ttnews%5Btt_news%5D=11694 [last visited: 13/09/2024]

[60] https://www.camera.it/application/xmanager/projects/leg19/attachments/upload_file_doc_acquisiti/pdfs/000/009/723/09_Promovetro.pdf

The translation is ours.

history.[61] The next section introduces this further object of analysis, since the Murano glass art terminology used therein will be evaluated in Chapter 6.

3.3 The Object of Analysis: the Publications of LWL Industry Museum

The section is aiming at briefly presenting two publications about the Murano glass, kindly offered by their publisher LWL Industriemuseum – Westfäliches Landesmuseum für Industriekultur (LWL Industry Museum – Westphalian State Museum of Industrial Culture) for this dissertation project. The proper use of the German terminology related to the domain will be evaluated, after having created the Italian/German terminological records. As pointed out on the Council of Europe Portal, the LWL Industry Museum is identified among the Cultural Routes, specifically as a point of the "European Route of Industrial Heritage". It is an "industrial museum with 8 decentralized locations in Westphalia and Lippe (North Rhine-Westphalia). The Regional Association of Westphalia-Lippe (Landschaftsverband Westfalen-Lippe, LWL) is responsible for the LWL Industry Museum".[62] The Westphalia-Lippe Regional Association (LWL) is a municipal association with 20000 employees for the 8.3 million people of the region. The LWL is responsible for 35 special schools, 21 hospitals and 18 museums. It thus fulfills tasks in the social and cultural sector, which are sensibly carried out throughout Westphalia. It is also committed to an inclusive society in all areas of life. The 9 independent cities and 18 districts of the Westphalia-Lippe region are the members of the LWL.[63] The website of the LWL Industry Museum offers a description of its purposes:

1. Collecting: the LWL Industry Museum's collection comprises over 250.000 objects and the Murano artistic glass items are included. The objects are expression of memories and history. Every item documents the industrial history: the mechanical production but also the manual labor, the occupational safety, the

[61] The website link of the Museum is the following: https://www.lwl-industriekultur.de/en/

[62] https://www.coe.int/en/web/cultural-routes/-/lwl-industry-museum-westphalian-state-museum-of-industrial-culture [last visited 23/09/2024]

[63] https://www.lwl.org/pressemitteilungen/nr_mitteilung.php?urlID=49618 [last visited 16/10/2024]

entrepreneurial and social conditions, the forced labor, migration and mining crisis, conditions and lifestyles.[64]

2. Researching: research into the industrial heritage objects and themes is part of its core activities. The results of this work flow into exhibitions and publications. The museum collaborates on projects with partners from Germany and abroad. Indeed, it has collaborated with the project of this dissertation with pleasure, since further research is considered extremely important in its field. The publications that will be later presented are aiming at describing the artifacts of the exhibitions, their aesthetics and history, by witnessing a strong relationship with Italy.
3. Communicating: communication is a central pillar of its work as museum. It offer tailor-made services for many target groups, by working closely with their educational partners and offer further training for teachers.[65]

As the website of the museum affirms, "hand-made glass production is recognized as an intangible cultural heritage in Germany".[66] The history of work is presented at its original locations. As previously mentioned, the museum is decentralized in some historical industrial buildings, which after a series of restoration measures, have been opened to the public.[67] Indeed, "the Museum consists of three collieries, one blast furnace plant, a ship lift, a textile factory, a brickworks and a glassworks, all left on their original sites".[68] Here, the map of the sites of the LWL Industry Museum is provided:

[64] https://wissenschaftsforum-ruhr.de/lwl-industriemuseum-westfaelisches-landesmuseum-fuer-industriekultur/ [last visited: 16/10/2024]
[65] https://www.lwl-industriekultur.de/en/ [last visited: 16/10/2024]
[66] https://glashuette-gernheim.lwl.org/en/ [last visited: 16/10/2024]
[67] https://www.route-industriekultur.ruhr/it/ankerpunkte/lwl-museum-zeche-zollern/ [last visited: 16/10/2024]
[68] https://worklab.info/lwl-industriemuseum-germany/ [last visited: 16/10/2024]

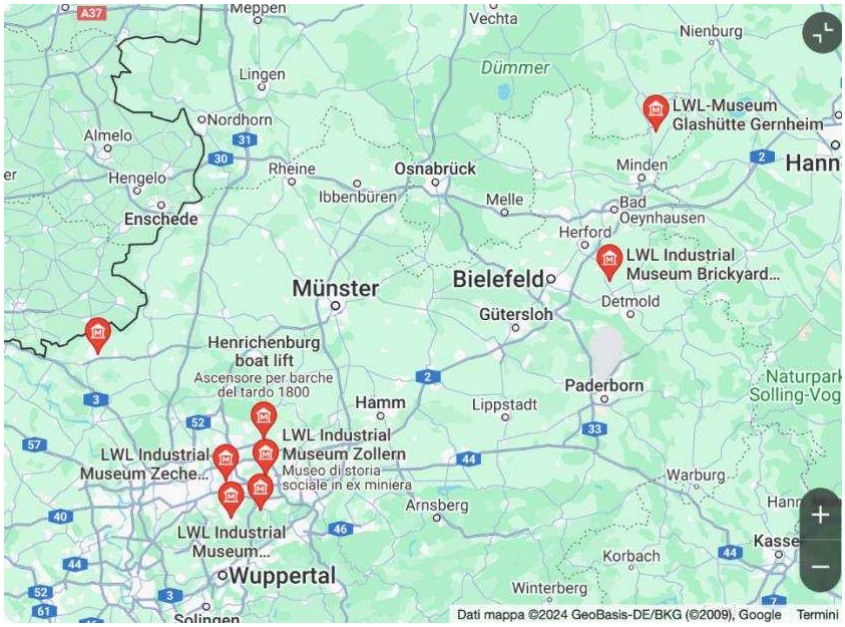


Figure 6 – The eight former industrial sites of the LWL Industry Museum visualized on Google Maps

The network of the museums, supported by the Regional Association of Westphalia-Lippe (LWL), consists of:

1. Zeche Zollern in Dortmund
2. Zeche Hannover in Bochum
3. Zeche Nachtigall in Witten
4. Heinrichshütte in Hattingen
5. Schiffshebewerk Heinrichenburg in Waltrop
6. Textilwek in Bocholt
7. Ziegelei Lage in Lage
8. Glashütte Gernheim in Petershagen

The Zeche Zollern, Zeche Hannover and Zeche Nachtigall are formers mines, which were added to the collection between 1979 and 1981.[69] The exhibition described in one of the books has been held in the last museum of the aforesaid list: the building is a cone tower, cradle of the Gernheim glassworks in Petershagen. It is one of the last buildings of its kind in Europe, and, if visited, allows to watch the glassmakers at work: they use various

[69] https://www.bergbau-sammlungen.de/de/institution/lwl-industriemuseum-westfaelisches-landesmuseum-fuer-industriekultur [last visited: 16/10/2024]

tools to shape the red-hot mass and the final objects are refined through cutting and engraving.[70] For this reason, it is the perfect place where the exhibitions about the international glass art can be held. As for what concerns the history of the foundation of the LWL Industry Museum, it was founded in 1979 to raise the awareness of the industrial past of the region and preserve the industrial heritage through the eight sites of the museum. The museum started collecting and telling the history of the workers and the region, thanks to some permanent and temporary exhibitions. What is really interesting is that there is a huge variety of extensive collections of oral history interviews, audio and video archival material. These stories are an important part of the cultural history of Germany and create a precious solid base for an oral history archive of work and life in the industrial age.[71] The Museum published two publications about the Murano artistic glass and they will be analyzed in terms of the terminology used. The books are written both in Italian and German: each volume contains the original text with the parallel one beside. The first publication object of analysis was published in 2013 and it is entitled *Spuren der Vergangenheit. Drei Glasshütten auf Murano – Le tracce del passato. Tre vetrerie a Murano*.[72] The authors are the essayist Aldo Bova and the director of the museum, Katrin Holthaus; the translator is Svenja Laufhütte. As described in the preface of the book, the LWL Industry Museum hosts permanent exhibitions on "il ciclo di produzione, l'organizzazione del lavoro e i prodotti delle diverse industrie [the production process, the work organization and the products of the different industries]", including the glass industry.[73] The book presents a brief introduction of three glass factories of Murano: the A.VE.M glass factory, the Gino Cenedese glass factory and the Alfredo Barabini glass factory, along with an historical background of the art glass in Murano. Then, the book offers a large collection of photographs taken in the three glass factories previously introduced. The photographs show the tools used, the kilns, the materials and the glass artworks: they capture every detail within the workplace. They are all accompanied by descriptive captions in Italian and German. The idea is that of freezing every corner of the workplace and the results made up of knowledge, creativity and passion. The second book is entitled *L'arte del vetro. Glas des 19. Jahrhunderts aus*

[70] https://glashuette-gernheim.lwl.org/en/ [last visited: 16/10/2024]
[71] https://deindustrialization.org/lwl-industriemuseum/ [last visited: 16/10/2024]
[72] The translation of the tile into English is "Traces from the past. Three glass factories in Murano". The translation is ours.
[73] The translation is ours. The reference page is 4.

Murano - Il vetro di Murano dell'Ottocento, published in 2014.[74] The authors are Aldo Bova, Katrin Holthaus, Helmut Ricke and Giovanni Sarpellon. The translators are Stefania Galassi, Katrin Holthaus, Svenja Laufhütte and Alessandra Perulli-Scott. The volume was realized on the occasion of the exhibition "L'arte del vetro" on the topic of the glass industry in Murano during the 18th century. As the preface of the book states, the exhibition contained artefacts from six private collections and focused on their realization thanks to practical demonstrations of the manufacturing process. The first part of the book focuses on the history of the Murano glass art in the 18th century. Then, two specific descriptive parts are introduced: one is about the technique related to the realization of the "murrine"; the other one is about the glass fundamental techniques of the art of the 18th century. The latter part (from pages 68 to 100) will be interesting and central for our analysis, since it is full of technical terms of the special language. Then, the entire catalog of the exhibits is proposed: the photographs of every glasswork, along with their Italian/German descriptions below, follow one another. With the confidence that the terminology adopted is consistent and the equivalents (ISO 704: 2022: 57) of the terms have been properly chosen, the analysis that will be proposed wants, however, to assess the terminological and translation choices. The aim is that of understanding how the translation process has been carried out and if care has been paid to the terminological aspect. It will be thus explored if the terminological databases have been used, especially to find out if there is enough awareness of the value such resources have during the translation process. Given the objective set by the museum, which is to preserve the different forms of industrial culture, it is central to convey the knowledge in an optimal way.

3.4 Conclusion

The chapter witnessed how the Venetian creativity of the local historical families, who carry on a centuries-old tradition with their artistic unique skills and sacrifice, is the central element of the art of Murano glass. The Murano artistic activity has always driven the regional local economy and more attention should be thus devoted to its promotion

[74] The translation of the title is "The Murano glass art of the XVIII century". The translation is ours.

abroad. Despite the dismal data about the current trend of the exports, interpreted in Section 3.2, the art of Murano is always attractive and appreciated all over the world. Indeed, the publications of the LWL Industry Museum in Germany are evidence of that: the Murano artistic glass has always been studied in the country and the relations between the two countries are fruitful. After having explored the domain on the surface, its export value and the books object of the following analysis, we move on to the next chapter. We will outline the steps of the terminological work that will culminate in the creation of the Italian/German terminological records for the Murano glass domain, getting to the heart of the terminological work. As widely previously stated, the specific skills and the knowledge of the field must also be supported from a linguistic point of view with the utmost care.

4 The Steps for a Standardized Glass Terminology

The chapter is aiming at outlining the steps of the terminological project, both on a theoretical and methodological point of view. As seen in Section 1.3, a double dimension of analysis is needed: the conceptual dimension and the linguistic one will be both considered to have high-quality terminological outcomes (Santos and Costa 2015). In the first section, the concept system of the domain will be created, after having theoretically defined it. This allows us to acquire a more detailed knowledge about the domain. The topic of the second section will be then the specialized corpus. Its function within the terminological work will be defined, along with the criteria with which the texts have been chosen. Indeed, the sources selected are resulting from a scrupulous research. Two corpora will be created, one for every language of study. Moreover, the terms will be extracted thanks to the Sketch Engine tool, as it paves the way for the last part of the work. The third section will be focused on the creation of the lexical networks of the domain, one for each language analyzed. The aim of the last step is that of integrating the results of the conceptual dimension with those of the linguistic one, to have the best in terms of completeness of data. One dimension doesn't outperform the other and they are both essential. All the steps outlined will allow us to explore the domain of the Murano artistic glass, before compiling the terminological records for the CAMEO database in Chapter 5.

4.1 The Concept System

According to the ISO 704: 2022 standard, the concept systems are cognitive tools, developed for some specific purposes. Among them, the need of representing the relations

between the concepts of a domain and standardizing the terminology for a terminology resource. The relations between concepts are distinguished by the ISO standards as follows: hierarchical (generic and partitive) relations and associative (sequential, causal, temporal) relations (ISO 1087: 2019, ISO 704: 2022). Concerning the first group of relations, they aim to elaborate "nested hierarchies, i.e., superordinate concepts in a way or another "contain" or "consist of" the subordinate concepts", as Nuopponen (2014: 5) defines. Non-hierarchical relations are extremely diversified, as "they enhance conceptual structure by enriching networks and codifying the multiple and various relations one concept can have with others" (Faber 1999: 107). ISO 1087: 2019 standard clearly specifies all the types of concept relations and how they are visualized in a concept diagram. If they are hierarchical relations, they will be differently visualized in the graphic compared to the associative relations. As regards to the terminological work, the concept is at the heart of the first step, as it has always been considered of primary importance in terminology science (see Section 1.1). Indeed, "the value attributed to the concept allows us to distinguish terminological approaches from linguistic approaches" (Santos and Costa 2015: 155). Thanks to the organization of the concepts relations, the knowledge of a certain domain is ordered and becomes clearer to approach the other steps. As Roche (2012: 28) states, "knowledge, which is often tacit and rarely described in scientific and technical documents, needs to be explained, making experts' participation in and contribution to work on terminology absolutely essential". Therefore, the criteria followed in identifying the set of concepts related to the Murano artistic glass domain have mostly relied on the expert knowledge. Our work has been developed in close cooperation with the experts: the research has been conducted after the visit to a glass factory in Murano and a guided tour in the workplace. Moreover, the visit to the Murano Glass Museum on the Murano Island has been also necessary to grasp the needed knowledge for the identification of concepts within an accurate and complete concept system. In this regard, Faber (1999: 98) affirms that "in the construction of concept systems, the terminologist is naturally aided by consultation with experts, as well as a familiarity with larger knowledge structures and the application of previous contexts". Santos and Costa (2015: 164) outline some "assumptions to be made in the construction of a concept map of a domain of knowledge:

1. Justify and limit the knowledge domain that we wish to analyze;
2. Search for information sources that may contribute to that process;
3. Select one or several domain experts;
4. Select one or several software tools;"

The above-mentioned assumptions have been a point of departure for the creation of the concept diagram; for each of us, it has been decided what follows:

1. The knowledge domain to be analyzed is the Murano artistic glass. In particular, the focus is on the composition, techniques, tools and decorations involved, considering the purpose of the project, namely the creation of terminological records for its export;
2. The information sources contributing to the process are to be seen in the visits to the Colleoni Murano glass factory and in the exhibitions of the Murano Glass Museum;
3. The domain experts, who contributed to organizing the knowledge, are the glass masters of the above-mentioned glass factory;
4. The software tool used is CmapTools;

The following map of the domain, which reflects and organizes the knowledge of the domain of study, is proposed. The map is here visualized to show the work in its integrality. Due to the lack of space, it is not perfectly readable and some zoomed screenshots are thus provided.

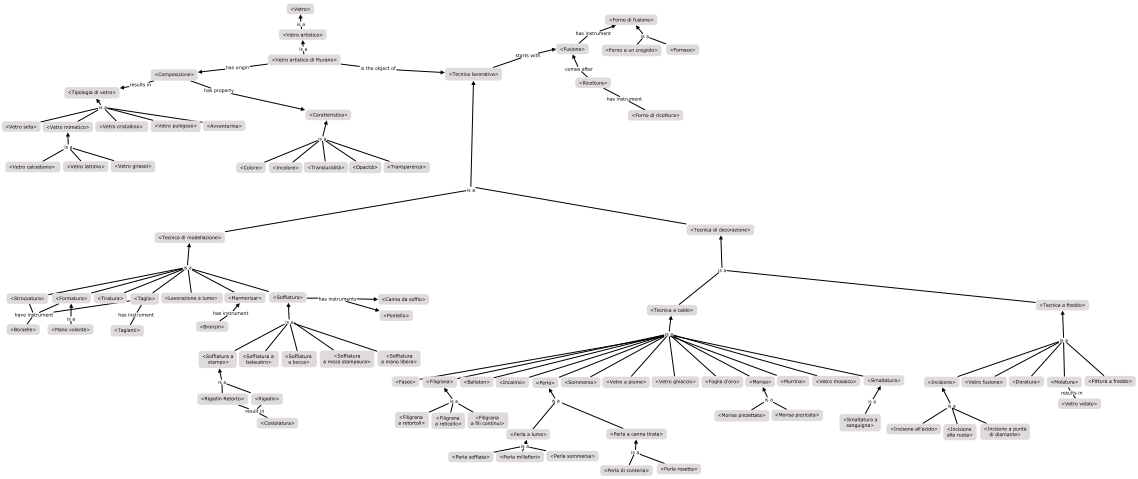


Figure 7 - Concept diagram of the Murano artistic glass domain

The concept diagram (Figure 7) is widely branched and contains both hierarchical and non-hierarchical relations. It has been created by mainly focusing on the working techniques, the decorations and the characteristics of the artifacts resulting from the artistic activity. It is due to define the concept of multidimensionality in this regard. According to Faber (2013: 18), the "difference in perspective reflected in terminological definitions is known as "multidimensionality". As exemplified in Bowker (1997), this phenomenon occurs when a concept can be classified in more than one way. A dimension represents one way of classifying a concept and a concept system with one dimension is said to be multidimensional." The same concept can thus lend itself to different classifications depending on the characteristics chosen to link it to other concepts. This concept diagram has been structured according to some criteria, since only some specific dimensions have been chosen to be brought to light. As widely underlined, the knowledge acquisition of the domain and its structurization is part of a series of steps of the terminology work that will culminate in the creation of terminological records for the commercial data bank CAMEO, which wants to support the work of those who face with

specialized translations or the technical drafting of export documents for the Murano artifacts. Therefore, it has been thought to give emphasis to the concepts (and consequently, the terminology) useful to describe the final objects, and to the techniques thanks to which they are created. It is now essential to describe the conceptual diagram to better explain the concepts that are therein shown. The central concept is <Artistic Murano glass>, linked to the more generic concepts <Artistic glass> and <Glass>. Indeed, other kinds of artistic glasses exist, such as that of Bohemia.[75] From it, two main branches are to be considered:

- The <Composition>
- The <Working technique>

The Murano artifacts are indeed the result of these two elements: a specific chemical composition, which can differ, and the working techniques. The first concept to be analyzed is thus the <Composition > (Figure 8).

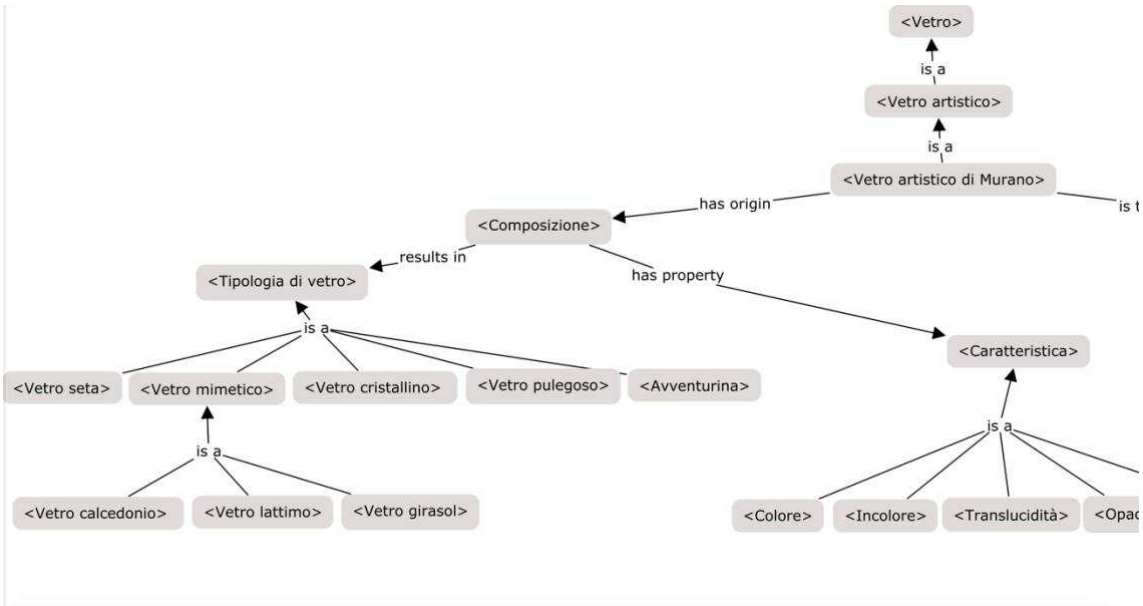


Figure 8 - The first main branch: the composition

[75] https://meglioinvetro.it/cristallo-di-boemia-patrimonio-dellumanita/ [last visited: 21/10/2024]

Different chemical substances can be involved in the glass-melting process, resulting in different types of glass. According to the substances added to the raw materials, different glasses can be created, such as the <Crystal glass>, the <Milk glass>, the <Chalcedony glass>, etc. This first classification aims to highlight the different glasses existing according to the ingredients used, so they have not been classified as working techniques. Indeed, every type of glass can be the object of a working technique listed afterwards in the concept diagram. Another aspect is related to the concept <Type of glass>, namely that of <Feature>. Every artifact has specific features, which depend on its composition and its thermal process: <Opacity>, <Transparence>, <Translucidity>, etc. The second main branch identified includes the concept <Working technique> (Figure 9).

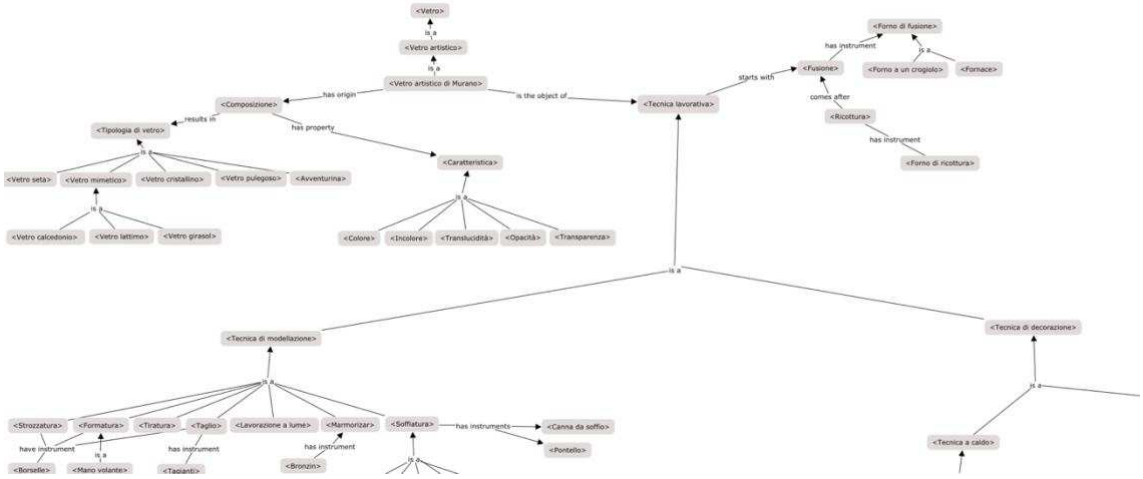


Figure 9 - The second main branch: the working technique

The glass manufacturing process starts with the <Fusion process> of the glass that takes place in the kilns, which are divided by function. Then, the glass is cooled slowly in a <Annealing oven>. The working techniques are many and they should be divided into two different branches: <Modeling technique> and <Decorative technique>. These two concepts sum up all the glass processing methods: the techniques involved in the glass processing are extremely diversified. Indeed, several new different techniques have followed one another over the years. The branch has been the object of a deep analysis and study, since the classification of the techniques has been really challenging. The issue was: should the modeling techniques be classified by distinguishing them from the

decorative ones? Actually, the decorations (such as the <Filigree>) are themselves techniques, such as the modeling technique of the <Glassblowing>. What has been useful to overcome the doubt was the visualization of the objects exhibited at the Glass Museum and the explanatory videos of the visit routes. The criterium of classification has been thus decided to be the scope of the technique: the techniques have been treated as a macro-category, which includes both the working and the decorative ones. Furthermore, the modeling techniques are carried out prior to the decorative ones. To carry out the modeling methods, the glass masters have different tools in their workplace that help the glass masters to shape and work the glass. They are all related to the technique for which they are used, such as the <Tagianti> (eng. 'shears') for the <Cutting>, the <Bronzin> for the <Marbling> etc. (Figure 10).

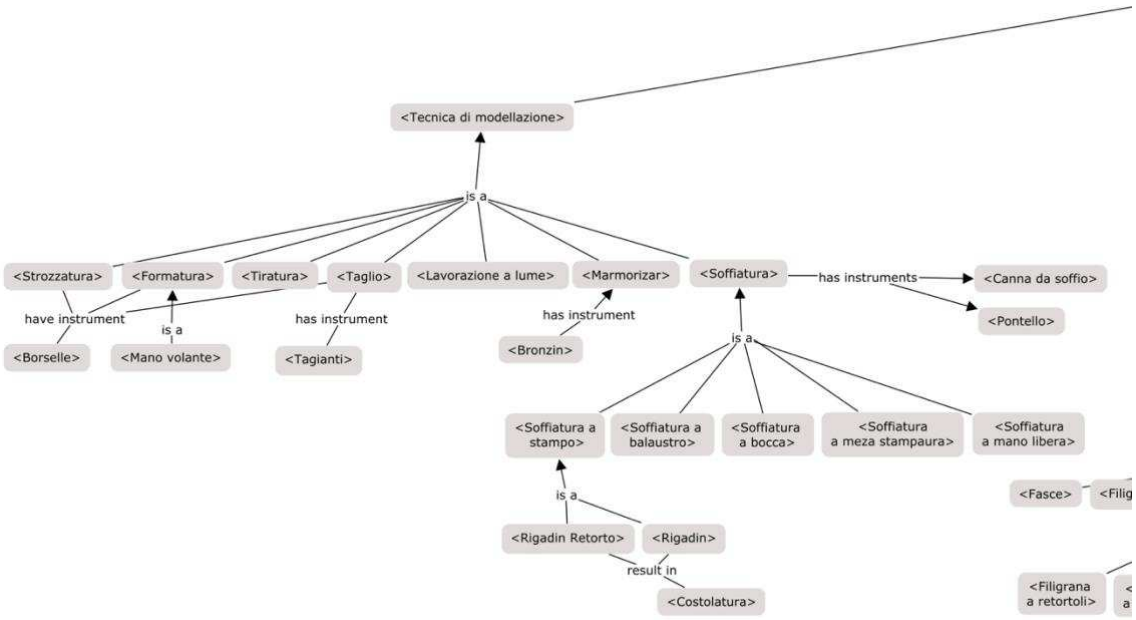


Figure 10 - The second main branch: the modeling technique

Then, the <Decorative technique> is instead divided into <Hot technique> and <Cold technique>: the subdivision is focused on the method of working (Figure 11). The two branches specify and include all the possible decorations to be made on glass.

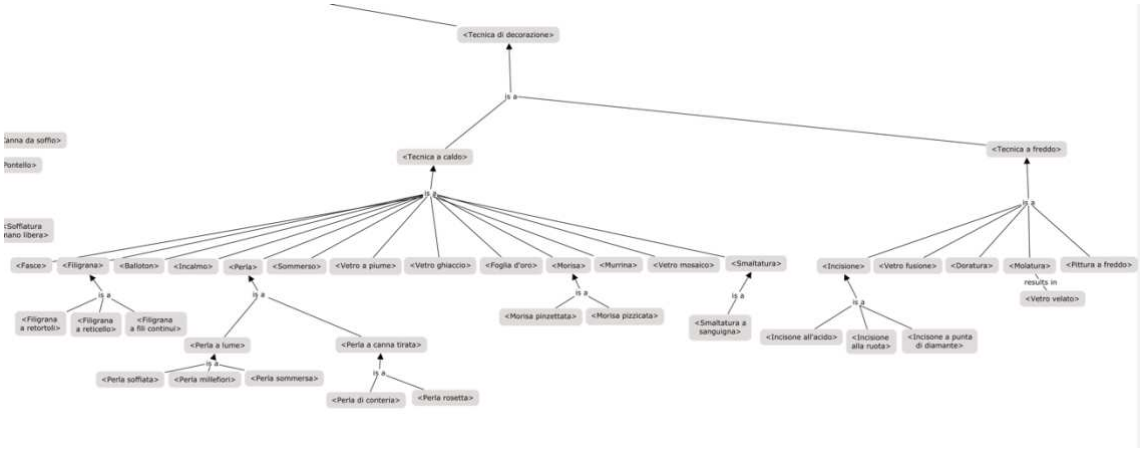


Figure 11 – The second main branch: the decorative technique

All the techniques that involve the use of the heat and flames at any stage of the process have been included in the first classification. This category is divided into 14 sub-categories (Figure 12) and it is the more complex and diversified of the concept diagram.

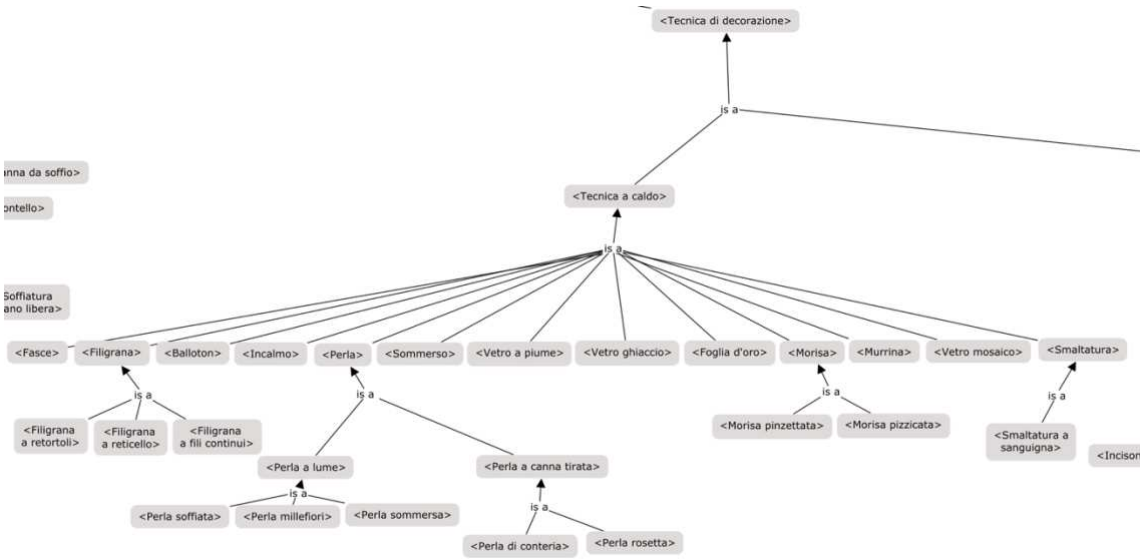


Figure 12 – The second main branch: the hot technique

The concept <Cold technique> includes instead only five sub-categories (Figure 13).

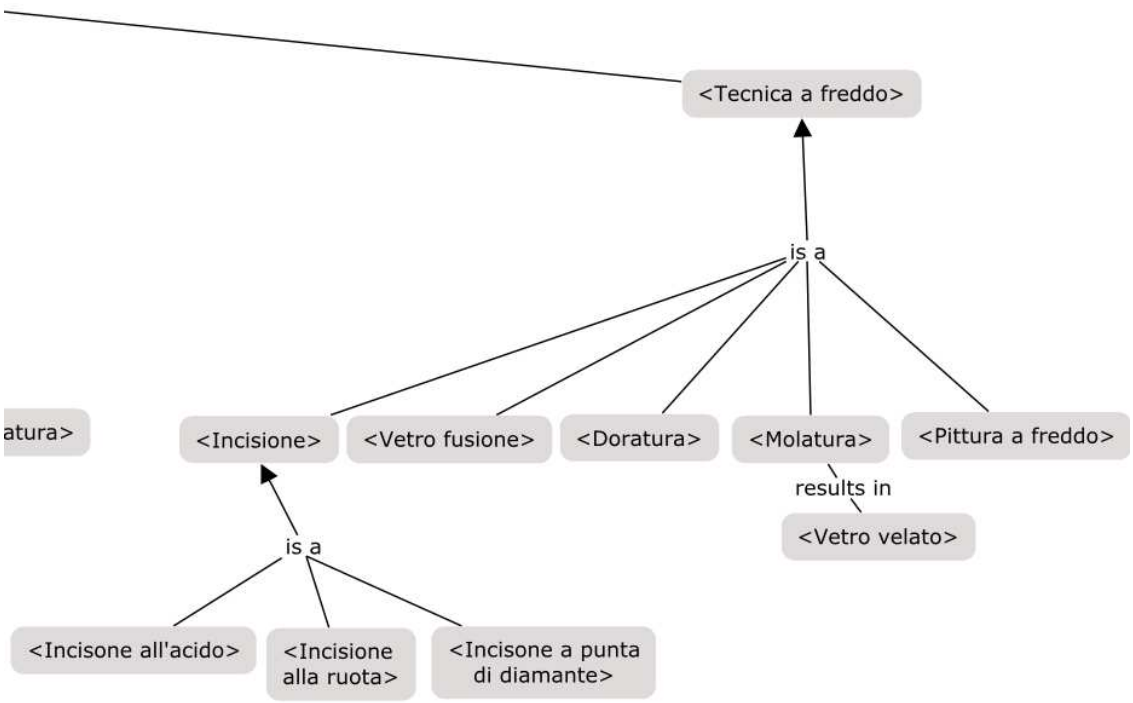


Figure 13 – The second main branch: the cold technique

The objects are the result of different ways of decorating the glass, which aim at making them unique with an eye towards their impressive esthetics. It has to be noted that many notions on the map are in Venetian dialect (<Tagianti>, <Bronzin>, <Balloton>, etc.), an element of the language that has been already introduced in Section 3.1. As here previously explained, the Murano artistic glass is clearly part of family traditions and the knowledge has been handed down over the centuries. The language conveyed in the workplaces of Murano is thus anchored in history, being scattered with many dialect terms which are still used today. This aspect can be considered as an obstacle to the understanding of the domain and makes the aid of terminological databases even more valuable for its study, comprehension and translation. Finally, the conceptual tree allows us to have a deeper knowledge of the domain, by showing the relations between concepts. The study of the domain must, however, be completed through other fundamental steps, which will be presented in the next sections and will be useful to carry out a satisfying terminological work. The next section, in particular, will present how the corpus has been

compiled and will focus on the linguistic dimension of analysis. As stated in the previous chapters, the analysis must consider both dimensions, the conceptual and the linguistic one (see the notion of integrated methodology theorized by Santos and Costa in Chapter 1).

4.2 The Specialized Corpus

Before getting to the core of the compilation of the corpus and the texts object of the research, it is necessary to briefly define the specialized corpus from a theoretical point of view. The second step of the terminological work aims at collecting the written specialized documents, which are the perfect environment where terms appear. As L'Homme (2004: 119) states: "Les textes spécialisés fournissent des *attestations* des termes, c'est-à-dire une preuve qu'ils existent et qu'ils sont effectivement utilisés par les spécialistes [Specialized texts provide attestations of the terms, so they prove they exist and are actually used by specialists].[76] A specialized corpus contains texts dealing with specialized subject fields and specialized knowledge. Indeed, the terminology of the domain appears because texts are their natural linguistic environment. Moreover, specialized corpora are representative of usage in a specialized domain, since the text selection is done according to some explicit criteria (L'Homme 2004), which will be listed in the following Subsection 4.2.1. The corpus is indeed "selected, chosen or assembled according to explicit criteria, […] stored in electronic form, and it consists of pieces of naturally occurring language" (Pearson 1998: 43). The corpus compilation is a fundamental step of the terminology work, since terminologists rely on it as they are not expected to be experts of every domain they analyze for terminological purposes. A corpus allows them to acquire the knowledge required to describe a domain, along with all the lexical relations and structures which are useful to build the lexical networks.[77]

[76] The translation is ours.

[77] The lexical networks are the third step of a complete terminology work and will be presented in Section 4.3.

4.2.1 Texts Research and Selection

After having theoretically defined the notion of corpus, it is now needed to describe the step during which the texts have been selected. Within the project, two corpora have to be compiled, one for every language of study: Italian and German. The corpora are monolingual and characterized by dialectal terms: diatopic variants are disseminated in the texts chosen for every language. First of all, some criteria had to be satisfied. In this subsection, the texts selected will be presented along with the reasons why they have been chosen. The criteria on which every terminologist should rely for the corpus compilation are described by L'Homme (2004) in its book *La terminologie: principes et techniques*:

- Definition of the subject field: the subject field has to be as precise as possible. In our case, the domain is limited to the Murano artistic glass (and not the artistic glass in general).
- Language and language variety: the terminological project aims at analyzing the Italian and German languages.
- Language in which the texts are written originally: most of the texts selected for the two corpora are not translations, in order to satisfy the principle of authenticity. The texts chosen for both corpora have Italian and German as drafting languages.
- Level of specialization: ideally, texts to be taken into account should be written only by experts. Indeed, texts that are really representative of a domain are the outcome of experts' knowledge. If they are not written by whom has the competences, they would not be reliable objects of analysis. The texts of our corpora are mainly explanatory texts, written by experts for non-experts who want to know about the domain. The texts chosen are thus addressed to the public and only a few of them are written for experts by experts.
- Text types: between them, specialized documents can be considered as such if they are scientific journals, official reports, professional magazines, in-house publications, theses, etc. The texts that will be presented later satisfy the above-mentioned textual types.

- The form in which texts are conveyed: usually, the written form is preferred. All the texts selected here are written texts, also considering that the texts have been found on electronic devices and on the net.
- Publication time: typically recent. All the texts selected are indeed recent texts, because the project aims at creating terminological entries for the CAMEO databank. The terms must be updated for the export purposes of the terminology resource.
- Evaluation criteria: it is important to consider the identity of the author/authors, the publisher and the overall quality of writing. The criteria have been slavishly followed, since lots of texts found on the Internet missed some information (for example, the author) and therefore they have not been chosen. The experts of the domain are mainly the glass makers, so the texts from the web sites of the Murano glass factories have been privileged and they are in the corpus in greater numbers.
- Corpus size: there's not a real agreement on the ideal size of a corpus. However, if considering how the domain is delimited and the number of texts collected, the size for the German corpus is of around 23.000 words; the Italian one is instead of around 90.000 words. The reasons of this discrepancy will be later explained.

During the research, the following research publications' platforms (which are ordered according to the number of texts selected from them) have been used for exploring the texts:

- Research Gate, a network where scientists and researchers share their research outcomes.[78]
- Google Scholar, through which it is possible to search for scholarly literature. The "Advanced Search" option has been used to add some useful parameters: the file type, the language, the data of publication. For the compilation of the corpus, these options are very practical to meet the criteria for our project, according to which only recent texts are to be preferred.[79]

[78] The link to the resource is: https://www.researchgate.net
[79] The link to the resource is: https://scholar.google.com

- The browser web Google. The texts have been found by typing a list of key words in the search engine.
- Jstor, a digital library of academic journals, book and primary sources.[80]
- Academia.edu, a platform where you can find research papers on different scientific topics.[81]

As regards the Italian corpus, the research has been easier if compared to the German one. The title of the corpus is "vetro di Murano" and the Italian texts therein contained are available and disseminated on the Web. The only challenge to face with has been the validation of the quality of texts. The texts chosen can be summed up as follows:

- Texts from the web sites of famous glass factories in Murano, which have the trademark "Vetro Artistico di Murano" (as explained in Section 3.1): the Venier glass factory, the Murano Glam glass factory, the Murano Design glass factory, the Massimiliano Schiavon Art Team glass factory. The texts list the terminology of the Venetian glass, by explaining and defining the terms and the techniques to raise the awareness of the domain.
- Texts from the web sites of some Murano glass retailers, which are all sited in Murano. The purpose of such texts is the same of that of the above-mentioned category. They have been chosen for the reasons explained below:

    - Texts of the Zogia Arte e Antiquariato glass retailer, which is specialized in the sale and purchase of antiques. The owner of the shop is presenter of television programs dedicated to antiques, in particular it is specialized on the Murano glass antiques.[82]
    - Texts of the Made Murano Glass glass retailer. The owner is from the Murano Island and has always assimilated the knowledge of the master glassmakers. His shop sells Murano glass artifacts online.[83]

[80] The link to the resource is: https://www.jstor.org
[81] The link to the resource is: https://www.academia.edu
[82] https://www.zogia.it/#chisiamo [last visited: 18/10/2024]
[83] https://www.mademuranoglass.com/it/chi-siamo/ [last visited: 18/10/2024]

    - Texts of the GV Oggettistica Murano Glass Shop glass retailer. The owners personally go to Murano for choosing the objects to be offered from their shop, by witnessing their specialized knowledge in the field.[84]
- Parts of theses/masters dissertations of the University of Padua and the University of Venice focusing on the Murano artistic glass.
- The research volume *Murano Pixel*, published within the project "Il Progetto circolare del vetro artistico di Murano: come gli scarti divengono risorse per l'industria artigiana 4.0", in collaboration with the Ca' Foscari University of Venice, the Iuav University of Venice and some glass factories of Murano, which are the project partners.
- Explanatory texts from the MUVE (Fondazione Musei Civici Venezia) website. The information drawn from the Glass Museum of Murano has been extremely important for both the conceptual and linguistic dimensions (see Section 4.1).
- Texts published in the scientific *Journal of Glass Studies* (1959-2023), so written by experts for experts.
- Historical essays on the history of the glass art in Murano published by experts and professors who have a professional background and knowledge about Murano and its artistic activity.

The German corpus of the domain of study, entitled "Muranoglas" has been instead more difficult to compile. The reasons are clear: the Murano artistic glass is part of the Italian tradition. The knowledge related to the domain is generally transferred by the Italian experts, such as glass makers, researchers, professional critics and scholars of the field. The niche activity is carried out within the glass factories that are based in Murano and the products of art are exhibited and easily found mainly on the island. The artifacts and the art from which they originate are thus difficult to study and to approach. As a consequence, the original texts are mainly written in Italian, which is the native language of the glass makers. The specialized language of the artistic glass of Murano is part of the jargon of the glass masters and people of Murano. So, it is full of technical terms for which the equivalents are hardly known, since many terms are diatopic variants of the

[84] https://gvoggettistica.it/chisiamo/#:~:text=GV%20Oggettistica%20nasce%20nel%202007,riteniamo%20più%20particolari%20ed%20unici. [last visited: 18/10/2024]

Venetian dialect, which are related to its linguistic contamination. However, the artistic glass activity is famous and studied all over the world and some German texts have been found. The sections of the websites of many Murano glass factories, where you can choose the language in which you want to read the content, are usually automatically translated and have not been therefore selected.[85] Indeed, the German texts of the specialized corpus have been meticulously studied before being included in the corpus. The list is here provided:

- Texts published on the website of the Museum Glass of Murano. In this case, the texts are probably translations. However, the quality of the translation is certainly high, considering that they are explanatory texts addressed to the German tourists, who visit the museum. A bilingual Italian/German glossary of the technical terms of the Murano artistic activity has been also chosen.
- Texts from the websites of some Murano glass retailers in Germany, which works in the field and in close collaboration with experts of the glass factories in Murano. They usually offer explanatory or promotional sections (such as glossaries with definitions of the most common terms).
- The explanatory texts included on the website of the LWL-Museum Industry Museum, in Dortmund, where the permanent exhibitions of the Murano glass are described.
- The publication entitled *Glas – 17. Jahrhundert bis 1940* by Walter Spiegl, which is a glass expert and has already published numerous specialist books on the subject of glass, including the Venetian glass.[86]
- A text published by the Scientific Portal Chemie.de. It is the leading specialist Portal for the chemical industry, the research and science in Germany. [87]

[85] The content is often translated thanks to the machine translation systems, such as Google Translate. The only case of a site, which is probably automatically translated, but it was anyway inserted is: https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker.

[86] https://www.artbooksfalco.com/product-category/vetro-europeo-dal-17-secolo-al-1940/ [last visited: 18/10/2024]

[87] https://www.chemie.de [last visited: 18/10/2024]

- The articles published on the journal WELT in the section "Reise" (eng. 'Travel'). The journal is one of the most important and consulted German daily newspaper, and, therefore, it has been considered a valid source for the corpus.

The Italian and German corpora are different in terms of size, because the second one is smaller than the Italian one for the above-mentioned reasons and results thus to be meager. They still share some criteria:

- The text type
- The domain of study
- The form in which texts are conveyed
- The publication time: the texts of both corpora are pretty recent, except for two texts of the *Journal of Glass Studies* included in the German corpus.
- The evaluation quality

After having described the collection of texts which are part of the two corpora of analysis, it is necessary to move on to the step focusing on the compilation and subsequent extraction of terms thanks to the online tool Sketch Engine.[88] The next sub-section will present the process and the steps taken in such a purpose.

4.2.2 Sketch Engine and the Automatic Extraction of Terms

After having selected the texts for both corpora, their compilation is now discussed. This allows to identify the terms contained in the texts and automatically extract them. Sketch Engine is an online tool useful for linguistic purposes and, in our case, terminology study purposes. On its website, a section "What can Sketch Engine do?" perfectly sums up its function:

> *Sketch Engine is an online text analysis tool that works with large samples of language, called text corpora, to identify what is typical and frequent in a language and what is rare, outdated, going*

[88] The link to the resource is: https://www.sketchengine.eu

out of use or what new words or grammar are beginning to be used. In a nutshell, Sketch Engine is a tool to learn how language works.[89]

The resource is actually an "excellent guide to linguistic exploration" (Kunilovskaya and Koviazina 2017: 504). As Kilgariff (2014: 11), creator of the tool, states: "one of the challenges for terminologists is finding the concepts and terms. The Sketch Engine can be used for term-finding." The information, which can be sought in a specialized corpus, is indeed extremely helpful for our research as terminologists. As previously mentioned, the corpus contains a vast repository of terms. For instance, the corpus provides us a genuine snapshot of the terms usage and their frequency/distribution. The frequency is a proof of the term usage by experts, whereas the distribution is a proof of term use by multiple experts (L'Homme 2004). Corpora give us important data about the relations between terms, their behavior in texts and the terminological variants, which are all central elements for the validation of the conceptual structure (see Section 4.1). Kunilovskaya and Koviazina (2017: 503) define the tool as follows:

SkE is a leading online corpus analysis service with a range of highly flexible functions to build and analyze KWIC concordances for items ranging from lemmas to CQL query strings. It also offers common statistical methods to produce frequency statistics, calculate co-occurrence patterns, visualize contrasts and to explore user and multilingual corpora (Kilgariff et al., 2014a).[90] *(Maria Kunilovskaya and Marina Koviazina 2017: 503)*

The use of the resource starts with the uploading of your own texts, but you can also find them on the web: "as well as preloaded corpora (managed by the Sketch Engine team) users can upload, build, process, share and explore their own corpora." (Kilgariff et al. 2014: 21) The interface of the query tool is easy to use and it is user-friendly; the compilation and uploading of texts have run smoothly and rapidly. Kunilovskaya and Koviazina (2017: 504) outline the core functions of the system touched upon by Kilgariff et al. (2014) in their article *The Sketch Engine: Ten Years On*:

[89] https://www.sketchengine.eu/what-can-sketch-engine-do/ [last visited: 18/10/2024]
[90] SkE is the abbreviation of Sketch Engine.

- *"Concordance" searches a corpus for a word form, a lemma, a phrase, a part of speech tag, etc. The system converts all queries into Corpus Query Language (CQL) which can be used directly.*
- *"Word List" generates frequency lists of words, lemmas, n-grams or key words.*
- *"Keywords and Terms" enables extraction of core lexis in a corpus using "keyness score".*
- *"Collocations" calculates words that are statistically associated with the query term. The system uses several measures to find collocation candidates: T-score, MI, log likelihood, logDice, etc.*
- *"Word Sketch" generates summaries of a word's grammatical and collocational behaviour using "sketch grammar".*
- *"Word Sketch Difference" offers a comparison of two words based on collocations.*
- *"Thesaurus" creates a distributional thesaurus based on common collocation. The resulting list of words includes items in various semantic relationships.*
- *"Trends" helps to conduct a diachronic analysis of word usage.*
- *"WebBootCaT" is a set of programs to compile a user web corpus (Kilgariff et al. 2018: 504).*

The corpus research skills are fundamental to analyze the authentic data of the specialized knowledge. As for the project here presented, the texts have been uploaded after having created a user profile as academic users, which was possible thanks to the collaboration with the University of Padua, renewed this year. Here the different phases of the process:

1. After having logged in, it has been clicked on "new corpus"; then, the name, the type and the language have been chosen ("vetro di Murano" for the Italian corpus and "Muranoglas" for the German corpus).
2. Another page has been then opened. The tool makes available two options, through which the compilation of the corpus can start (Figure 14).

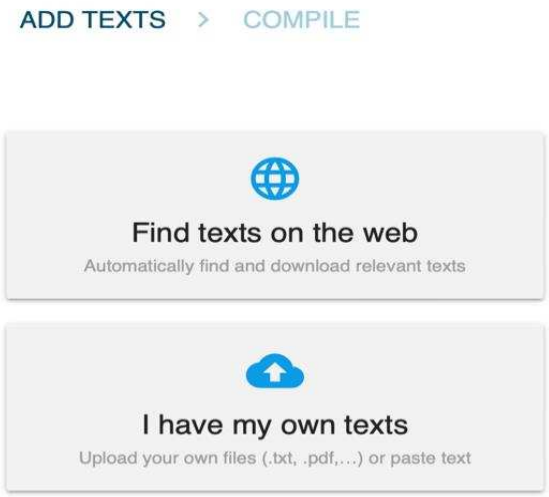


Figure 14 – The "add texts" option in Sketch Engine

The texts can be found on the web (the tool automatically finds and downloads the texts) or they can be directly uploaded from your personal computer. The corpora have been created by using both options. As for what concerns the voice "find texts on the web", the option "URLs" under "input type" has been firstly selected. The list of the URLs of the previously selected texts has been provided (one URL per line). Once the list is completed, it has been clicked on "go".

3. The corpus content has been processed (as shown in Figure 15), until the 100 % has been achieved. The number of words processed was indicated on the right side. Then, it has been clicked on "next", and then on "compile" for the corpus building.

Figure 15 – Corpus compilation processing in Sketch Engine

4. The last part of the uploading of texts has been achieved by clicking on "dashboard corpus", then on "manage corpus" and "make bigger", as shown in Figure 16. Here the option "I have my own texts" has been selected (see Figure 14). The texts uploaded in this phase are texts previously downloaded. They all have a pdf. format, except for two texts in .txt: some chapters of the two master's thesis (see Section 4.2.1) have been converted into .txt, after the images and the superfluous sections not focusing on the specific domain have been removed. Once the process is completed, it has been clicked on "next", and then on "compile" for the corpus building.

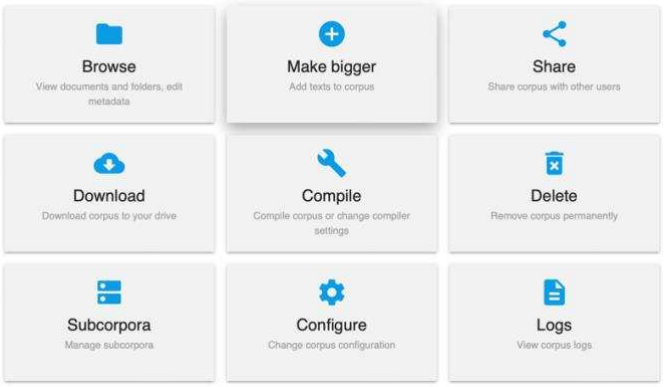


Figure 16 - Managing the corpus in Sketch Engine: the "make bigger" option

Then, the texts have been ready to be analyzed. The corpora are listed on the right side of the dashboard, under the voice "recently used corpora". If you click on "corpus info", the statistics for the whole corpus are provided: the counts, the lexicon sizes, etc. As

previously mentioned, the corpus size is not the same for both corpora, even if they share some criteria (the German corpus has 22.656 words, the Italian one has 97.899 words). In this scenario, it becomes even more important to provide multilingual databases that offer support for translation and technical writing purposes. In particular, the "text type analysis" option is interesting, as it shows the metadata attached to the corpus structures (for example, the documents). Here, you can filter for structures and text types. What has been figured out from the corpora is shown in the two pie charts of Figure 17 and 18.

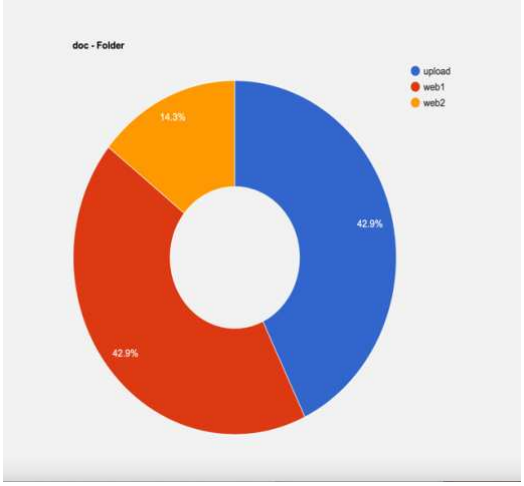


Figure 17 - The text distribution percentages of the German corpus

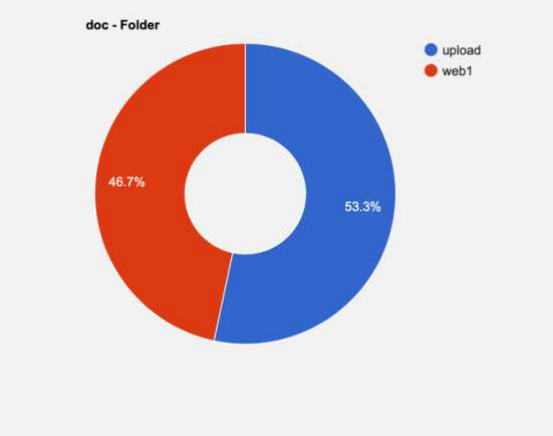


Figure 18 - The text distribution percentages of the Italian corpus

As regards the first pie chart (Figure 18), the blue part is representative of the texts which have been uploaded. The red and orange parts are representative of the texts which have been drawn from the web through the list of the URLs selected after the research on the net. Two different folders ("web 1" and "web 2") are indicated, but they have to be seen

as one: the URLs have been listed in two different moments and this is why there are two different folders, which are colored differently. The German pie chart reports that the number of texts drawn from the web is higher (57,2 %) than the texts which have been uploaded (42,9 %). Indeed, the number of the German scientific articles, books, etc. about the artistic Murano glass domain is smaller than the number of texts found on the web (glass retailers websites, glass factories websites, museums websites, etc.). As regards the second pie chart (Figure 18), it gives us the metadata about the Italian texts. It reflects the opposite situation: the number of texts coming from the uploading is higher, but the difference is not significant. Indeed, the Italian literature about the domain is wider. So, the graphs witness that most written sources coming from the websites have been selected for the German corpus, and those coming from the uploading have been mainly selected for the Italian corpus.

As previously mentioned, data collection on terms is based on the use of concordances. As L'Homme (2004) affirms, Sketch Engine finds the words within the texts of a corpus which are likely to be terms. Data extracted from computer tools are the outcome of an automatic procedure. Therefore, they must be always interpreted and evaluated by humans. Among the functions available on the tool, the "keywords" section is the most important for our research. In Sketch Engine:

- Keyword and term extraction is a functionality used to extract terminology for use in translation and interpreting; extract single word and multi-word units which are typical of a corpus/document/text or which define its content or topic; compare two corpora/documents/texts by identifying what is unique in the first corpus compared to the second. The results are divided into keywords (single word items) and terms (multi-word items) and are displayed together with links to the sentences in both the focus and the reference corpora.[91]
- Wordlist tool generates frequency lists of various kinds: nouns, verbs, adjectives and other parts of speech; words beginning, ending, word forms, tags, lemmas and other attributes.

[91] https://app.sketchengine.eu/#keywords?corpname=user%2FPriscillaP%2Fmuranoglas&tab=basic&k_itemsPerPage=50&ktab=terms&n_itemsPerPage=50&ref_corpname=preloaded%2Fdetenten20_rft3&showavgstar=0&showcounts=0&showdocf=0&showarf=0&showaldf=0&showreldocf=0&showrelfrq=0&showscores=0&showwikisearch=0&t_itemsPerPage=50&usekeywords=1&usengrams=0&useterms=1&w_itemsPerPage=50&include_nonwords=0 [last visited: 18/10/2024]

Sketch Engine defines "terms" only the multi-word items. The ISO 1087: 2019 standard instead distinguishes the term between "single-word term" and "multi-word term".[92] Concerning the German corpus "Muranoglas", the first 50 results for the single-word terms are shown in Figure 20 and want to serve as examples for reflection and classification of terms found by the tool.[93] The tool identifies as single-word terms (Figure 19):

- Proper names, which have to be excluded: Kunckel[94], Murano Mathesius, Spiegl, Buquoy, etc.
- Raw materials terms: *Soda*, *Saltz*, *Siliciumdioxid*, *Pottasche*, *Salpeter*, *Braunstein*, etc.
- Denominative variants: *Crystall/Kristallglas*, *Glas/Glaß*, etc.[95]
- Italian/French terms, which have to be excluded: *vetro*, *neri*; *Venise*, *façon*, etc.
- Technical terms: *Glasmacher*, *Glasmasse*, *Flussmittel*, *Glaskunst*, *Glashütten* (which has to be lemmatized into "*Glasshütte*"[96]), *Glasware*, *Glasbläser*, *Schmelze*, *Muranoglas*, *Schmelzvorgang*, *Nuppen*, *Glasmacherpfeife*, *Glasofen*, etc.
- Terms referring to glass techniques not related to the Murano glass domain: *Waldglas* (eng. 'forest glass')[97], etc.
- Terms which are not technical terms of the domain of study: *levantisch*, *zutrinken*, *Schleifglas*, *Pflanzenasche*, *Auktionskatalog*, *böhmisch*, etc.
- Terms which are part of multi-word terms: *venezianisch*, *venezianer*, *muraneser,* etc.

[92] The single-word term is a "simple term, that consists of one word"; the multi-word term is a "complex term that consists of more than one word" (ISO 1987: 2019: 8).

[93] The reference corpus is "German Web 2020", a huge corpus already provided by the tool.

[94] Johannes Kunckel is the name of a famous German glassmaker.

[95] See Section 1.5 for the definition of "denominative variation".

[96] The lemmatization is the process of grouping together different inflected forms of the same word (as the plural form into singular form). The lemmatization is not always needed during our research, because some forms are generally found in the plural form (for example, "*conterie*"). The information has been found here: https://www.techtarget.com/searchenterpriseai/definition/lemmatization#:~:text=Lemmatization%20is%20the%20process%20of,processing%20(NLP)%20and%20chatbots. [last visited: 18/10/2024]

[97] "Waldglass" is a medieval kind of glass produced in northwestern and central Europe, using wood ash and sand as the main raw materials and made in factories know as glasshouses in forest areas. The information has been found here: https://en.wikipedia.org/wiki/Forest_glass [last visited: 18/10/2024]

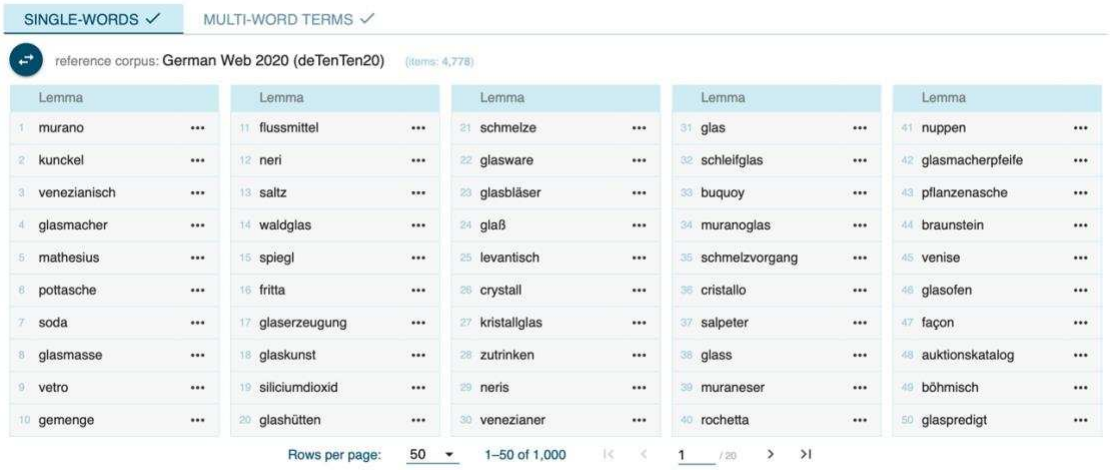


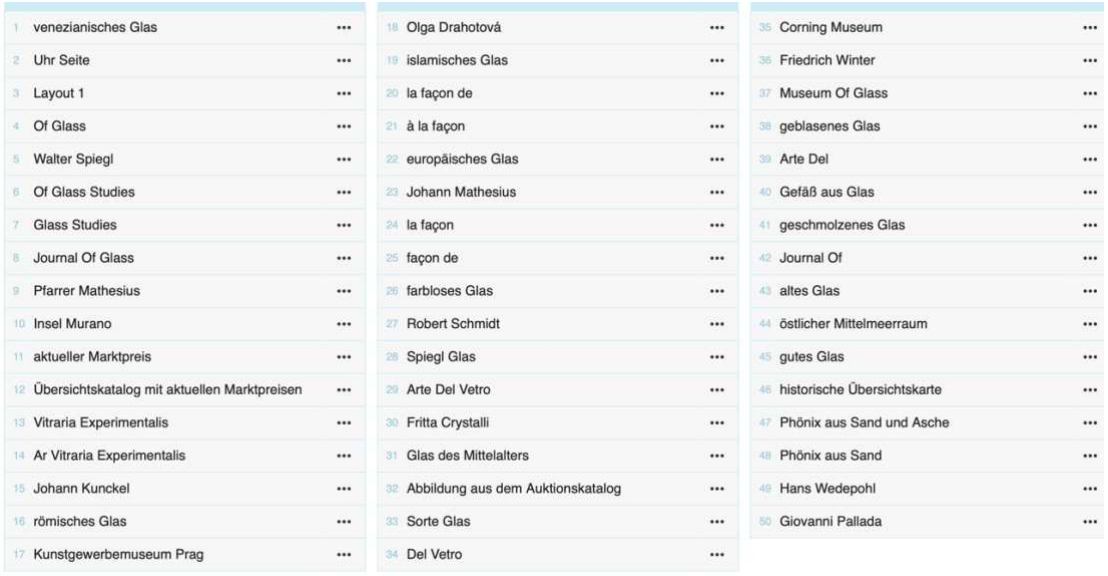
Figure 19 – Single-word terms in Sketch Engine: the German focus corpus

As for what concerns the multi-word terms, the list of the first 50 is here provided (Figure 20). In the list, many words to be cut away from our research have been found. Examples are:

- Proper names: Johann Kunckel, Giovanni Pallada, etc.
- Foreign terms: Journal of Glass, *à la façon*, *Arte del Vetro*, *Museum of Glass*, etc.
- Terms which are meaningless or not related to the domain: Layout 1, Of Glass, *aktueller Marktpreis*, Vitraria Experimentalis, *römisches Glas* etc.

Among the 50 terms of example, not so many of them are significant for the work. The following will be the only candidate terms among the first 50:

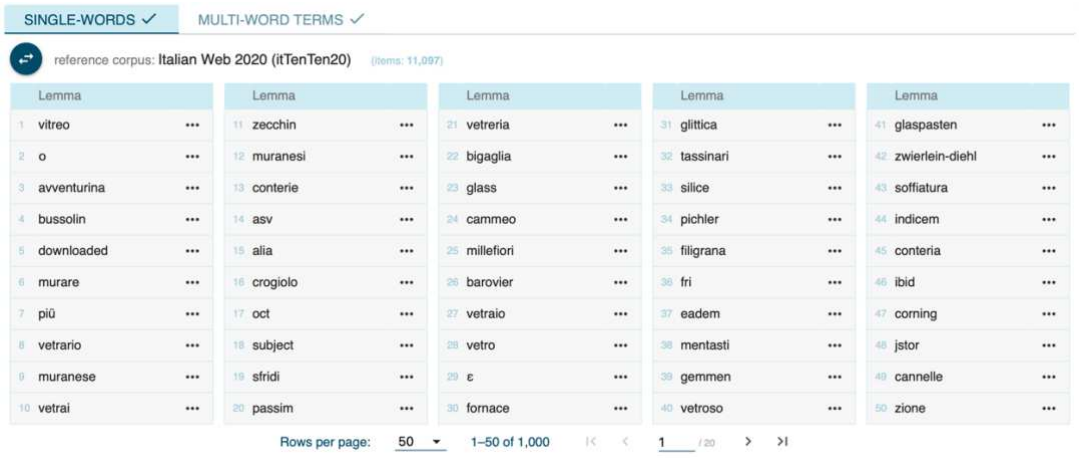
- *farboloses Glas, geblasenes Glas, geschmolzenes Glas*



1 venezianisches Glas	18 Olga Drahotová	35 Corning Museum
2 Uhr Seite	19 islamisches Glas	36 Friedrich Winter
3 Layout 1	20 la façon de	37 Museum Of Glass
4 Of Glass	21 à la façon	38 geblasenes Glas
5 Walter Spiegl	22 europäisches Glas	39 Arte Del
6 Of Glass Studies	23 Johann Mathesius	40 Gefäß aus Glas
7 Glass Studies	24 la façon	41 geschmolzenes Glas
8 Journal Of Glass	25 façon de	42 Journal Of
9 Pfarrer Mathesius	26 farbloses Glas	43 altes Glas
10 Insel Murano	27 Robert Schmidt	44 östlicher Mittelmeerraum
11 aktueller Marktpreis	28 Spiegl Glas	45 gutes Glas
12 Übersichtskatalog mit aktuellen Marktpreisen	29 Arte Del Vetro	46 historische Übersichtskarte
13 Vitraria Experimentalis	30 Fritta Crystalli	47 Phönix aus Sand und Asche
14 Ar Vitraria Experimentalis	31 Glas des Mittelalters	48 Phönix aus Sand
15 Johann Kunckel	32 Abbildung aus dem Auktionskatalog	49 Hans Wedepohl
16 römisches Glas	33 Sorte Glas	50 Giovanni Pallada
17 Kunstgewerbemuseum Prag	34 Del Vetro	

Figure 20 – Multi-word terms in Sketch Engine: the German focus corpus

The Italian corpus is now analyzed. The first 50 single-word terms extracted are displayed in Figure 21.



SINGLE-WORDS ✓ MULTI-WORD TERMS ✓

reference corpus: Italian Web 2020 (itTenTen20) (items: 11,097)

Lemma	Lemma	Lemma	Lemma	Lemma
1 vitreo	11 zecchin	21 vetreria	31 glittica	41 glaspasten
2 o	12 muranesi	22 bigaglia	32 tassinari	42 zwierlein-diehl
3 avventurina	13 conterie	23 glass	33 silice	43 soffiatura
4 bussolin	14 asv	24 cammeo	34 pichler	44 indicem
5 downloaded	15 alia	25 millefiori	35 filigrana	45 conteria
6 murare	16 crogiolo	26 barovier	36 fri	46 ibid
7 più	17 oct	27 vetraio	37 eadem	47 corning
8 vetrario	18 subject	28 vetro	38 mentasti	48 jstor
9 muranese	19 sfridi	29 ε	39 gemmen	49 cannelle
10 vetrai	20 passim	30 fornace	40 vetroso	50 zione

Rows per page: 50 1–50 of 1,000 1 / 20

Figure 21 – Single-word terms in Sketch Engine: the Italian focus corpus

The example terms displayed in Figure 21 can be classified as follows:

- Technical terms of the Murano glass domain: *avventurina, crogiolo, vetreria, millefiori, vetraio, vetro, furnace, filigrana, soffiatura, silice, cameo*, etc.
- Proper names of Murano glassmakers or experts, which have to be excluded: Barovier, Tassinari, Zecchin, Corning, etc.
- Part of multi-word terms: *vitreo, vetroso, muranesi,* etc.

- Terms which are not candidate terms (many of them probably originate from typing or extraction errors): *murare, piü, o, asv, oct, zione,* etc.
- Terms of the glass domain, which don't refer to the artistic activity of Murano: *glittica, cannelle,* etc.
- German and foreign terms: many of them probably come from the text by Gabriella Tassinari*, Osservazioni sulla produzione di paste vitree nel XVIII secolo e il caso di Venezia*, which includes the equivalents (ISO 704: 2022) of some technical terms used (as exemplified in Figure 22).[98] Examples are: subject, glass, *glaspasten* etc.

Ancora nella letteratura glittica c'è talvolta confusione di termini, o essi non vengono usati con un significato univoco, tra "gemme vitree", "paste vitree", "intagli di vetro" e "matrici vitree" ("glass paste", "pâte de verre", "Glasgemmen", "Glaspasten"); perciò è necessario intendersi, accettare e seguire una unica definizione. La più opportuna, a mio avviso, è quella già da tempo ripetutamente proposta e adottata dalla Zwierlein-Diehl[6]: "*Glasgemmen*", le repliche di vetro realizzate in età antica, e "*Glaspasten*" quelle di età moderna; in italiano, le espressioni

Figure 22 – The equivalents for the technical terms (Tassinari 2010: 168)

Finally, as for what concerns the Italian multi-word terms (Figure 23), the terms analysis has been similarly carried out. The list of the multi-word terms of the Italian corpus is the most fruitful. The first 50 terms extracted can be classified as follows:

- Terms belonging to the domain of the Murano glass: *pasta vitrea, lavorazione del vetro, vetro di Murano, vetro fuso, vetro colorato, canna da soffio, miscela vetrificabile, lavorazione a lume* etc. The category covers the most terms of the list provided by the tool.
- Terms which have to be excluded. Among them there are foreign terms and those not related to the domain: downloaded from, *voce di Murano*, *premi d'industria*, *consultazione luglio, antike gemmen* etc.

[98] Gabriella Tassinari is Professor of Science in Cultural Heritage in Milan.

- Proper names, which have to be excluded: Gabriella Tassinari, Alessandro Moretti, Luigi Zecchin, etc.
- The term "*mille fiori*" has been wrongly considered as a multi-word term. Otherwise, the correct form is "*millefiori*" and it a single-word term.

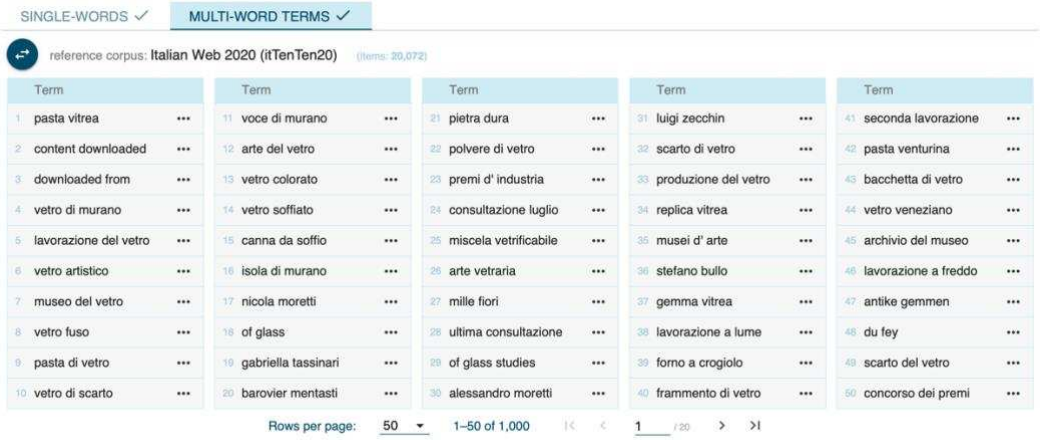


Figure 23 – Multi-word terms in Sketch Engine: the Italian focus corpus

The function "key-words" has thus allowed us to find the candidate terms, which have generally resulted to be nouns. Indeed, if the world-list function is checked and the advanced option "noun" is selected, it is discovered that the terms identified by the "key-words" option are also the more frequent. The German corpus has the terms "*glas*" (365), "*soda*" (32), "*ofen*" (32) as some of the most frequent; the Italian corpus has the terms "*vetro*" (1405), "*lavorazione*" (346), "*forno*" (162). As L'Homme (2004: 54) affirms, "la fréquence et la répartition constituent des indicateurs précieux en terminographie mais elles ne peuvent être utilisées aveuglément sans l'application de critères additionnelles. Une forme n'apparaissant qu'une seule fois peut être un terme [frequency and distribution are valuable indicators in terminography but they cannot be blindly used without the application of some additional criteria. A form appearing only once may be a term]".[99] The frequency has thus to be evaluated after having focused on the key words function, since the parameter is not sufficient if considered without other data. The frequency information about the terms can thus support and strengthen the validity of data previously found. The analysis, which has been carried out, makes clear the need to assess the results obtained. Indeed, it has witnessed the limits the computer automation has by

[99] The translation is ours.

nature. Notwithstanding, the results from the corpora aim at completing the work done with the conceptual diagram of the domain. They have been analyzed and the terms collected: this step is fundamental to build the lexical networks of the domain. The procedure illustrated for the first 50 terms collected thanks to the key-words function has been repeated for the other terms, so that a list of the most relevant ones has been prepared. The methodology adopted has been fundamental to find the most of the equivalents useful for the creation of the multilingual terminological records. Some of them have been found through a further research within parallel texts and bilingual dictionaries. The corpora have been key in searching for the material to write the definitions and the contexts for the creation of term records, and some important equivalence relations have been established. The next section will present the last step of the terminological work: the building of the lexical networks. The completeness of data, reached by following the two different dimensions of analysis, owes to the success of every step of the work.

4.3 The Lexical Networks

After having validated the terms in texts, which are the expression of the use of language in the specialized environments, the final step of the terminological work focuses on the realization of the lexical networks, which ideally should have the same structure of the concept diagram of the domain (see Section 4.1). Indeed, as Costa (2013: 37) affirms, "the terminologist's job is to establish a relationship between two systems of a different nature". The combination of the two allows to have a deeper knowledge of the domain. The extraction of the candidate terms, from which a list of the relevant ones has been validated, aims at supporting this step. Indeed, texts are the primary sources of specialized knowledge and are related to the linguistic dimension of terminology. Additionally, reference works, general and specialized dictionaries, encyclopedias, term banks and glossaries have been consulted for the creation of the lexical networks. They are an essential aspect of the work, considering that terminology is a twofold science (Santos and Costa 2015). It is important to underline that the "elaboration of lexical systems does not correspond to and not overlap the identification of concepts and the elaboration of concept systems. […] It is in the relationship between what is designated

and the designation that we can find the essence of terminological work" (Santos and Costa 2015: 157-159). Knowledge is grasped in its totality if both dimensions are explored and the information presented within concept systems is validated and integrated. The lexical networks are thus handled in the final step. For every language of a study, a lexical system has been drafted, composed of terms (also including some extracted from the corpus) and the relations between them. The same tool used for the concept systems has been used for the lexical networks: CmapTools. Within the lexical networks, some terms have not been intentionally included. The decision depends on the vast number of terms related to the domain and the impossibility of representing them all in detail.[100] For example, the terms referring to the people who carry the different work tasks out or those referring to the raw materials used in the processing of glass have not been selected for the lexical networks. Furthermore, some terms have not been considered essential for the purpose of the work, which culminates in the creation of the commercial terminological records for the CAMEO databank and the export of the Murano artifacts. As Santos and Costa (2015:169-170) underline:

> *although not experts, we already possessed some knowledge of the domain resulting from previous work and we were more sensitive towards the selection and correct usage of the corpus and also towards the lexical organization […]. Our theoretical hypothesis is that the map resulting from text analysis will contain linguistic manifestations of knowledge that might be close to the conceptualizations mirrored in the concept map previously built (Santos and Costa 2015: 169-170).*

Indeed, the terms defining concepts not taken into account in our first research have been found thanks to the Sketch Engine tool, and so they have been added to the lexical networks. But it is also true that some respective terms defining the concepts included in the concept map of the domain have not been found in the corpora. For the graphic construction of the lexical networks, the tool "concordance" has been used to search for the context of a term and assess its position on the map. Generally, the lexical networks have enriched the concept map and they faithfully reflect the concept system previously build. As for what concerns the concept map, also the lexical networks contain much more hierarchical relations rather than the non-hierarchical ones. The two lexical networks are

[100] The same criteria has been applied to the realization of the concept system of domain (see Section 4.1)

shown in Figures 24 and 30. It has to be underlined that the two Figures are here represented to show the work in its integrality, and thus they are not perfectly readable. For this reason, some zoomed screenshots are here provided.

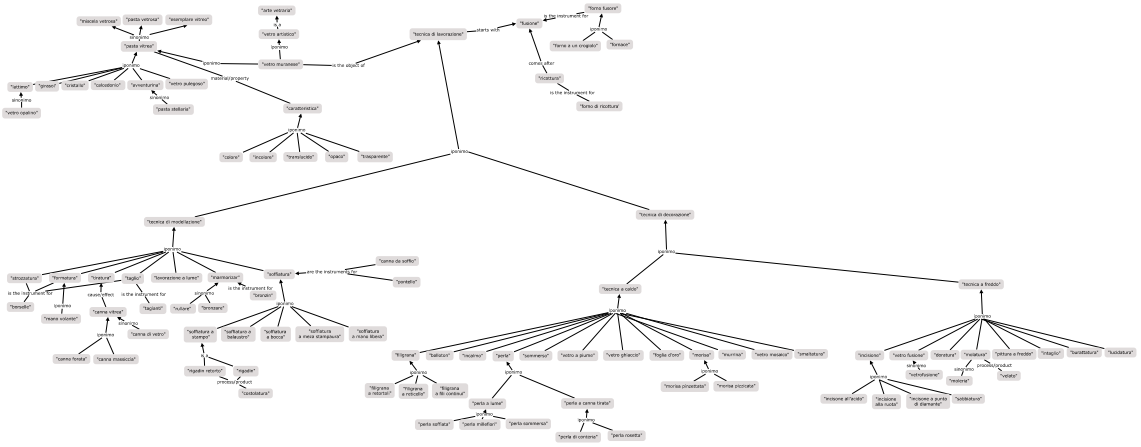


Figure 24 – Lexical network – Italian language

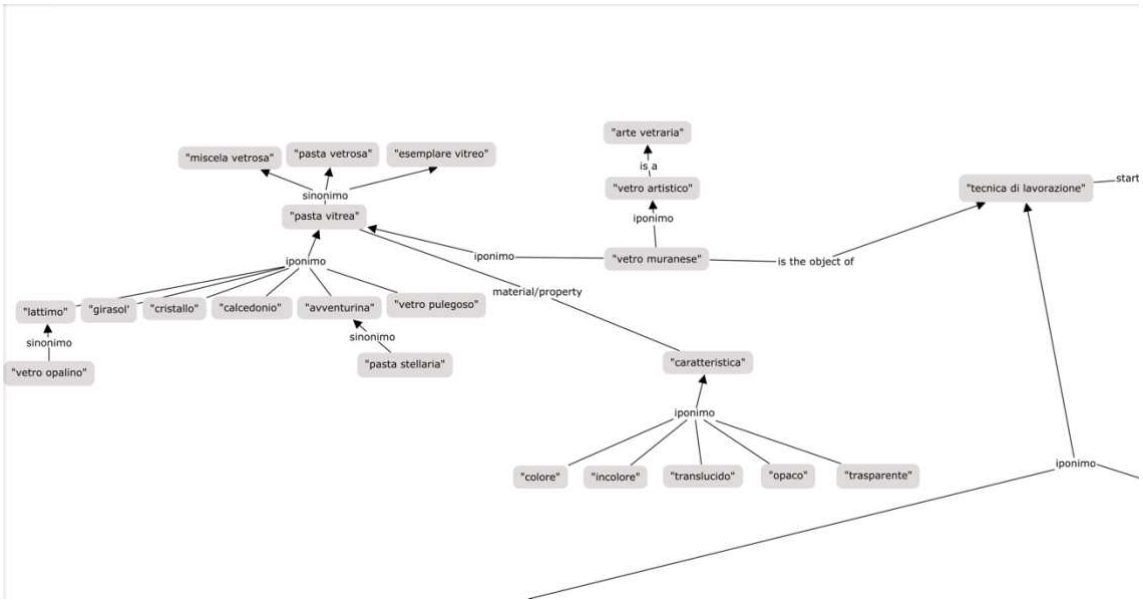


Figure 25 – Lexical network – Italian language

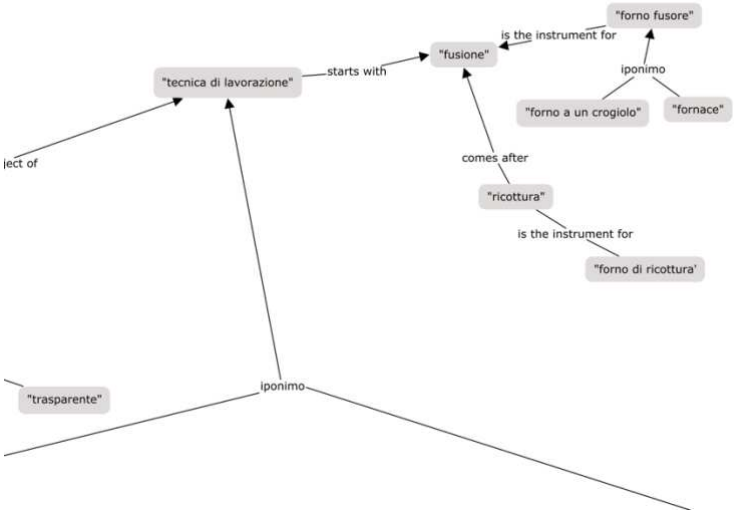


Figure 26 - Lexical network – Italian language

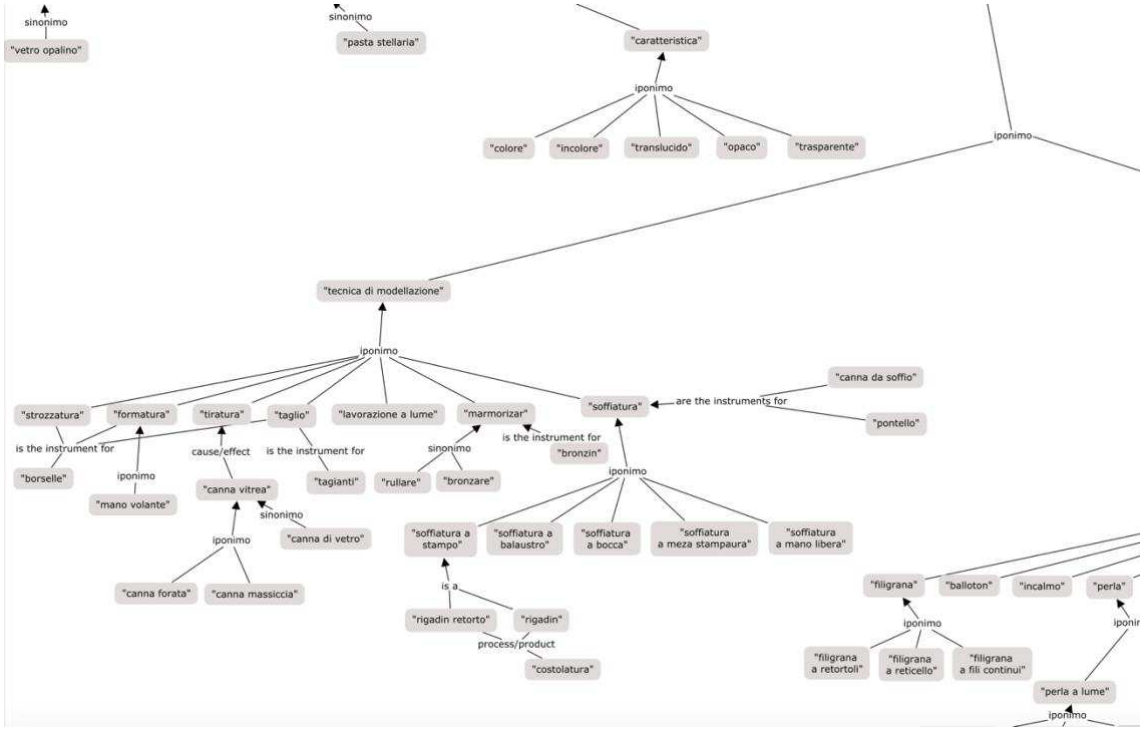


Figure 27 - Lexical network – Italian language

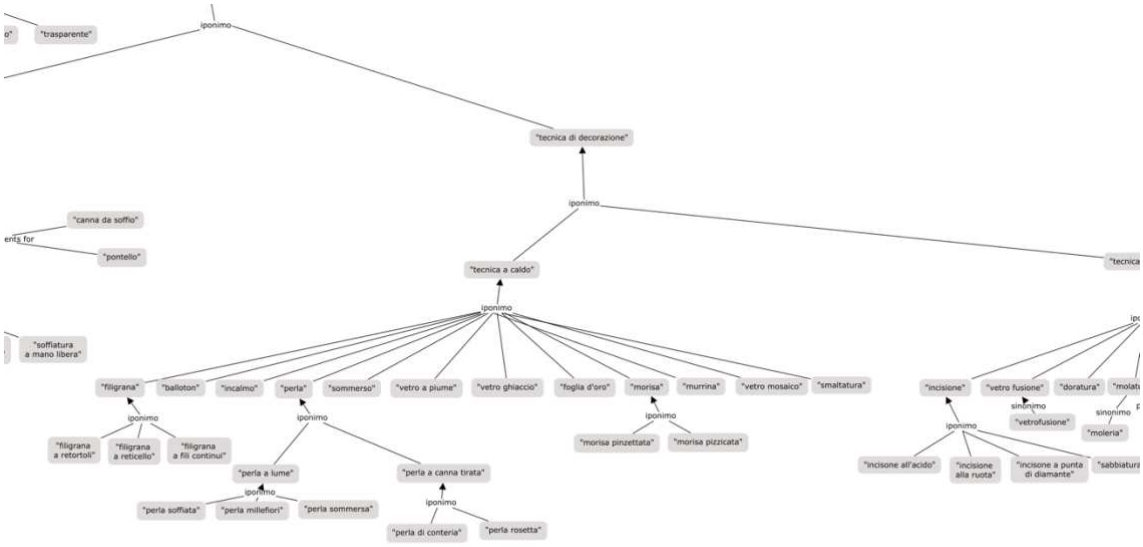


Figure 28 - Lexical network – Italian language

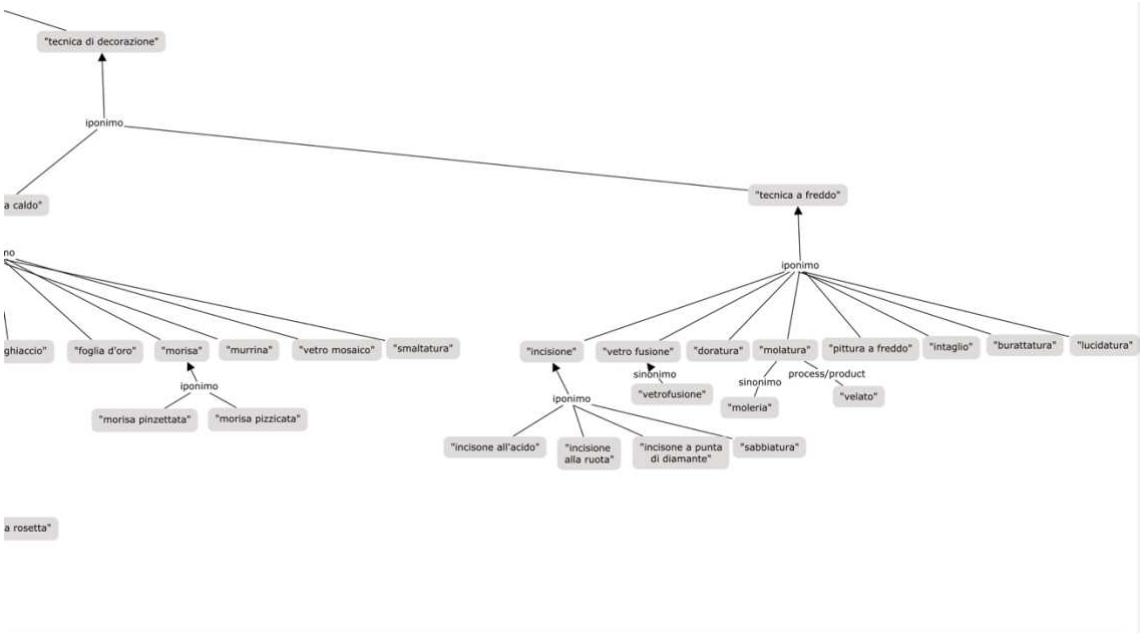


Figure 29 – Lexical network – Italian language

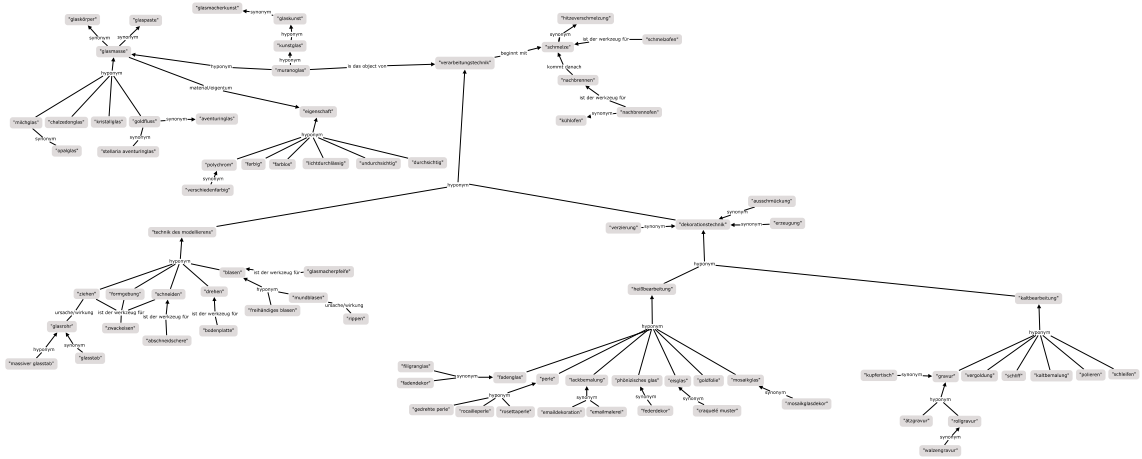


Figure 30 – Lexical network – German language

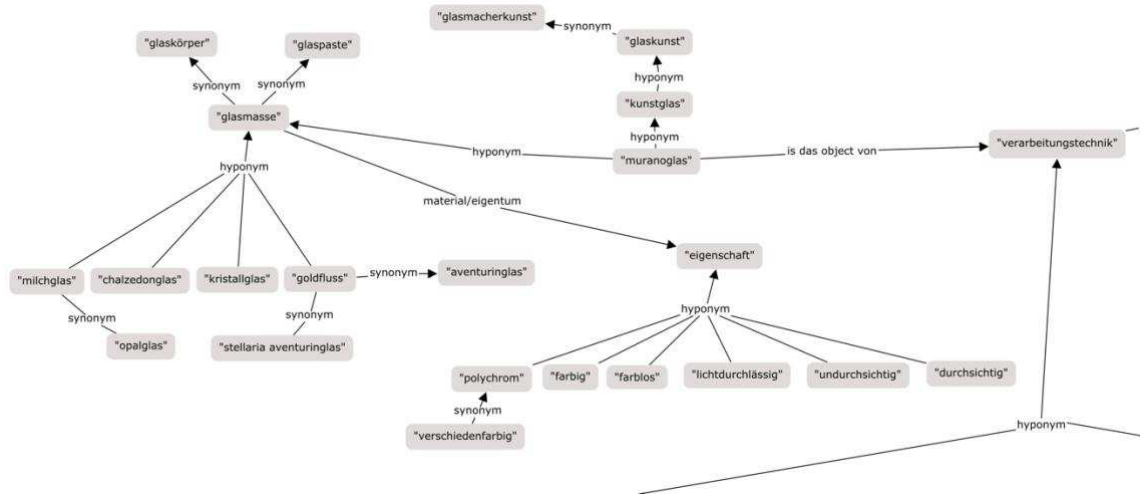


Figure 31 – Lexical network – German language

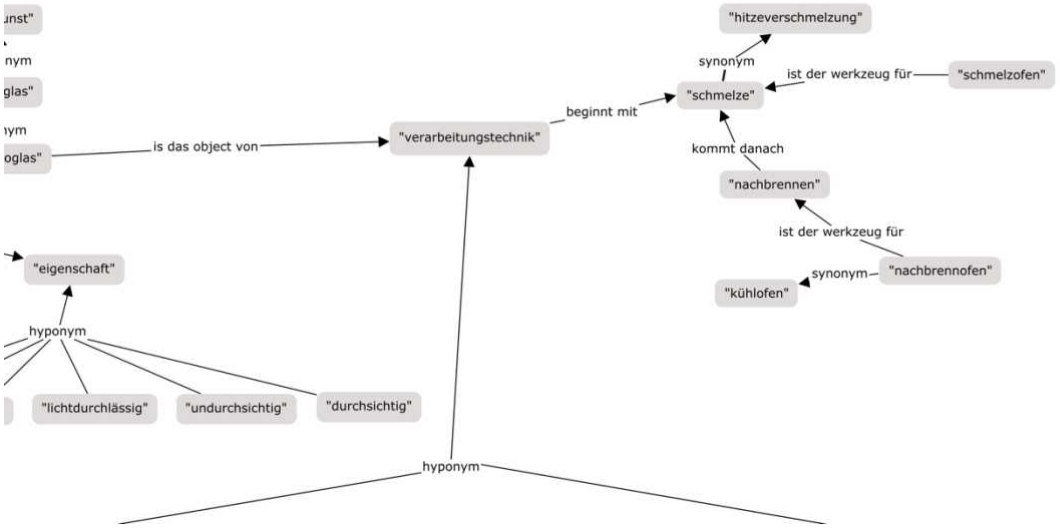


Figure 32 – Lexical network – German language

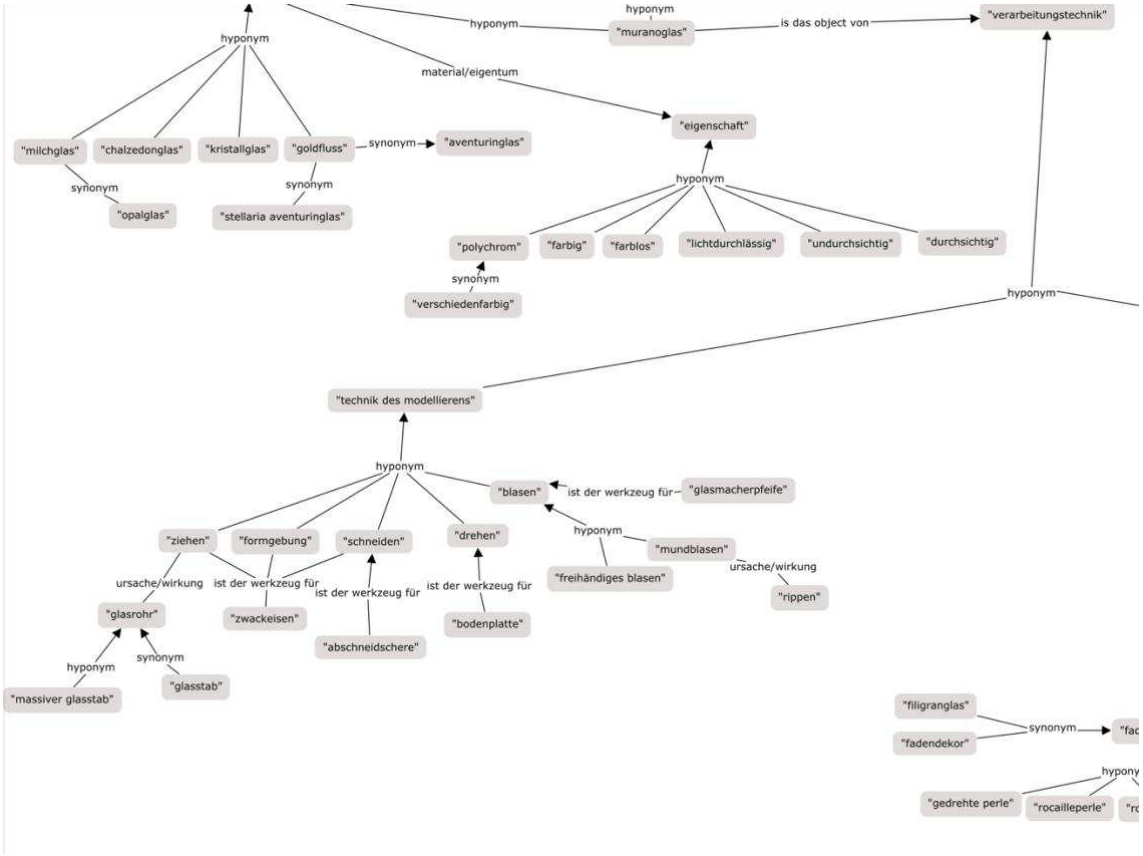


Figure 33 – Lexical network – German language

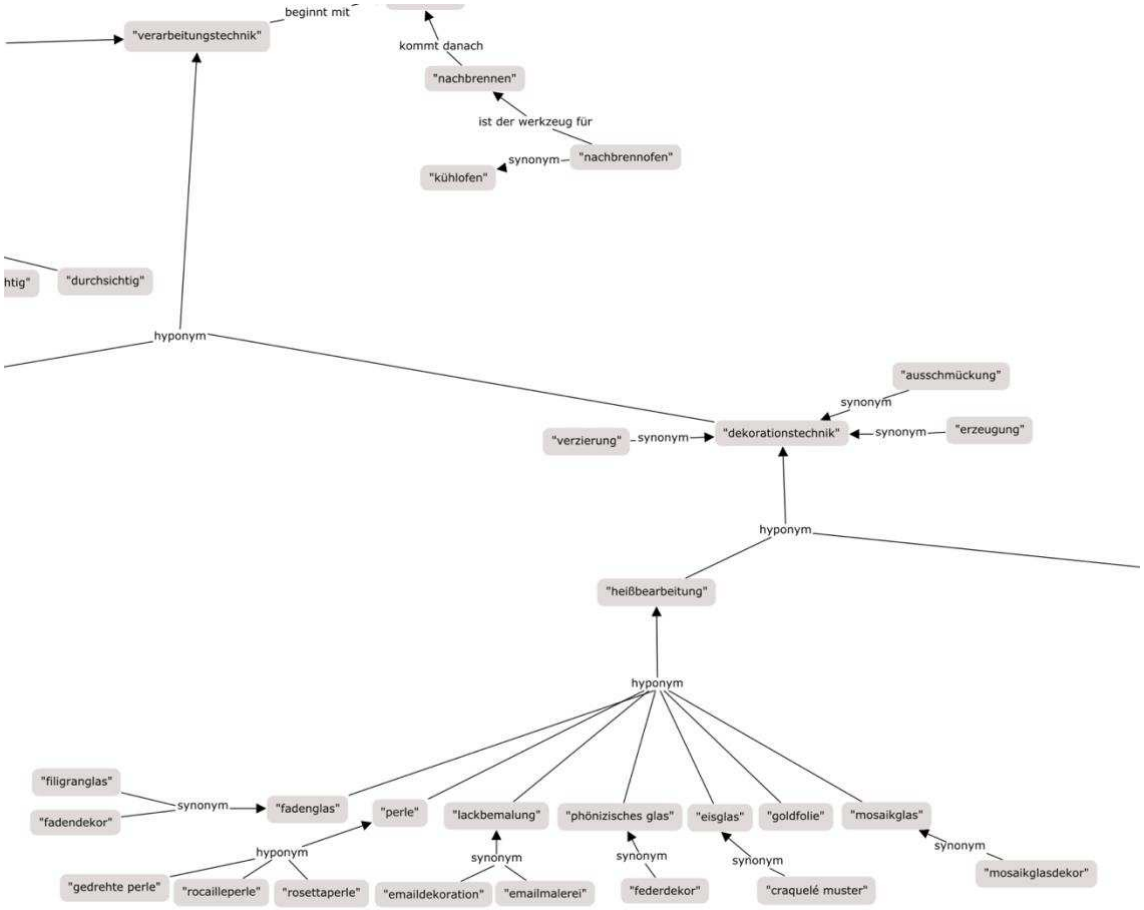


Figure 34 - Lexical network – German language

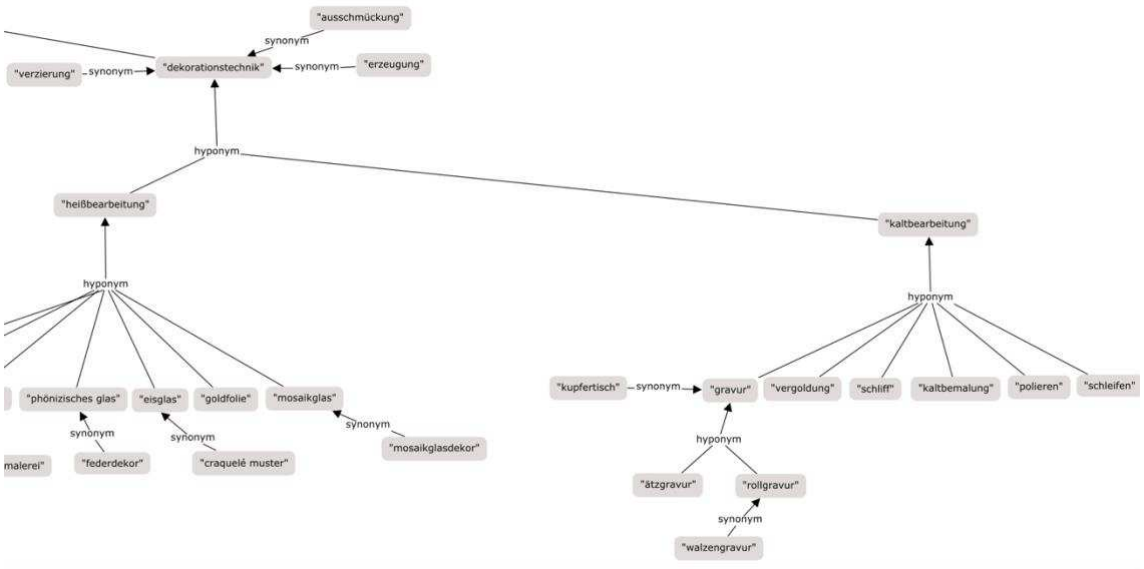


Figure 35 – Lexical network – German language

To create both lexical networks, the following resources have been used:

- the corpus and its "concordance" option have been essential to collect the information on the candidate terms: the context, the frequency of usage, etc.
- the consultation of the parallel texts and dictionaries (such as the PONS dictionary).[101]

It is worth noting that each lexical system uses lowercase letters to represent the terms, although the German language uses uppercase letters for nouns. Both the lexical networks confirm the conceptual system previously created; in fact, there are no meronymic relations. Moreover, many synonymous relations have been added in both systems. The case of the concept <Mosaic glass>, designated by the German term "*glasmosaik*", but also "*mosaikglas*", has been interesting. The second option has been chosen because its frequency of appearance is higher in the corpus, and it has been assessed through the "concordance" tool option. In the German conceptual system, it has been deliberately chosen not to include the dialect terms (such as *meza stampaura, magiosso, rigadin, rigadin retorto* etc.), which have actually no equivalents. Furthermore, it has been discovered that the German terminology is richer in single-word terms rather than multi-word terms. Then, it should also be noted that the German equivalent for the concept <Costolatura> exists in German only in the plural form ('*Rippen'*). For the sake of uniformity, the terms for "chalcedony", "lattimo" etc. have been chosen without "*vetro di*", but both solutions are possible. The corpora have highlighted a high frequency for the term "viscosity", but it was chosen not to include it in the lexical networks because it is not similar to the other characteristics included in the systems ("*trasparenza*", "*opacità*", etc.). The creation of lexical networks has been thus essential to acquire a more complete knowledge of the domain and to integrate and confirm the conceptual systems. Finally, it has been vital to establish the equivalence relations, locate some potential equivalence problems and compile the terminological records for the data bank CAMEO. The combination of the two products generates the representation of specialized knowledge.

[101] The link to the resource is: https://it.pons.com/traduzione-testo/tedesco-italiano

4.4 Conclusion

The chapter was paramount to describe the different steps of the terminological work, by making evident the need of considering the conceptual dimension of analysis and the linguistic one. It was clearly witnessed how one complements the other. The methodology adopted allowed us to explore the domain and to be ready to deal with the compilation of the multilingual terminological sheets. The results collected contribute to produce high-quality terminological outcomes within the CAMEO data bank, which will finally benefit from the integration of the German language among its provided languages. By doing so, the quality of the export exchanges between Italy and German will be enhanced under a linguistic (or better said, terminological) point of view. Furthermore, the terminological records will be the point of departure for the revamping of the terminology included in the LWL Museum's publications. The next chapter will address both objectives, achieved thanks to the completeness and the attention paid during the entire terminological work just presented. The data bank will thrive on the multilingual terminological records created thanks to this project, which may be a trigger for more research in the field and for the integration of even more languages in the following years. Now, we can move on to the next chapter, where the results of the terminological analysis will be reported: the early promises of the research will be thus fulfilled.

5 The Results: CAMEO and the LWL's Publications

This final chapter aims at approaching the results of the entire work previously carried out. The first section will address the creation of the bilingual terminological records for the CAMEO commercial databank and is divided into three further subsections. In the first one, the functioning of the FAIRterm Web Application, implemented in collaboration between the Department of Linguistic and Literary Studies and the Department of Information Engineering of the University of Padova. The role of such resource is fundamental, since it will support the process of creation of the records with a FAIR methodology of compilation. The German language will be finally integrated within the CAMEO project, for promoting the exports from Italy to Germany. In the second one, the terminological records created will be analyzed from a quantitative and a qualitative point of view. The third one will analyze the bilingual terminological data compiled in the perspective of the terminological variation, according to the classification made by Freixa (2006). As stated in the previous chapters, the phenomenon of the terminological variation is really interesting to study and to explore in terminology science. Finally, thanks to the results achieved through all the steps of the work, the last section will assess the terminology of the LWL Industry Museum's publications, which have been already introduced in Section 3.3. It will be revamped and evaluated from a terminological point of view, as our final aim is to enhance the quality of the existing terminological data of the Murano artistic glass domain.

5.1 Bilingual Terminological Records for CAMEO

Dobrina (2015: 181) affirms that the majority of the terminological projects result "in producing new or enhancing the quality of existing terminological information." The aim of the project presented in this dissertation perfectly reflects her statement. Indeed, the purpose is that of producing new terminological data (the German records for the commercial purposes of CAMEO) and enhancing the quality of the terminology used in the LWL's publications. Moreover, Dobrina (2015) in her article *Getting to the core of a terminological project*, describes the different types of terminological projects (TPs). Type 4 identifies our work, since a new language is added to an existing terminology resource without compromising its structure (Figure 36).

Type 4 – Adding new languages to an existing translation-oriented terminology resource	
Needs to be met	domain terminology in languages not represented in an existing resource
Objective	complement an existing terminology resource with term equivalents in new target languages
Target users	translators of special language texts
Properties of the resource	(1) scope: terminology in an existing resource; (2) types of terminological information presented: as in Type 2 and 3; (3) directionality: the target language is the native language of the project team; (4) prescription level: prescriptive

Figure 36 – Type 4 of terminological project (Dobrina 2015: 184)

The objectives of the type of project shown above are actually the same established for this project. The bilingual records flowing into the already existing commercial CAMEO databank are essentially new, because they foresee the integration of the German language. The previous work, made thanks to the organization of the concept system, the automatic extraction of terms and the building of lexical networks, paved the way to consciously prepare the multilingual records and have the needed knowledge to prepare accurate terminological results. They must be accurate and precise, to be faithful to the natural direction of the terminology science towards clarity of expression and completeness of data, without any ambiguity and with the required level of standardization. The equivalence relations, figured out through the steps of the terminological work, will be crystallized in the records, in order to support the work of the text's specialists. For the creation of the terminological records, the FAIRterm Web

Application has been used. The resource is thus described in the following subsection, prior to delve into the compilation of the entries.

5.1.1 The FAIRterm Web Application

As presented on the website of the resource, the FAIRterm Web Application is a free tool for the compilation of multilingual terminological entries. It aims at supporting the work of language professionals, and 24 official EU languages are available. The resource has a bilingual view for the terminological entry, and the main advantage in using such a model is that its data categories allow to have a broad linguistic and conceptual framework of the term, both in the source and target language.[102] The resource thus results to be extremely beneficial in terms of completeness of data and information, which is an essential element for any terminologist, translator or technical communicator. The name of the resource is related to its FAIR nature: the resource was born to offer a tool to compile FAIR terminological data. Indeed, the FAIR principles are followed to ensure the optimal organization of the terminological outcomes. The paradigm of the tool is based on the latest ISO TC/37 SC/3 standards on the terminology management, which have been presented in Chapter 2.[103] So, the terminological entries are compiled thanks to the application and are then integrated in the CAMEO databank. Besides the commercial terminology resource CAMEO, it is interesting to cite and introduce all the ongoing projects that benefit from the use of FAIRterm. This allows us to understand the prominence the resource actually has:

- TRIMED – Medical Termbase: the resource has been conceived to tackle different problems related to the complexity of medical terminology.
- DITTO – Disarmament International Treaty Terminology: the resource has been conceived to collect the relevant terminology in the field of justice and legal terminology. The resource analyses the principles of international law and

[102] https://shiny.dei.unipd.it/fairterm/compilation.html [last visited: 23/10/2024]
[103] https://shiny.dei.unipd.it/fairterm/ [last visited: 23/10/2024]

agreements on weapons of mass destruction, conveyed by specialized terminology.

- International Digital Glossary Performative Arts – Drama & Theatre in Education: the resource has been conceived to conceptualize the complexity and cultural diversity of pedagogical practices that are inspired by the performative acts.[104]

The resource is user-friendly and intuitive, and its functioning is here briefly presented. The interface, which is all in English, allows you to fill in the fields and then download the records in the TBX format.[105] Firstly, you have to add a new term, by choosing the source language of your term, writing and clicking on "add new term", under the option "create new term". Then, the application allows you to compile the record, as shown in Figure 37. The procedure starts by selecting the source language and the target language. Then, the term (source) and the term (target) have to be added. The equivalents research is the result of a combination of methods, aiming at establishing them. Certainly, the comparison of characteristics, the access to the respective contexts, the consultation of primary (authentic texts and corpora) and secondary (general and specialized dictionaries, encyclopedias, term banks, glossaries) sources result to be the key element in such a purpose. Here, some technical explanations may also be found, along with explanatory figures and graphs.

[104] https://shiny.dei.unipd.it/fairterm/consultation.html [last visited: 23/10/2024]

[105] The records must be filled in the case study languages. The TBX format has been introduced in Section 2.3.

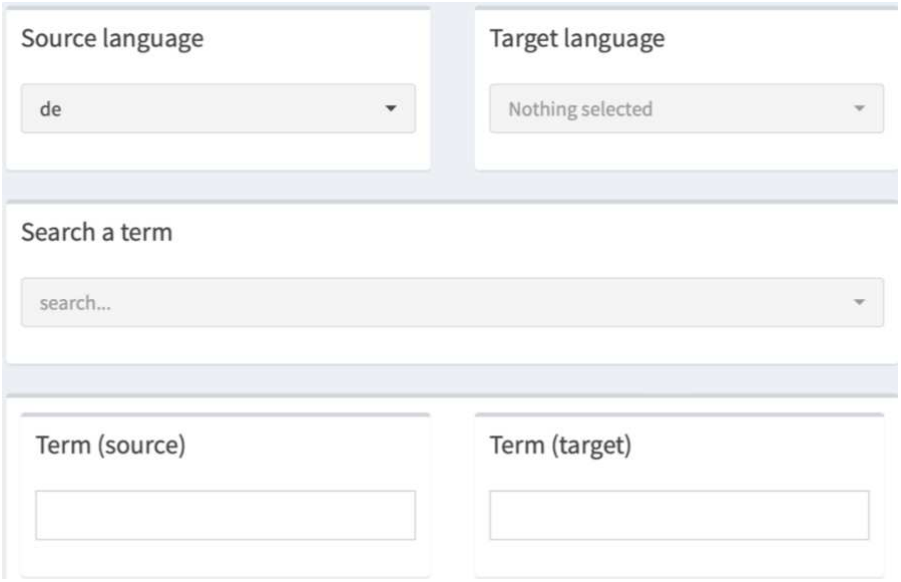


Figure 37 – The first sections to be compiled in FAIRterm

The data categories provided are organized in four panels (Figure 38).

1. Formal features: part of speech, gender, number, pronunciation, etymology, derivative, notes. The information of this panel is drawn from the dictionaries.
2. Semantics: definition, external cross-ref (definition), source (definition), notes (definition), semic analysis, synonym, quasi-synonym, hypernym, hyponym, meronym, olonym.
3. Variation: common name, scientific name, orthographic variant, acronym, full form, abbreviation.
4. Usage: subject field, subdomain, register, context, external cross-ref (context), source (context), collocation.

Figure 38 – Data categories in FAIRterm Web Application

About the data categories that have to be filled in, some remarks have to be made. Under the voice "Semantics", the definition field is found. The ISO 1087: 2019 standard defines the definition as follows: "representation of a concept by an expression that describes it and differentiates it from related concepts" (ISO 1087: 2019: 6). In particular, the standard

distinguishes between two kinds of definition: the intensional definition and the extensional definition (ISO 1087: 2019: 7). The first one will be mainly chosen in our records and it is defined as "definition that conveys the intension of a concept by stating the immediate generic concept and the delimiting characteristic(s)" (ISO 1087: 2019: 7). It is important to remember that the delimiting characteristic is an "essential characteristic used for distinguishing a concept from related concepts" (ISO 1087: 2019: 3). These basic concepts of terminology science have to be kept in mind during the realization of the records. As for what concerns this project, the definitions have been mainly drawn from the most reliable glossaries of the corpora. Under the voice "Variation", the "Common name" and "Scientific name" fields refer to the diastratic variation. Under the "Usage" panel, the "Context" field offers a single sentence, in which the term appears. The categories, briefly described here, are considered to be the most relevant in the description of the term from the terminological point of view. Otherwise, all the data categories listed above contribute to giving a complete overview of the term and its equivalent/equivalents. The information required to compile the entries is also retrieved from the lexical networks, the concept systems and the corpus. Here, the previously studied information about terms is collected: you can even find ready-made definitions or the material for formulating them, the semantic distinctions, the collocates, the syntactic information, etc. Furthermore, the corpus is a precious repository of synonyms and terminological variants. After having introduced the resources used, the German/Italian terminological records of the domain of Murano artistic glass are ready to be compiled.

5.1.2 Quantitative and Qualitative Analysis

After having extracted the terms and having collected the relevant ones, the final step is aiming at compiling the terminological entries by using the resource described earlier in the previous subsection, namely the FAIRterm Web Application. As widely underlined, each terminological entry will define the term from a conceptual and linguistic point of view, in order to make the work easier for the translators and the technical communicators. If they consult the term bank, they will have all the useful information about a term to use it properly or to find its German equivalent. The terms included are 62 and have been accurately chosen. They can be grouped as follows:

- Terms defining the esthetics of the glasswork: "*colorato"*, "*incolore"*, "*trasparente", "opaco", etc.*
- Terms defining the material of the glasswork: "*lattimo", "calcedonio", "cristallo", "opalino", etc.*
- Terms defining the technique used for their realization and their decoration: "*soffiatura", "incisione", "pittura a freddo", "filigrana", etc.*
- Terms defining the tools used to create the glasswork: "*canna da soffio", "borselle", "tagianti", etc.*

The terms selected are those that have been considered useful for the export documentation of the final products. The descriptions of the Murano artifacts within the *Museo del Vetro* of Murano have been useful in this direction. All the labels of the exhibited objects have been read and analyzed, because it has been thought that they could include the terms of our interest. The compilation work was complex and each step required a long research. The most consulted resources to find the information to be included in the records have been the following:

- Terminological glossaries, written by the experts for the public and published on the glass factories websites, such as *Gambaro e Tagliapietra – Lessico Muranese*[106] and *Carlo Donà – Glossario*[107].
- Lexicographic dictionaries, such as the *Wiktionary – Das freie Wörterbuch*[108] and the *DWDS – Digitales Wörterbuch der deutschen Sprache*[109] for the German terms and the *Treccani*[110] dictionary for the Italian terms. The information included therein was useful for adding the formal features of the terms, but also for writing the definitions of the terms that are part of the general language.[111]
- The German dictionary *Wörterbuchnetz* for the etymologies of the terms.

[106] The link to the resource is the following: https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/
[107] The link to the resource is the following: https://www.carlodona.com/glossario/
[108] The link to the resource is the following: https://de.wiktionary.org/wiki/Wiktionary:Hauptseite
[109] The link to the resource is the following: https://www.dwds.de
[110] The link to the resource is the following: https://www.treccani.it
[111] The general language is defined in the ISO 1087: 2019 standard as: "natural language characterized by the use of linguistic means of expression independent of any specific domain".

- The corpora previously compiled using the Sketch Engine tool, useful for finding the information about the usage of the terms (such as the context) and the definition of the technical terms. Indeed, lots of the material used for writing the definition has been found here. Moreover, the function "Word Sketch" was central to find the terminological collocations of the terms analyzed.
- Terminological data banks, such as *IATE (Interactive Terminology for Europe).*[112]
- The *IPAFONETICA* portal for the Italian automatic IPA transcriptions.
- The *MUVE – Fondazione Musei Civici Venezia* website, which was essential for the entire work of compilation of the records. The texts of the Museum are an important and extremely precious repository of Italian and German terms.
- The websites of the glass factories, since the documentation of the terminology of the domain is generally to be found here.
- The online tool *Tom.Brondsted.dk* for the German IPA transcription of the terms.[113]

The compilation of the records was essential to study how terms behave within the special language. Among the criteria which have been followed for establishing the equivalents, there are:

- The belonging of the terms to the same domain.
- The comparison of characteristics.
- The access to the contexts in the Sketch Engine tool filtered through the "Concordance" option.

Once different synonyms and variants have been found, the most appropriate one has been selected as the term entry, by observing the causes of variation (see Section 5.1.3) and its frequency in the corpus. The synonyms included in the records are many more if compared to those included in the lexical networks, since every step of the work is more complete than the previous one because it results from further research. Thanks to the compilation, some new data has thus been discovered. Certainly, it has not always been

[112] The link to the resource is the following: https://iate.europa.eu/home
[113] The link to the resource is the following: http://tom.brondsted.dk/text2phoneme/

easy and straightforward to establish the equivalents for every technical term. The greater number of the terms of the domain are, indeed, dialect terms of the jargon of Murano and, therefore, their equivalents in the German language don't exist. The non-equivalence is justified by the fact that the Murano artistic glass is part of an Italian reality. In terminology science, it is common that specialized realities are first named in one language and continue to be linguistically related to the cultural heritage to which they belong. Such terms are an example of the phenomenon of the non-equivalence: "there are cases where language B lacks an adequate equivalent to express the meaning conveyed by a term in language A" (L'Homme 2020: 234). As L'Homme states (2020: 229), "terms are equivalent if they belong to different languages and denote the same concept within the same domain". According to this statement, it would have been incorrect to create bilingual terminological records with, for instance, equivalents resulting from the direct borrowing strategy. In such a context, other different strategies for translating the terms without equivalents, are making their way. The first translation solution is the direct borrowing of the term, followed from an explanation in the target language; this option has been here considered the most successful to transfer the concepts into the German language. It has been considered valid for the following dialectal Italian terms, which have not been indeed included in the records:

- *Incalmo* (Verfahren, bei dem verschiedene bereits fertige Komponenten zu einem Objekt verschmolzen werden).
- *Soffiatura a meza stampatura* (dekorative Technik, die darin besteht, eine weitere Glaskappe auf den Boden eines geblasenen Glases aufzubringen, während es noch am Fass befestigt ist, und das Blasen in einer offenen, gerippten Form fortzusetzen um erhöhte Rippen zu erhalten).
- *Murrina* (Technik, die in der Hitzeverschmelzung des Ofens aus monochromen Mosaiksteinen oder Abschnitten aus polychromem Glasrohr nach einem geplanten Design besteht, um ein sehr buntes glasiges Gewebe zu erhalten).
- *Baloton* (Metallform mit kleinen pyramidenförmigen Spitzen an den Innenseiten, um Glasware mit Rautenmustern zu verzieren).

This strategy has been considered valid, since the dialect term is anyway expressed and an explanation of the concept designated by the term is offered. For all the dialect terms without their German equivalent, only this method is proposed and considered useful. Other strategies, such as the literal translation, the paraphrase or the creation of a new designation (L'Homme 2020: 229) are not possible for them. Otherwise, the following two dialectal terms, which don't have a German equivalent, have been put in the terminological records as synonyms of other terms:

- *"vetro girasol",* synonym of "*lattimo*" ('*Milchglas')*
- *"vetro millefiori",* synonym of "*vetro mosaico*" ('*Mosaikglas'*)

Another translation solution may be the explanatory periphrasis (Scarpa 2020), thanks to which a new designation can be created. For example, the Italian term "*morisa"* may be translated into "*Dekor in Wellenform*" (it. '*decorazione a onda'*). However, it is not completely correct, and the term has not been included in the multilingual term bank, because:

1. the dialectal feature of the term "*morisa*" is lost.
2. besides the "*morisa*", there exist other decorations that have a wavy shape.

Another example is the dialect term "*filigrana a retortoli*", which has been translated into the German "*Fadenglas mit sich verdrehenden spiralförmigen Fäden*", and then included in the CAMEO data bank. The filigree is indeed a decorative technique, which results from many spiral twisted threads; the explanatory periphrasis, through which the German equivalent has been created, describes the concept. The same strategy allowed us to include in the CAMEO term bank the dialect term "*vetro pulegoso"*, for which it has been created the German equivalent term "*Glas mit Luftblasen*" (eng. 'glass with bubbles'). The term "*Luftblasen*" (it. 'bolle'), resulted to be very frequent in the German corpus "Muranoglas" (15 appearances) and it has been thus decided to use it for defining the concept. Indeed, the Italian term "*pulegoso*" derives from the term "*puleghe*", which means "*bolle*" (eng. 'bubbles') in the Venetian dialect. However, the German equivalent term losts the dialectal feature of the Italian term, but it gives the perfect idea of how the

glass is obtained and how its esthetics is. Furthermore, a case of anisomorphism (also known as "partial equivalence") is to be reported (L'Homme 2020: 230). Indeed, the Italian language distinguishes between two types of melting oven: "*forno a un crogiolo*" and "*fornace*". The German language, however, doesn't make such a distinction and has one term, namely "*Schmelzofen*" (it. forno fusore). Finally, the strategy of the literal translation has been used for the term "*vetro sommerso*", which has been translated into "*untergetauchtes Glas*". The solution has been thought to be that of translating it literally, by following the same principle for which "*perla sommersa*" is findable in the corpus as "*untergetauchte Perle*". As for what concerns the part of speech of the terms, they are almost all substantives. Generally, the special languages are full of nouns, since there is a tendency towards the linguistic phenomenon of the nominalization. Indeed, as Cortelazzo (1994) explains:

> *Sono i sostantivi e gli aggettivi, dunque, ad assumersi il carico informativo preponderante del testo. La preferenza per lo stile nominale nasce da due esigenze: quella della maggior oggettività e astrazione permessa dal processo di nominalizzazione (che porta il messaggio su un piano generale, atemporale, proprio del discorso scientifico) e quella della comunicazione più economica, attraverso l'eliminazione di elementi ridonanti [Therefore, the nouns and adjectives carry the predominant information of the text. The preference for the nominal linguistic phenomenon arises from two needs: a greater objectivity and abstraction allowed by the process of nominalization (which brings the message to a general, timeless level, typical of the scientific discourse) and that of a more economical communication, through the elimination of redundant elements].*[114] *(Cortelazzo 1994: 31)*

The nominalization is thus one of the features that differentiates the general language from the special one. Many verbs, describing the activities of the glass art, have been included as nouns, and not as verbs. The Table below shows some of the nouns included in the records and the verbs from which they come from (Table 2).

IT. NOUNS	IT. VERBS	GERMAN EQUIVALENT
soffiatura	soffiare	Blasen
incisione	incidere	Gravur
tiratura	tirare	**Ziehen**
lucidatura	lucidare	**Polieren**
formatura	dare forma	Formgebung

[114] The translation is ours.

tecnica di modellazione	modellare	Technik des Modellierens
fusione	fondere	Schmelze
doratura	dorare	Vergoldung
lavorazione a caldo/a freddo	lavorare a caldo/a freddo	Heißbearbeitung, Kaltbearbeitung
pittura a freddo	pitturare a freddo	Lackbemalung
taglio	tagliare	**Schneiden**
intaglio	intagliare	Schliff
molatura	molare	**Schleifen**

Table 2 – The nominalization of the verbs

As the Table 2 shows, the German equivalents are nouns, as well. However, it has to be considered that the German nouns *Schneiden, Schleifen, Ziehen* and *Polieren* are less frequent in the German corpus than the verbs from which they come from. Anyway, they are the only four, and all the other nouns appear much more frequently than the respective verbs. For a consistency reason, they have been included as nouns. It can thus be concluded that in both languages the frequency of the nouns in the corpora is higher than that of the verbs from which they come from. The only two verbs of the terminological records are "*marmorizar*" ('*drehen'*) and "*pizzicare*" ('*kneifen'*), since they never appear nominalized in the corpus. Many of the verbs used in the special language are the following (Figure 39).

	Verb	Frequency ? ↓	
1	essere	2,159	···
2	murare	535	···
3	avere	522	···
4	venire	318	···
5	fare	308	···
6	potere	306	···
7	realizzare	158	···
8	utilizzare	147	···
9	ottenere	145	···
10	lavorare	118	···
11	dovere	115	···
12	dare	106	···
13	perle	105	···
14	produrre	98	···
15	andare	96	···
16	trovare	75	···
17	sapere	72	···

Figure 39 – The most frequent verbs of the Italian corpus

The verbs like "*realizzare", "utilizzare", "ottenere", "lavorare", "produrre"* etc. have not been included in the records, since they are not technical verbs of the domain. However, they are often part of the terminological collocations and are reported with the technical terms (especially nouns) with which they most frequently appear.

From a qualitative point of view, some interesting remarks should be done about the following terms:

1. "*Chalzedonglas*" and its Italian equivalent "*calcedonio".* In this case, the German language is more unambiguous than the Italian language. Indeed, the Italian term "*calcedonio*" defines both the concept referring to the glass type and that referring to the material chalcedony. The German language has two different designations for the two concepts, since it distinguishes between "*Chalzedon*" and "*Chalzedonglas*". It is also true that there is the Italian term "*vetro calcedonio*" but it is less used than "*calcedonio*" (the first option appears 3 times in the corpus, compared to the 6 times of the second one). The same situation is to be reported for another type of glass, the "*Kristallglas*" (it. '*cristallo*').
2. *"Glaskörper"* and its Italian equivalent "*esemplare vitreo".* If you search for "*Glaskörper"* into a lexicographic dictionary, you will certainly find that its Italian equivalent is "*corpo vitreo*", namely 'vitreous body', a term from the

medical language. If you search for the term in the corpus, it is always used as a term designating the concept referring to a glass object.

3. "*Glaspaste*" and its Italian equivalent "*pasta di vetro"*. If you search for the terms into the lexicographic dictionaries, you will find out that the term is designating a specific material, composed of the same raw materials of glass but slightly different from it, since it has a much higher silica content than glass and it is melted at a lower temperature, thus allowing only the superficial fusion of its ingredients. In the two corpora, the terms are designating not only this different material but it is also used for designating the material of glass.

Finally, the creation of the terminological records allowed us to delve deeper into the case of the term "*soffiatura a mano libera*". It has been found out that it is a synonym for the term "*soffiatura a bocca*", so differently from what it was displayed in the lexical networks of both the German and Italian language. After having analyzed the records from a quantitative and qualitative point of view, it is now important to spend a few words about the terminological variants listed within the records and classify them according to the causes from which they arise.

5.1.3 The Terminological Variants

The compilation of the records allowed us to organize and classify the terminological variants of the terms, which result to mostly belong to the Italian language. The variants have been found in the texts that are part of the corpora; then, they have been put in the records, under the section "Formal features - Notes (terms)".[115] As in the first chapters anticipated, the phenomenon of the terminological variation is very interesting to study and allow us to discover some aspects of the language, otherwise not considered because they are not explicit. The variation has a link with synonymy, but covers a much broader range of phenomena, namely all the changes occurring at the linguistic and/or conceptual level. The greater number of the terminological variants found is to be classified under the typology of the "dialectal variants", according to the subdivision made by Freixa

[115] The orthographic variants have been put under the Section "Variation" of the records.

(2006). The technical terms of the domain of the Murano artistic glass are part of a jargon, which has been passed down through the centuries (see Section 3.1). The need to explain the glass art to the public, made then unavoidable the conversion of the dialectal terms into the Italian standard language. As previously discussed (see Section 1.4), the causes of variation can be many. The list of the variants found is here provided and the terms are divided according to their causes of variation (Freixa 2006). The first group of variants belongs to the "dialectal variation" (Table 3).

Dialectal variation	
vetro pulegoso[116]	vetro bullicante
filigrana a reticello	filigrana a redexello
calcedonio	calcidonio
marmorizzare	marmorizar, marmorizzar
canna da soffio	ferro sbuso, fero buxo, fero, supieto
foglia d'oro	fogia or

Table 3 – The dialectal variants

As Freixa (2006: 55) states, "the fields closer to everyday human activity tend to present a higher degree of denominative variation". The Murano artistic glass is a domain which is made of people and tradition. Therefore, the terminology is full of dialectal variants. Among them, some chronological variants are included, since the art is centenary (Table 4).

Chronological variation	
avventurina	pasta venturina
cristallo	cristallino

Table 4 – Chronological variants

[116] "*Vetro pulegoso*" is a a dialectal term like "*vetro bullicante*", but it is more frequently used than the second one. It is thus perceived as a "less dialectal" term.

The term "pasta *venturina*" was originally used to designate the "*avventurina*". [117] The term "*cristallino*" was instead the first term given to the "*vetro cristallo*" by Angelo Barovier.[118] However, as it happens in most cases of chronological variation, here the variation is not related to a conceptual variation (Freixa 2006). Indeed, also according to Vezzani and Costa (2024: 84) "the authors also distinguish between conceptual variation which has no denominative reflection (that is, the concept evolves over time but the term to designate it remains the same), and conceptual variation which is reflected in denominations (that is, leading to term variation)." The second group is the "functional variation" (Table 5).

Functional variation	
zwacken	kneifen
borselle	pinza di strozzamento
era	forno di ricottura
filigrana a retortoli	zanfirico
bronzin	piano in grafite
levigatura	molatura

Table 5 – Functional variants

The functional variants listed are the outcome of different conditions of production related to the art of Murano. For Freixa (2006: 56-57), the "functional variation is caused by usage […]. The specialist adapts the message to the level of specialization of the recipient". Indeed, the art is mostly reflected in the everyday workplaces, which are made of spoken language and jargon owned by its group of specialists. Otherwise, the knowledge is also written by the experts who study the domain. Moreover, it is usually transferred to the less specialized audience for promotional purposes or for a need of

[117] https://www.treccani.it/vocabolario/avventurina/ [last visited: 2/11/2024]

[118] https://www.muranonet.com/it/blogs/unfold-venice/from-blown-glass-to-crystal?srsltid=AfmBOorlevhQp2D6D51KebS9K7HpgVegvLBrpIaXB4Qr8xuXbdZbsPrU [last visited: 2/11/2024]

divulgation.[119] For this reason, other variant terms are used, as they are perceived to be more understandable (sometimes even more "technical") and not part of a jargon or a colloquial register. Another group of variants is that of the "discursive variation" (Table 6).

Discursive variation	
canna vitrea	canna di vetro
esemplare vitreo	esemplare di vetro
filigrana	vetro filigranato
pasta vitrea	pasta vetrosa, pasta di vetro
Fadenglas	Fadendekor
incisone a punta di diamante	incisione puntinata, graffito a punta di diamante
vetro a piume	vetro piumato
forno fusore	forno fusorio
tecnica di decorazione	tecnica decorativa
tecnica di lavorazione	tecnica lavorativa

Table 6 – Discursive variants

The discursive variation can be summed up with these words: "a specialist looks for synonymous expressions for what has already been said in a different way, intending, according to the situation, to avoid repetition, or to be more economical, emphatic, creative or expressive. In the selection of vocabulary, specialists also aim for lexical cohesion, and synonymy is one of the mechanisms of reiteration that best guarantees this cohesion" (Freixa 2006: 60). The standardization in terminology science is always preferred but it is part of the human nature to create an expressive richness in terms of communication, without redundant repetitions. Indeed, "in the discourse of

[119] The phenomenon is known as "scientific popularization": "different denominations are used, intended to help the reader to understand the limits of the concept, resulting in a preference for the diffusion of concepts over the standardization of denominations" (Freixa 2006: 59).

popularization, […] we can observe how a specialist partially abandons the priority of exact transmission of knowledge, which is restricted to a precise and concise treatment of the terminology and takes into account the style in which the information is transmitted" (Freixa 2006: 61). The transmission of knowledge, whether written or spoken, always aims to be fluent and communicatively functional rather than exact and standardized. A single case of "cognitive variation" has been then to be reported (Table 7).

Cognitive variation	
vetro lattimo	vetro opalino

Table 7 – Cognitive variants

The cognitive variation is caused by different conceptualizations and motivations. In this case, "*vetro lattimo*" and "*vetro opalino*" are not always considered synonyms, but actually they are. The term "*vetro opalino*" comes from a need to define the concept according to its resemblance to the opal, which is an iridescent mineral (the dimension of the iridescent color is considered). If the composition of the "*vetro lattimo*" and the "*vetro opalino*" as a material is considered, it is the same.[120] The term "*vetro lattimo*" is given to the concept by considering another dimension, namely its resemblance to the color of the milk (the dimension of the milky white color is considered). The reality is thus differently categorized and the denominations of the same concept are different (Lerat 1995). Indeed, the concept variation arises from "different points of view and varying degrees of importance given to the constitutive elements of the concept in the process of denomination." The same situation is to be reported for the German language equivalents ("*Milchglas" – "Opalglas"*). Finally, it is important to underline that in the records there is a specific part within the "Variation" panel, where only the orthographic variants have been put. The list is here provided (Table 8).

Orthographic variation	
vetro pulegoso	vetro puligoso

[120] The concept is thus the same.

calcedonio	calcidonio
vetro ghiaccio	vetro a ghiaccio
filigrana a reticello	filigrana a redexello
filigrana a retortoli	filigrana a ritorti
marmorizar	marmorizzar, marmorizzare
incisione all'acido	incisione con acido
translucido	traslucido
molatura	moladura

Table 8 – Ortographic variants

In this subsection, it has been thus focused on the classification and the nature of the terminological variants of the Murano artistic glass domain, which have been found during the project. After having described all the cases encountered thanks to the analysis of the terminology of the domain, we can move on the next section. Finally, the terminology of the books of the LWL Industry Museum will be assessed thanks to all the outcomes collected so far.

5.2 Revamping the Terminology of LWL Industry Museum's Publications

In the previous section, the bilingual terminological terms about the domain of the artistic Murano glass have been collected. The terminological work has been useful for the technical translators, who are expected to provide the linguistic support to the Murano glass export process. Our project is not, however, limited to such a purpose. As already anticipated, the terminology of the two publications of the LWL Industry Museum will be assessed thanks to the terminological records created. It has to be primarily underlined that the overall quality of the translations of the source texts in the books is pretty high. However, some proposals for revamping the terminology used are here discussed and offered. Most of the terminological inaccuracies have been found in the book *L'arte del*

vetro – Glas des 19. Jahrhunderts aus Murano. Il vetro di Murano nell'Ottocento. However, the considerations about the terminological choices are here listed regardless of the book in which they are contained. First of all, some technical terms have not been translated and have been reported in the target text as they are in the source language. This is the most frequent terminological error to be seen; probably, the equivalent terms have not been detected during the translation process. Alternatively, the translator may have chosen to spontaneously leave the terms untranslated, to underline the technical nature of the term. Some examples of this tendency are reported below (Table 9).

Source text of the book	**Target text of the book**	**Alternative terminological solution**
Mentre i vetrai tedeschi usano spesso forme di legno (per esempio il cosiddetto 'Wulgerholz') per dare forma al vetro mentre lo soffiano, a Murano si usano vari attrezzi – come **borselle, pinze e taglianti** – per la lavorazione a mano.	Während deutsche Glasmacher oft Model und Wulgerhölzer benutzen, um das heiße Glas während des Blasens zu formen, verwendet man auf Murano viele Arten von Werkzeugen – etwa **borselle, pinze, tagianti** – zur manuellen Bearbeitung.	Während deutsche Glasmacher oft Model und Wulgerhölzer benutzen, um das heiße Glas während des Blasens zu formen, verwendet man auf Murano viele Arten von Werkzeugen – etwa **Zwackeisen, Zange, Abschneidschere** – zur manuellen Bearbeitung.
A Barovier si attribuiscono inoltre l'invenzione del **lattimo** e del **calcedonio**. Il primo costituisce la base per la filigrana a reticello o per la filigrana a retortoli.	Barovier werden darüber hinaus die Entwicklung des **lattimo** und **calcedonio** zugeschrieben. Ersteres stellte die Basis für die Technik des Fadenglases (filigrana a retortoli, filigrana a reticello) dar.	Barovier werden darüber hinaus die Entwicklung des **Milchglases** und **Chalzedonglases** zugeschrieben. Ersteres stellte die Basis für die Technik des Netzglases und Fadenglases mit verdrehenden spiralförmigen Fäden dar.

Bussolin, che già dal 1836 lavorava all'imitazione di vetri storici e in particolare della filigrana, inaugurò nel 1838 una sua vetreria.	Bussolin arbeitete seit 1836 an der Imitation historischer Gläser, insbesondere der filigrana, und eröffnete 1838 eine eigene Hütte.	Bussolin arbeitete seit 1836 an der Imitation historischer Gläser, insbesondere des **Fadenglases**, und eröffnete 1838 eine eigene Hütte.
Normalmente era usata con il cristallo, così da accentuare la similitudine con il ghiaccio, ma in qualche raro caso era anche usata con vetri colorati, in pasta o trasparenti.	Überlicherweise wurde diese Technik für das cristallo angewendet, um seine Ähnlichkeit mit dem Eis hervorzuheben, aber in seltenen Fällen wurde sie auch fü farbiges – opakes oder trasparentes – Glas eingesetzt.	Überlicherweise wurde diese Technik für das **Kristallglas** angewendet, um seine Ähnlichkeit mit dem Eis hervorzuheben, aber in seltenen Fällen wurde sie auch für farbiges – undurchsichtiges oder durchsichtiges – Glas eingesetzt.

Table 9 – Alternative terminological proposals for untranslated Italian terms

Another translation solution may be that of maintaining the source terms "*lattimo*", "*calcedonio*" and "*cristallo*" and put the German equivalents between parentheses. It is interesting that there exist two isolated cases, where the term "*calcedonio*" has been translated into "*Chalzedon-Glas*" and "*calcedonio-Glas*". The sentences are:

1. "*Ähnlich berühmt wurde Lorenzo Radi, dem 1856 die Herstellung des seit der Antike verarbeiteten Chalzedon-Glases gelang".*
2. *"Neben Glasmosaik, das u.a. für die Restaurierung der Mosaiken von San Marco produziert wurde, stellte die Hütte das von Radi 1856 neu entdeckte calcedonio-Glas her."*

The two orthographic variants with the hyphen have never been found within the corpus. It is also interesting to observe that "*filigrana a retortoli*" is sometimes translated into

"*wellenförmig gedrehtes Fadenglas*", which is a valid solution. The possibility of creating some explanatory periphrasis to transfer the concepts has already been explained in Section 5.1.2. It is a stylistic solution and it is at the translator's discretion. For example, in one of the books, "*senza l'intervento della soffiatura*" has been translated into "*ohne dass das Glas geblasen werden musste"* instead of using "*ohne das Blasen*". Another example is "*vaso in vetro fenicio*", which is translated in "*Vase in gekämmter Technik*". However, the equivalent term established for "*vetro fenicio*" and put in the CAMEO terminological records is "*phönizisches Glas*", which would have been more straight to the point. The German equivalent of the book corresponds to the literal translation "*vaso con tecnica a pettine*", where "*tecnica a pettine*" is a synonym of "*vetro fenicio*".[121] As for what concerns the terminological choices about the equivalents of the technical Italian terms, some remarks have to be made. The majority of the German equivalents used in the books are not completely incorrect, but their frequency is not high in the German corpus. The equivalents proposed here are those resulting from our terminological work, making them preferred solutions. Indeed, they are the same contained in the terminological records: lots of the equivalents used in the books have been listed in our records as synonyms.

Term of the source text	**Equivalent term used**	**Proposal of equivalent**
Lavorazione a freddo	kalte Bearbeitung	Kaltbearbeitung
Canne policrome	mehrfarbige Glasstäbe	polychrome Glasstäbe
Canne da soffio	Glasmacherpfeifen	Glaspfeifen
Tecniche di lavorazione	Techniken ihrer Herstellung	Verarbeitungstechniken
Lavorazione a caldo	heißes Glas	Heißbearbeitung
Tecnica a caldo	Hüttentechnik	Heißbearbeitung/Heißtechnik
Incisione e decorazioni a smalto	Gravur und Malerei	Gravur und Lackbemalung

[121] The synonym is also reported in the records of CAMEO.

Foglia d'oro	Blattgold, Blattgoldauflage	Goldfolie
Ricottura	Einbrennen	Nachbrennen
Moleria	Schleiferei	Schleifen
Trasparente	transparent	durchsichtig
Opaco	opak	undurchsichtig
Avventurina	Aventurin	Aventuringlas
Filo tirato	aufgelegter Faden	gezogener Faden
Fusione	Schmelzvorgang	Schmelze

Table 10 – Proposals of equivalents for the Italian terms

The following Table 11 is instead grouping the incorrect equivalents, which have been frequently used in the book, and the proper equivalents to be used.

Term of the source text	**Equivalent term used**	**Proper equivalent**
1. Molatura	Schliff	Schleifen
2. Borselle e tagianti	Zwackeisen und Scheren	Zwackeisen und Abschneidschere
3. Decoro inciso e intagliato	Schliff- und Schnittdekor	Gravur- und Schliffdekor
4. Processo di modellazione	Formgebungsprozess	Prozess des Modellierens
5. Sfaccettatura	Schliff, Ätzverfahren	Schneiden, geschnitte Dekor
6. Ricottura	Einbrennen	Nachbrennen
7. Avventurina	Aventuringlas	Goldfluss

Table 11 – Proper equivalents to use instead of the incorrect German equivalents used

As regards the Table above, some comments are here reported:

- In the 1) case, the German equivalent of the Italian term "*molatura*" is incorrect. "*Schliff*" is designating another concept, namely that of <*Intaglio*>. The <*Intaglio*> and <*Molatura*> are two different concepts, as shown in the concept system (see Section 4.1).
- In the 2) case, the German equivalent "*Schere*" of the Italian term "*tagianti*" is incorrect. The German equivalent used in the book is a hypernym of the correct term "*Abschneidschere*", which is instead more specific.
- In the 3) case, the term "*decoro inciso*" has been wrongly translated into "*Schliffdekor*", and "*decoro intagliato*" into "*Schnittdekor*". However, the first term chosen is the equivalent of "*decoro intagliato*" and the second one is a term not designating a decorative technique, rather a modelling one.
- In the 4) case, the German equivalent of the Italian term "*processo di modellazione*" is "*Formgebungsprozess*", and it is incorrect. Indeed, the term "*Formgebung*" designates the concept <Formatura>, and not that of <Tecnica di modellazione >. "*Tecnica di modellazione"* is a hypernym of "*formatura*".
- In the 5) case, the term "*sfacettatura*" has been translated into "*Schliff*", which is instead the equivalent of "*intaglio*".
- In the 6) case, "*ricottura*" is a specific kind of melting process, whose German equivalent is "*Nachbrennen*" and not "*Einbrennen*".
- In the 7) case, if the term "*Aventurin*" is used, the sentence will sound ambiguous. The "*Aventurin*" refers to the material and the precious stone and it has been probably translated as a calque of the Italian term "*avventurina*".

Another interesting situation to be reported is related to the term "*filigrana semplice*", which is used in the Italian texts of the books. Probably, the term is used to distinguish the "*filigrana*" from the "*doppia filigrana*"; indeed, the term is translated into "*Fadenglas*". However, "*filigrana semplice*" never appears in the corpus and it is not a term belonging to the specialized domain. Generally speaking, attention has been certainly paid to the terminological aspect in both books, but the terminological databases have not been probably used during the whole translation process. However, they should always be used: they offer terminological data resulting from scrupulous terminological works, going at the heart of the specialized domain. Only by doing so, the terminological

choices can be consciously made, correct and consistent throughout the work. The lack of consistency of the equivalents chosen for designating the concepts in the LWL Industry Museum's publications, gives the perception of having a less overall technicality and quality of the translations. It has to be remembered that every text is the outcome of the creativity of the author, and the terminology used is, at a certain extent, part of it. However, it is extremely important (especially in certain contexts), that the terminology contained in a text is standardized and accurately selected. The importance of having a consistent and standardized terminology is central even for a book published by a museum. Within the books analyzed, the terminological inaccuracy is not a serious obstacle for the understanding of the text from the reader, since the books has lots of images of the artifacts with their descriptive labels. So, they help the reader to better understand the concepts, even if the terminology is incorrect. The considerations made so far wants to improve the general quality of the two publications, thanks to the success of the work done and the effort put into every step of the terminological project.

5.3 Conclusion

The chapter has been central to complete the terminology project and fulfill the earliest premises of the work. The terminological records to flow into the CAMEO database have been created, hoping that they will be a valid support for the Murano artistic glass market and the German export product documentation. Moreover, the outcomes of the terminological work have been fundamental for assessing the terminology used in two books of a famous Museum based in Dortmund, the LWL Industry Museum. Some terminological errors have been detected and some better terminological solutions have been proposed. The revamping of the terminology therein contained doesn't want to assume that the work was not done with great precision and attention. Rather, it wants to improve the quality of the writing from a terminological point of view, by witnessing the impact the terminology aspect has on the overall quality of the specialized text, especially if it is a bilingual book. The creation of a solid and structured specialized terminology, supporting the overall translation process and the writing of specialized texts, has to be highlighted as an advantageous aspect of a successful communication. The specialized communication of a domain can be clear and can promote the diffusion of knowledge

only if the terminology used is correct. This dissertation proves that if the terminology of a domain has been standardized, it means that there's a great research and study behind it.

Conclusion

The dissertation aimed at creating the commercial terminology of the Murano glass domain in a multilingual perspective. Furthermore, the results collected have been compiled in the terminological records to be put into the CAMEO data bank. The records compiled are 62, and they include the terms and their German equivalents, which have been considered to be useful for describing the products to be exported abroad. In particular, the terms defining the esthetics of the glasswork (*colorato*, *incolore*, *trasparente, opaco, etc.),* terms defining the material of the glasswork (*lattimo, calcedonio, cristallo, opalino, etc.),* terms defining the technique used for their realization and their decoration (*soffiatura, incisione, pittura a freddo, filigrana, etc.)* and terms defining the tools used to create the glassworks (*canna da soffio, borselle, tagianti, etc.).*
The terms included in the databank have all their respective German equivalent. Some equivalents have been created by us, but the cases are relatively few: "*vetro pulegoso",* whose German equivalent is "*Glas mit Luftblasen"*, and "*filigrana a retortoli"*, whose German equivalent is "*Fadenglas mit sich verdrehenden spiralförmigen Fäden"*. For the terms that have not been included in the term bank, some translation solutions have been proposed.
The sections of the records, which have been compiled, are all fundamental to give the needed information for the translators and technical communicators. Then, the terminological outcomes have been central to assess and revamp the terminology used in two publications about the Murano glass domain of the LWL Industry Museum. The research has been important for two main reasons.
Firstly, the project will be a support for all the translators and technical communicators for the exports of the Murano glass wares, since they can consult the CAMEO database. At a certain extent, the aim is also promotional, because it enhances the renown of the Venetian art worldwide. The German language has never been introduced in the CAMEO project, and therefore it is a new and important contribution for the current state of art. The German language is then, for the first time, integrated as part of the project. The research has been important because it contributes to standardizing the bilingual glass terminology and its reuse. Indeed, the terminological records have been compiled by slavishly following the four FAIR principles: Findability, Accessibility, Interoperability

and Reusability. The FAIR principles are synonyms of research and progress in the discipline. The research always provides the building block upon which the growth is hinged.

Secondly, the terminological results created will be central to the enhancement of the quality of the terminological data already existing, as done in the evaluation of the two books published by the LWL Industry Museum. The research has shown that good terminological results come from a double perspective of study. If only one of the two dimensions of analysis had been considered, the research would have led to incomplete and unsatisfying results. As for what concerns the compilation of the corpora, it has been discovered that they are different in size: the Italian corpus is huger than the German one. The reasons have been found in the number of the texts selected. The Italian specialized information about the domain is much more, since the experts of the domain are mainly the glassmakers of the glass factories. Generally, the written bibliography of the domain is not big. The terminology has never been really crystallized during the centuries, since it was only orally passed down. The terminology project and its various phases have shown that the glass terminology of Murano is rich of dialectal terms, such as *balloton, morise, borsella, pontello, pulegoso, rigadin, rigadin retorto*, etc. The jargon is part of the Murano glass activity, which is a popular art form, and it has a prominent oral feature. Therefore, not all terms have equivalents in the German target language of study. Lots of terminological variants have been also found and classified. Among them, most of the variants found belong to the dialect variation and the orthographic variation. Furthermore, cases of social variation, chronological variation and discursive variation have been discovered. The domain terminology is generally quite poor in terms of quantity of technical terms; however, the compilation of the corpora allowed us to select some written sources and still collect a satisfying number of terminological data.

The glassmaking activity of Murano is a niche business, even if it is known all over the world. Its renowned character makes the project addressed in this dissertation even more valuable, because the interest in the Murano artifacts has always been alive. Germany has always looked with admiration at the art forms of our country. That is witnessed by the publications of the LWL Industry Museum, which has been a further object of study. The objectives of the dissertation have led to different considerations.

First of all, the attention to the terminological aspect in a specialized text makes it really technical. Moreover, it is perceived as such by the non-expert if attention is paid to that feature. It is also true that a non-expert is not expected to know the terminology of a domain, and probably he has not the competences to understand it. However, he can anyway perceive that a text contains an incorrect terminology, especially if it is inconsistent throughout the text. Within the LWL publications, most of the terminological errors result from a lack of knowledge of the terminological equivalents of the terms of the source language. Indeed, lots of technical Italian terms have been put untranslated in the target text ("*lattimo", "calcedonio", "cristallo", "tagianti", etc.*) even without an explanation of the term in the German language. If a term is not consciously selected, the result will be an incorrect translation, making the communication unclear and ambiguous for the reader. The aim of terminology is, however, the non-ambiguity and the perfect transmission of the concepts of a special field from the source language to the target language. Within the books analyzed, the terminological inaccuracy is not a serious obstacle for the understanding of the text from the reader, since the books has lots of images of the artifacts with their descriptive labels. However, for a proper transmission of knowledge, more attention should have been devoted to the bilingual terminology of the domain. Furthermore, many terms used to translate the source language terms are either not frequent in the linguistic corpora or they are not the proper terminological choice. Indeed, in terminology science, some terms are more frequent than others, being then the preferred ones to be used. Some of the terms used are rather synonyms of the proper technical terms, and they result to be not completely correct terminological choices. In case of terminological choices that were not completely incorrect, a proposal for improvement was made, according to the data previously created. For every terminological error found, the correct form has been listed. All the suggestions want to contribute to a better dissemination of knowledge for the reader and to other future translation tasks. In this context, the standardization of the terminology of the greatest number of specialized domains becomes fundamental to avoid the ambiguity, when choosing the designation to transfer a concept. It should be remembered that in terminology science a term corresponds to one single concept and vice versa. Although synonymy and variation are increasingly accepted as existing terminological phenomena, it is appropriate that the terminology is as clear, standardized and correct as possible. If

the terminology used is correct, it means that behind its selection, there is a complex study of the specialized domain. The terminological project carried out for creating a standardized Murano glass terminology, has witnessed its effectiveness. Furthermore, the project has resulted to be important because the German language is almost never contemplated in the glossaries of the terminology of the Murano glass. For this reason, the terminological work wants to serve as an example and aims to be auspicious for the integration of even more languages in the CAMEO terminological data bank. Only by doing so, the economy of the Veneto region can indirectly benefit from its use. New terminological research means new standardized data, resulting in terminological progress.

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WorkLab – The International Association of Labour Museums. *LWL-Industriemuseum, Germany.*
URL: https://worklab.info/lwl-industriemuseum-germany/ [last visited: 16/10/2024]

Zogia Arte e Antiquariato. *Chi siamo.*
URL: https://www.zogia.it/#chisiamo [last visited: 18/10/2024]

Appendices – The bilingual terminological records of CAMEO

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	avventurina	sostantivo	femminile	singolare	[av.ven.tuˈriːna]	[dal fr. aventurine (con le accezioni del n. 2), che a sua volta è dall'ital. venturina, nome dato a Venezia (in origine come agg. nella locuz. pasta venturina) alla composizione di vetro e rame (v. al n. 1) perché risultante da pagliuzze di rame gettate a caso (per ventura) nel vetro fuso].	venturina	"Pasta venturina" è una variante cronologica secondo la classificazione di Freixa (2006).	Pasta vitrea particolarmente pregiata, inventata dai vetrai muranesi nella prima metà del XVII secolo e così chiamata perché il suo ottenimento, anche per il più esperto vetraio, era incerto e difficile, era una "avventura". La preparazione della "avventurina" lunga e delicata, alla conclusione della quale si formano all'interno della massa vitrea piccoli cristalli di rame lamellari e lucenti ("stelle", da cui il nome "stellaria", con cui pure venne indicata in passato) è sempre stata nel corso dei secoli segreto di pochi abili tecnici compositori.	https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/
DE	Goldfluss	Substantiv	Maskulinum	Singular	[gɔltflʊs]				Zimtgelbe Glaspaste mit glitzernden Einschlüssen winziger, beim Abkühlen der Schmelze ausgefallener Kupferkristalle.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	borselle	sostantivo	femminile	plurale	[borˈsɛl.le]	Dal dialetto veneto, derivato di borsèla, molletta che i vetrai usano per lavorare il vetro		Il termine è comunemente usato al plurale, ma esiste anche la forma singolare "borsella". "Pinza di strozzamento" è una variante funzionale secondo la classificazione di Freixa (2006).	Particolari pinze di diverse dimensioni utilizzate per modellare e decorare il vetro caldo in lavorazione.	https://www.zogia.it/blog/vetro-di-murano-gli-strumenti-del-maestro-vetraio/

DE	Zwackeisen	Substantiv		Plural	[t͡svakaɪ̯ˌzən]				Zangen und Scheren verschiedener Form und Größe zum Schneiden, Zwacken und Modellieren des Glases.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	bronzin	sostantivo	maschile	singolare	[bronˈd͡zin]	deriva da "bronzo", materiale con cui la piastra era anticamente prodotta.	bronzo	"Piano in grafite" è una variante funzionale secondo la classificazione di Freixa (2006).	Piastra di ferro, ma un tempo di marmo o bronzo, sulla cui superficie il vetraio fa rullare il bolo per dargli forma cilindrica o a pera.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	Bodenplatte	Substantiv	Femininum	Singular	[ˈboːdn̩ˌplatə]	1747 hamb. magazin 1,5,22. 1955 altertum 1,208 ak.			Platte, ursprünglich aus Marmor oder Bronze, später aus Eisen, auf der der Glasmacher einen Glasposten zum zylindrischen oder birnenförmigen Kölbl formt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	calcedonio	sostantivo	maschile	singolare	[kal.ʧeˈdɔːnjo]	[dal lat. tardo chalcedonius, gr. χαλκηδόνιος, agg. di Χαλκηδών «Calcedonia» (antica città della Bitinia, sulla costa asiatica del Bosforo)]		Il termine "calcedonio" si può trovare anche accompagnato dal termine "vetro". In effetti, la seconda opzione sarebbe la più corretta: il termine "calcedonio" designa anche il concetto <minerale calcedonio>. "Calcedonio" è una variante dialettale secondo la classificazione di Freixa (2006).	Tipo di vetro decorativo opaco ottenuto aggiungendo e mescolando nel fuso sali d'argento e altri ossidi di coloranti per imitare le pietre semipreziose come l'agata, il calcedonio, l'onice, la malachite, il lapislazzuli. Dalle carte muranesi il primo sicuro accenno al calcedonio risale al 1460.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/lavorazioni-e-composti-vetro/#
DE	Chalzedonglas	Substantiv	Neutrum	Singular	[ʧaltsɛdgla:s]				Durch Beimischen von Silbersalzen und weiteren Farboxiden zur Glaspaste gewonnenes mattes Dekorglas zur Imitation von Halbedelsteinen wie Achat, Chalzedon, Onyx, Malachit und Lapislazuli. In Muraneser Quellen ist Chalzedonglas 1460 erstmalig sicher belegt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Scientific name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Glossario Gambaro & Tagliapietra Murano Glass Studio		/tipo di vetro/ /cristalli di rame/ /massa vitrea/	pasta stellaria, venturina				vetro artistico	vetro di Murano	specializzato	Il segreto della lavorazione dell' avventurina , detenuto nei secoli da pochi maestri vetrai, sta nell'aggiungere a fusione conclusa, appropriate quantità di materie prime come battitura di ferro, silicio metallico, carbone, fino a quando inizia a precipitare il rame metallico.	https://www.mademuranoglass.com/it/lisola-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b	Made Murano Glass	avventurina rifusa, fare l'avventurina , avventurina soffiata
MUVE - Musei Civici Venezia		/Glasart/ /Kupferkristalle/ /Glasmasse/	Stellaria Aventurinaglas, Aventurinaglas, Aventurin, Goldstein			Goldfluß	Kunstglas	Muranoglas	fachsprachlich	Goldfluss: eine zimtgelbe Glaspaste mit glitzernden Einschlüssen winziger, beim Abkühlen der Schmelze ausgefallener Kupferkristalle.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Musei Civici Venezia	Goldfluss verarbeiten
Zogia Arte e Antiquariato		/pinza/ /strozzamento/ /decorazione/ /tecnica/	pinze di strozzamento		pinze di strozzamento		vetro artistico	vetro di Murano	specializzato	La modellazione avviene con "canna da soffio", "borselle" (specie di pinze) e "tagianti"(forbici) rimaste quasi immutate per foggia ed utilizzo nei secoli.	https://muranoglam.com/tipi-di-lavorazione/	Murano Glam	utilizzare le borselle
MUVE - Fondazione Musei Civici Venezia		/zwacken/ /technik/ /dekoration/ /Zange/					Kunstglas	Muranoglas	fachsprachlich	Dazu wird mit dem Zwackeisen ein Spitzenbesatz auf dem noch heißen Glas angebracht.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	Zwackeisen anbringen
MUVE - Fondazione		/piastra/ /bronzo/					vetro artistico	vetro di Murano	specializzato	Con la canna da soffio il maestro preleva dal crogiolo la quantità che gli serve della	https://museovetro.visitmuve.it/wp-	MUVE - Fondazione	marmorizar sul bronzin

Musei Civici Venezia		/rullare/ /cilindro/								massa di vetro fuso, poi la fa rullare (marmorizzare) sulla piastra di ferro (bronzin).	content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	Musei Civici Venezia	
MUVE - Fondazione Musei Civici Venezia		/Platte/ /Bronze/ /Rolle/ /Zylinder/					Kunstglas	Muranoglas	fachsprachlich	Das Ausrollen des Postens auf der Bodenplatte zum zylindrischen oder birnenförmigen Kölbl.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	drehen auf der Bodenplatte
MUVE - Fondazione Musei Civici Venezia		/tipologia di vetro/ /miscela di vetri/ /venature policrome/	Chalzadòn io	Chalzadòn io		calcidonio	vetro artistico	vetro di Murano	specializzato	La sua fama però ebbe inizio nel XV secolo, quando al vetro islamico fu preferito quello realizzato a Venezia e Angelo Barovier inventò il vetro cristallo, il bianco lattimo e il variegato calcedonio.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. MURANO PIXEL - Economia Circolare per gli scarti del vetro artistico.	vetro calcedonio
MUVE - Fondazione Musei Civici Venezia		/Glasart/ /Glasmischung/ /Polychrome Maserung/					Kunstglas	Muranoglas	fachsprachlich	In Muraneser Quellen ist Chalzedonglas 1460 erstmalig sicher belegt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-	Fondazione Musei Civici di Venezia (MUVE). 2020. Was ist Glas?	

											IST-GLAS-DEU.pdf		

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	canna da soffio	sostantivo	femminile	singolare	[ˈkan.na][da][ˈsof.fjo]			"Ferro sbuso", "fero", "supieto" sono varianti dialettali secondo la classificazione di Freixa (2006).	Tubo metallico di dimensione variabile utilizzato per raccogliere il vetro fuso e poi soffiare aria all'interno del bolo, come una bolla di sapone incandescente.	https://www.muranonet.com/it/blogs/glossary/canna-da-soffio-murano-glass-factory-fabric-verre?srsltid=AfmBOopqn4yC4i4CvGm7rVBsdAzJ67WLMV5bvwZMu3qSDHNsDXhxpJrE
DE	Glaspfeife	Substantiv	Femininum	Singular	[glaspfa̯ɪfə]				An einer Seite kegelförmig zulaufende Pfeife aus Eisen, mit der der Meister das Glas bläst, um eine gleichmäßige Stärke – zu gewährleisten.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	canna massiccia	sostantivo	femminile	singolare	[ˈkaːnna] [masˈsit.ʧa]				Lunga bacchetta di vetro cilindrica, ottenuta da un bolo di vetro che viene attaccato alle due estremità e tirato in due direzioni opposte, non forata.	https://www.muranonet.com/it/blogs/glossary/canna-di-vetro#:~:text=È%20una%20lunga%20bacchetta%20di,legno%20predisposti%20ad%20intervalli%20regolari.
DE	massiver Glasstab	Nominalphrase			[masiːvɐ] [glaːstp]				Langer zylindrischer Glasstab mit keinen Löchern, gewonnen aus einem an beiden Enden befestigten "bolo", der in zwei entgegengesetzte Richtungen gezogen wird.	https://www.muranonet.com/it/blogs/glossary/canna-di-vetro#:~:text=È%20una%20lunga%20bacchetta%20di,legno%20predisposti%20ad%20intervalli%20regolari.
IT	canna vitrea	sostantivo	femminile	singolare	[ˈkan.na][ˈviːtre.a]			"Canna di vetro" è una variante discorsiva secondo la classificazione di Freixa (2006).	Lunga bacchetta di vetro cilindrica, ottenuta da un bolo di vetro che viene attaccato alle due estremità e tirato in due direzioni opposte.	https://www.muranonet.com/it/blogs/glossary/canna-di-vetro#:~:text=È%20una%20lunga%20bacchetta%20di,legno%20predisposti%20ad%20intervalli%20regolari.

DE	Glasrohr	Substantiv	Neutrum	Singular	[glasʁo:ɐ̯]	Determinativkompositum aus den Substantiven Glas und Rohr			Langer zylindrischer Glasstab, gewonnen aus einem an beiden Enden befestigten "bolo", der in zwei entgegengesetzte Richtungen gezogen wird.	https://www.muranonet.com/it/blogs/glossary/canna-di-vetro#:~:text=È%20una%20lunga%20bacchetta%20di,legno%20predisposti%20ad%20intervalli%20regolari.
IT	colorato	aggettivo			[ko.loˈraːto]	P. pass. di colorare - sec. XIV.			Caratteristica di essere tinto di colore.	https://www.treccani.it/vocabolario/colorato/?search=colorato%2F
DE	farbig	Adjektiv			[ˈfaʁbɪç]	Adj. ‘bunt, koloriert’ (16. Jh.), zunächst auch färbig, farbicht. Seit dem 19. Jh. für nichtweiße Hautfarbe (vgl. engl. coloured); in dieser Verwendung substantiviert Farbiger m. (19. Jh.). Färber m. ‘wer das Gewerbe des Textilfärbens ausübt’, mhd. verwære; vgl. (mit anderer Bildungsweise) ahd. far(a)wo (9./10. Jh.).			Das Eigenschaft, (eine) Farbe zu haben.	https://www.dwds.de/wb/farbig#d-1-1

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Murano Net Vetreria glossario		/vetro fuso/ /tubo metallico/ /soffiare/ /prelevare/	fero sbuso, fero buxo, fero, supieto, canna di soffiaggio	fero sbuso, fero buxo, fero, supieto			vetro artistico	vetro di Murano	specializzato	Due soffiati differenti per colore o per decorazione di forma cilindrica, l'uno attaccato alla canna da soffio, l'altro al pontello, vengono saldati lungo il bordo di uguale diametro.	https://www.massimilianoschiavon.com/lavorazione/	MUVE - Fondazione Musei Civici Venezia	mit der Glaspfeife blasen
MUVE - Fondazione Musei Civici Venezia		/geschmolzenes Glas/ /Metallrohr/ /blasen/ /aufnehmen/	Glasmacherpfeife				Kunstglas	Muranoglas	fachsprachlich	An einer Seite kegelförmig zulaufende Glaspfeife aus Eisen, mit der der Meister das Glas bläst, um eine gleichmäßige Stärke – zu gewährleisten.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	mit der Glaspfeife blasen
Murano Net Vetreria - Glossario	La definizione è stata formulata da me.	/canna/ /tiratura/ /forma cilindrica/ /assenza di foro/					vetro artistico	vetro di Murano	fachsprachlich	La canna forata si usa nella produzione di perle di conteria; quella massiccia, l'unica utilizzata fino all'ultimo quarto del XV secolo, si usa tuttora nella produzione di perle lavorate – "a lume".	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	ottenere dalla canna massiccia
Murano Net Vetreria - Glossario	Die Definition wurde von mir formuliert.	/Fass/ /Produktion/ /zylindrische Form/ /kein Loch/					Kunstglas	Muranoglas	specializzato	Ein massiver Glasstab wird über der Flamme erhitzt und in kleinen Portionen auf (teils mit Ton überzogenen) Metalldraht gezogen und unter ständigem Drehen zu Perlen geformt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	massiver Glasstab über der Flamme zu erhitzen

Murano Net Vetreria – Glossario		/cilindro/ /vetro/ /tiratura/ /tecnica di modellazione/	canna di vetro				vetro artistico	vetro di Murano	specializzato	La lavorazione del vetro a lume è realizzata con una fiamma diretta per ammorbidire la canna vitrea.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano	GV Oggettistica Murano	tirare la canna vitrea, canna vitrea con motivi centrali policromi
Murano Net Vetreria - Glossario	Die Definition wurde von mir formuliert.	/Zylinder/ /Glas/ /Ziehen/ /Technik des Modellierens/	Glasstab				Kunstglas	Muranoglas	fachsprachlich	Es wird mit einem farbigen Glasrohr durchgeführt, das als Halbfabrikat mit Feuer von einer Fackel erweicht wird.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de. 2021.Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker	Abschnitten aus polychromem Glas rohr, farbiges Glasrohr
Treccani							vetro artistico	vetro di Murano	non specializzato	Secondo la composizione e la storia termica, il vetro può essere trasparente, traslucido o opaco, incolore o colorato.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	vetro colorato
DWDs		/Zylinder/ /Glas/ /Ziehen/ /Technik des Modellierens/	Glasstab				Kunstglas	Muranoglas	nicht fachsprachlich	Selbst das ursprünglich nur dezent farbige, oft weiße Fadenglas zeigte nun ungewöhnliche Pracht.	https://www.lwl.org/wim-download/ausstellungen-download/Gernheim/LWL/Kultur/wim/portal/S/gernheim/sonderausstellung/Fruehere_Ausstellungen/murano.html	LWL Industry Museum	farbiges Glasrohr, farbige Glasflüsse

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	costolatura	sostantivo	femminile	singolare	[ko.sto.laˈtuːra]	Der. di costola - sec. XVI.	costola		Effetto di rilievo sulla superficie del vetro, ottenuta con la tecnica del rigadin e rigadin ritorto.	https://muranoglam.com/tipi-di-lavorazione/
DE	Rippen	Substantiv		Plural	[ˈʁɪpn̩]	f. einer der gebogenen Knochen, die den Brustkorb von Menschen und Wirbeltieren bilden, ahd. ribbi, rippi n. (9. Jh.), ribba, rippa f. (10. Jh.), mhd. rippe, rib(b)e, riebe f. n., asächs. ribbi n., mnd. ribbe, rebbe m. n., mnl. ribbe, rebbe, nl. rib(be), afries. rib, reb m. n., aengl. rib(b), engl. rib, anord. rif, auch ‘Riff’ (s. Riff), schwed. rev führen als j-Ableitungen (germ. *rebja-) mit der ro-Ableitung aslaw. rebro ‘Rippe, Seite’, russ. rebró (ребро) ‘Rippe’ sowie mit griech. eréphein (ἐρέφειν) ‘überdecken, überdachen’ und (ablautend) órophos (ὄροφος) ‘Bedeckung, Dach’ auf eine Wurzel ie. *rebh- ‘überwölben, überdachen’. Die Rippen sind also die Bedeckung der Brusthöhle.		Der Begriff ist im Plural verwendet.	Reliefeffekt auf der Glasoberfläche, erzielt mit der rigadin Glasverzierungstechnik und rigadin ritorto Glasverzierungstechnik.	https://muranoglam.com/tipi-di-lavorazione/
IT	cristallo	sostantivo	maschile	singolare	[kriˈstal.lo]	[dal lat. crystallus e crystallum, gr. κρύσταλλος, propr. «acqua gelata, ghiaccio», der. di κρύος «freddo, gelo»].	cristallino, cristallizzare, cristallizzazione	Il termine "cristallo" è accompagnato spesso dal termine "vetro". "Cristallino" è una variante cronologica secondo la classificazione di Freixa (2006).	Vetro incolore e terso, ottenuto per la prima volta attorno alla metà del XV secolo dal vetraio muranese Angelo Barovier, oltre che con la decolorazione mediante il manganese, già prima praticata, anche con la depurazione, cui veniva sottoposta la cenere fondente, e con speciali procedimenti applicati alla condotta della fusione. Il cristallo veneziano, di tipo sodico, è adatto, a	https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/

									differenza del più tardo cristallo boemo, alla potassa, ed inglese, al piombo, ad una lunga e complessa lavorazione manuale da parte del maestro vetraio.	
DE	Kristallglas	Substantiv	Neutrum	Singular	[kʁɪsˈtalˌglaːs]	n. ‘stark glänzendes Glas, daraus hergestelltes, meist geschliffenes Trinkglas’ (18. Jh.).			Durchsichtiges, farbloses, sehr reines Glas aus geläuterten und mit Mangandioxid entfärbten Rohstoffen.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	doratura	sostantivo	femminile	singolare	[do.raˈtuːra]	[der. di dorare]			Tecnica che prevede una copertura in oro di parte del vetro o un’applicazione di un disegno in oro. Essa si ottiene con una lamina d’oro, che viene applicata sul vetro a freddo, interponendo dei fondenti e sagomandola tramite appositi attrezzi.	https://gvoggettistica.it/tecnica-di-lavorazione-con-foglia-doro-del-vetro-di-murano/?srsltid=AfmBOoqcpu-G4l-7awKniVPj24lUvTB7Rxhry8TuHh-dotjQp2ZPXfHR
DE	Vergoldung	Substantiv	Femininum	Singular	[fɛɐ̯gɔldʊŋ]	f. , substantivbildung zu vergolden: vergüldung, auratura Maaler 420b, deauratio Stieler 680.			Technik, bei der ein Teil des Glases mit Gold bedeckt oder ein Goldmuster aufgebracht wird. Es wird mit Goldfolie hergestellt, die kalt auf das Glas aufgetragen wird.	https://gvoggettistica.it/tecnica-di-lavorazione-con-foglia-doro-del-vetro-di-murano/?srsltid=AfmBOoqcpu-G4l-7awKniVPj24lUvTB7Rxhry8TuHh-dotjQp2ZPXfHR
IT	esemplare vitreo	sostantivo	maschile	singolare	[e.zemˈplaːre][ˈviːtre.o]			"Esemplare di vetro" è una variante discorsiva secondo la classificazione di Freixa (2006).	Oggetto in vetro, ottenuto per fusione ad alta temperatura da una miscela di materie prime: silice, carbonato di sodio e carbonato di calcio.	https://www.assovetro.it/il-vetro-materiale/
DE	Glaskörper	Substantiv	Maskulinum	Singular	[ˈglaːsˌkœʁpɐ]	Determinativkompositum aus den Substantiven Glas und Körper			Glasobjekt, der durch Hochtemperaturschmelzen aus einer Mischung der Rohstoffe Siliziumdioxid, Natriumcarbonat und Calciumcarbonat gewonnen ist.	https://www.assovetro.it/il-vetro-materiale/

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Murano Glam	La definizione è stata formulata da me.	/rilievo/ /superficie/ /decorazione/					vetro artistico	vetro di Murano	specializzato	Una volta fredda, la canna viene tagliata in segmenti cilindrici, le murrine, che avranno caldo sul fondo di un soffiato, ancora attaccato alla canna, un'ulteriore calotta vitrea che viene poi impressa riprendendo la soffiatura in uno stampo costolato aperto, in modo da ottenere costolature a rilievo .	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	
Murano Glam	Die Definition wurde von mir formuliert.	/Relief/ /Oberfläche/ /Dekoration/					Kunstglas	Muranoglas	fachsprachlich	Neben einfachen Verzierungen wie Rippen oder Rillen entstanden auch figürliche wie Früchte, Tiere, Menschenköpfe und so weiter.	https://files.battenberg-gietl.de/public/leseproben/leseprobe-glas.pdf	Walter Spiegl. 2009. Glas - 17. Jahrhundert bis 1940.	
Gambaro & Tagliapietra Murano Glass Studio		/tipologia di vetro/ /trasparenza/ /sabbia quarzosa/ /fusione/	vetro cristallino, vetro cristallo, cristallo veneziano, cristallino				vetro artistico	vetro di Murano	specializzato	Fin dai tempi del Medioevo il cristallo è considerato il più pregiato vetro muranese.	https://www.mademuranoglass.com/it/lisola-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b	Mademuranoglass. L'isola di Murano e la lavorazione del vetro.	vetro cristallo, cristallo prelevato
MUVE - Fondazione Musei Civici di Venezia		/Glasart/ /Undurchsichtigkeit/ /Quarzsand/ /Fusion/	Kristall				Kunstglas	Muranoglas	fachsprachlich	Die verstärkten Bemühungen im 17. Jahrhundert um ein verbessertes Kristallglas nach venezianischem Vorbild scheinen sich auf die Zusammensetzung des Waldglases nicht ausgewirkt zu haben.	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2022. Die Geschichte vom Glasmachen 1550 bis 1700.	Herstellung des Kristallglases, Kristallglas zu bekommen
GV Oggettistica		/foglia oro/ /decorazione a freddo/ /applicare/					vetro artistico	vetro di Murano	specializzato	Reliquiario con incisioni a punta di diamante, pitture a freddo e tracce di doratura.	https://www.jstor.org/stable/24191231	Walter Spiegl. 2022. Die Geschichte vom Glasmachen	doratura a freddo, doratura e incisione

												1550 bis 1700.	
GV Oggettistica	Die Definition wurde von mir formuliert.	/Goldfolie/ /Kaltdekoration/ /auftragen/					Kunstglas	Muranoglas	fachsprachlich	Emailmalerei und Vergoldung erreichten in der zweiten Hälfte des 15. Jahrhunderts ihren künstlerischen Höhepunkt.	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Zecchin. Il vetro decorato veneziano nel '500, in «Journal of Glass Studies» 51 (2009).	Vergoldung erreichen, Emailmalerei und Vergoldung
Assovetro	La definizione è stata da me formulata.	/oggetto/ /vetro/ /silice/ /materie prime/	esemplare di vetro, pasta vitrea, pasta vetrosa, miscela vetrosa				vetro artistico	vetro di Murano	specializzato	Un altro indizio di provenienza dalla stessa officina potrebbe essere la presenza di nuclei di esemplari vitrei omogenei, cioè del tutto simili tra di loro.	https://www.academia.edu/4722149/Osservazioni_sulla_produzione_di_paste_vitree_nel_XVIII_secolo_e_il_caso_di_Venezia	Gabriella Tassinari. 2010. Osservazioni sulla produzione di paste vitree nel XVIII secolo e il caso di Venezia	esemplare vitreo omogeneo
Assovetro	Die Definition wurde von mir formuliert.	/Objekt/ /Glas/ /Siliciumdioxid/ /Rohstoffe/	Glasmasse, Glaspaste				Kunstglas	Muranoglas	fachsprachlich	Eine weitere Möglichkeit, den Glaskörper zu verzieren, bot das Schmelzen von Glasfäden oder Tropfen.	https://files.battenberg-gietl.de/public/leseproben/leseprobe-glas.pdf	Walter Spiegl. 2009. Glas – 17. Jahrhundert bis 1940	Zimtgelbe Glaspaste

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	filigrana	sostantivo	femminile	singolare	[fi.liˈgraːna]	Da filo (a) grani; prima del 1704.L'origine del nome è senza dubbio latina, e deriva dall'unione di due sostantivi: filo (filum) e grano inteso come granulo (granum).	filo, granulo	"Vetro filigranato" è una variante discorsiva secondo la classificazione di Freixa (2006).	Tipo di vetro ottenuto con una tecnica decorativa a caldo, che prevede l'utilizzo di bacchette contenenti fili lisci in "lattimo" o in vetro colorato.	https://www.mademuranoglass.com/it/lisola-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b
DE	Fadenglas	Substantiv	Neutrum	Singular	[ˈfaːdŋglaːs]			„Fadendekor“ ist nach der Klassifikation von Freixa (2006) eine diskursive Variante.	Verfahren aus Stäbchen mit glatten Milch- oder Farbglasfäden heiß hergestelltes Glas. Werden die Fäden in den Stäbchen spiralförmig verdreht, spricht man von Fadenglas "a retortoli", überkreuzen sich die Stäbchen, von Netz- oder Spitzenglas.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	filigrana a reticello	sostantivo	femminile	singolare	[fi.liˈgraːna] [a][re.tiˈʧɛl.lo]			"Filigrana a redexello" è una variante dialettale secondo la classificazione di Freixa (2006).	Variante della filigrana ottenuta in questo caso dalla disposizione a intreccio doppio delle canne usate per la decorazione.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano
DE	Spitzenglas	Substantiv	Neutrum	Singular	[ʃpɪt͡sə̯ŋlaːs]				Eine Verfeinerung des Fadenglases, bei der die Stäbchen überkreuzen sich.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	filigrana a retortoli	sostantivo	femminile	singolare	[fi.liˈgraːna] [a][reˈtɔr.to.li]			"Zanfirico" è una variante funzionale secondo la classificazione di Freixa (2006).	Variante della filigrana in cui i fili nelle bacchette sono ritorti o a spirale.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	Fadenglas mit sich verdrehenden spiralförmigen Fäden	Nominalphrase							Eine Verfeinerung des Fadenglases, bei der die Fäden in den Stäben gedreht oder spiralförmig sind.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf

IT	foglia d'oro	sostantivo	femminile	singolare	[ˈfɔʎ.ʎa][di][ˈɔːro]			"Fogia or" è una variante dialettale secondo la classificazione di Freixa (2006).	Foglio sottile quadrato di materiale oro, su cui viene rotolato il vetro incandescente massiccio o soffiato, in modo da creare un pulviscolo che aderisce alla parete esterna del vetro.	https://www.massimilianoschiavon.com/lavorazione/
DE	Goldfolie	Substantiv	Femininum	Singular	[ˈgɔltˌfoːlɪə]	f., als untergrund aus blattgold, vgl. cochina, cadmia goldes folli id est illud quod utuntur aurifabri in anulis sub margaritis ponendis voc. theut. (Nürnbg. 1482) l 5b: die ... schöneren sorten (achat) geben ringsteine, die beym fassen eine ... goldfolie erhalten			Dünne, quadratische Platte aus Goldmaterial, auf die massives oder geblasenes Glas gerollt wird, um einen Staub zu erzeugen, der an der Außenwand des Glases haftet.	https://www.massimilianoschiavon.com/lavorazione/

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Made Murano Glass		/intreccio/ /fili/ /decorazione/	vetro filigranato				vetro artistico	vetro di Murano	specializzato	Anche questa tecnica di lavorazione del vetro è una variante della filigrana ed è molto utilizzata per realizzare piatti e bicchieri.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano	GV Oggettistica Murano	filigrana a reticello, filigrana a retortoli, a mezza filigrana
MUVE - Fondazione Musei Civici di Venezia		/Weben/ /Fäden/ /Dekoration/	Filigranglas, Fadendekor				Kunstglas	Muranoglas	fachsprachlich	Selbst das ursprünglich nur dezent farbige, oft weiße Fadenglas zeigte nun ungewöhnliche Pracht.	https://www.lwl.org/wim-download/ausstellungen-download/Gernheim/LWL/Kultur/wim/portal/S/gernheim/sonderausstellung/Fruehere_Ausstellungen/murano.html	LWL Industry Museum	weißes Fadenglas
GV Oggettistica Murano		/rete/ /decorazione/	vetro a reticello, reticello, doppia filigranavetro a reticello, reticello, doppia filigrana				vetro artistico	vetro di Murano	specializzato	Inoltre, proprio nel 1500 nascono e si sviluppano nuove tecniche come quella, famosissima, della filigrana a retortoli e della filigrana a reticello che forse più di tutte le altre contribuirono alla diffusione e alla passione per i vetri di Murano nelle corti e negli ambienti aristocratici di tutta Europa.	https://www.vetreriavenier.com/it/vetreria/l-arte-del-vetro-a-murano	Vetreria Venier	
MUVE - Fondazione Musei Civici Venezia		/Netz/ /Dekoration/	Netzglas				Kunstglas	Muranoglas	fachsprachlich	Werden die Fäden in den Stäbchen spiralförmig verdreht, spricht man von Fadenglas "a retortoli", überkreuzen sich die Stäbchen, von Netz- oder Spitzenglas.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDI	MUVE - Fondazione Musei Civici Venezia	

											MENTI-WAS-IST-GLAS-DEU.pdf		
MUVE - Fondazione Musei Civici Venezia	La definizione è stata formulata da me.	/unione a caldo/ /canne trasparenti/ /fili intrecciati/ /decorazione/	zanfirico		zanfirico	filigrana a ritorti	vetro artistico	vetro di Murano	specializzato	Inoltre, proprio nel 1500 nascono e si sviluppano nuove tecniche come quella, famosissima, della filigrana a retortoli e della filigrana a reticello che forse più di tutte le altre contribuirono alla diffusione e alla passione per i vetri di Murano nelle corti e negli ambienti aristocratici di tutta Europa.	https://www.vetreriavenier.com/it/vetreria/l-arte-del-vetro-a-murano	Vetreria Venier	realizzare la filigrana a retortoli
MUVE - Fondazione Musei Civici Venezia	Die Definition wurde von mir formuliert.	/Heißfügen/ /undurchsichtige Stäbe/ /geflochtene Fäden/ /Dekoration/					Kunstglas	Muranoglas	fachsprachlich	Werden die Fäden in den Stäbchen spiralförmig verdreht, spricht man von Fadenglas "a retortoli".	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	
Massimiliano Schiavon Art Team	La definizione è stata formulata da me.	/applicazione/ /decorazione/ /vetro/					vetro artistico	vetro di Murano	specializzato	Anche la foglia d'oro zecchino o d'argento vengono inserite a caldo.	https://muranoglam.com/tipi-di-lavorazione/	Murano Glam	fare aderire la foglia d'oro, sottile foglia d'oro
Massimiliano Schiavon Art Team	Die Definition wurde von mir formuliert.	/Anwendung/ /Dekoration/ /Glas/					Kunstglas	Muranoglas	fachsprachlich	Dabei wird eine hauchdünne Goldfolie auf eine Glasscheibe geklebt und im Ofen mit einer Glasschicht überzogen.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	hauchdünne Goldfolie

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	formatura	sostantivo	femminile	singolare	[for.maˈtuːra]	[Lat. formatura, der. del part. pass. formatus di formare "dare una forma"]			La formatura è eseguita in diverse modalità, quando il vetro è ancora fluido e si trova in un campo di temperatura nel quale assume viscosità tale da poter essere lavorato e da conservare la forma impartita, senza alterazioni.	https://www.mosaicidonamurano.com/mosaici_murano/fusione_del_vetro.htm#:~:text=La%20fase%20seguente%20è%20la,la%20forma%20impartita%2C%20senza%20alterazioni.
DE	Formgebung	Substantiv	Femininum	Singular	[ˈfɔʁmgeːbʊŋ]				Gestaltung eines Gebrauchs- oder Kunstgegenstandes.	https://www.duden.de/rechtschreibung/Formgebung#google_vignette
IT	forno di ricottura	sostantivo	maschile	singolare	[ˈfor.no][di][ri.kotˈtuːra]			"Era" è una variante funzionale secondo la classificazione di Freixa (2006).	Tipologia di forno in cui il vetro viene raffreddato lentamente per evitare rotture dovute al rapido raffreddamento della superficie rispetto all'interno.	http://dspace.unive.it/bitstream/handle/10579/8394/819881-1167441.pdf
DE	Nachbrennofen	Substantiv	Maskulinum	Singular	[naːxbʁɛnoːfən]				Ofen, der eine kontrollierte Abkühlung von Glasgegenständen ermöglicht.	http://dspace.unive.it/bitstream/handle/10579/8394/819881-1167441.pdf
IT	forno fusore	sostantivo	maschile	singolare	[ˈfor.no] [fuˈzoːre]			"Forno fusorio" è una variante discorsiva secondo la classificazione di Freixa (2006).	Forno utilizzato per la fusione dei metalli.	https://iate.europa.eu/entry/result/1422211/de-it
DE	Schmelzofen	Substantiv	Maskilunum	Singular	[ˈʃmɛlt͡sˌʔoːfn]	„Vorrichtung zur Erzeugung und Abgabe von Wärme“ geht auf ahd. ofan st. m. (a-St.) „Ofen, Schmelzofen“ (10./11. Jh.) zurück.			Ofen zum Erschmelzen und Überhitzen der Gusswerkstoffe.	https://iate.europa.eu/entry/result/1422211/de-it
IT	fusione	sostantivo	femminile	singolare	[fuˈzjoːne]	Dal lat. fusio -onis, der. di fundĕre ‘fondere’, sec. XIV.			Trasformazione di un sistema termodinamico da uno stato di aggregazione solido a uno liquido.	https://iate.europa.eu/entry/result/1367454/it-de
DE	Schmelze	Substantiv	Femininum	Singular	[ˈʃmɛlt͡sə]	f. Handlung, Ort (Schmelzhütte), Produkt des Schmelzens (16. Jh.).			Überführung vom festen in den flüssigen Zustand durch Hitzeeinwirkung.	https://iate.europa.eu/entry/result/1367454/it-de

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Mosaici Donà Murano		/modellare/ /vetro fuso/ /lavorare/					vetro artistico	vetro di Murano	specializzato, non specializzato	Il vetro viene prelevato con canne d'acciaio o puntelli e sottoposto a lavorazioni di formatura e trattamento con tecniche specifiche in base all'effetto desiderato (soffiatura, taglio manuale, pressatura) utilizzando anche stampi in legno di pero o in ghisa.		Master Thesis "Analisi Emergetica della produzione di vetro artistico di Murano"	formatura del vetro, processo di formatura
DUDEN		/Modellieren / /Fused Glass/ /Arbeiten/					Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Kunstvolle Formgebung und handwerklich perfekte Dekore kennzeichnen die Gläser der venezianischen Insel Murano.	https://www.lwl.org/wim-download/ausstellungen-download/Gernheim/LWL/Kultur/wim/portal/S/gernheim/sonderausstellung/Fruehere_Ausstellungen/murano.html	LWL Industry Museum	kunstvolle Formgebung,Formgebung und handwerklich perfekte Dekore
Sofia Spagnolo. 2015/2016. Master Thesis - ANALISI EMERGETICA DELLA PRODUZIONE DI VETRO ARTISTICO DI MURANO.		/forno/ /raffreddamento/ /vetro/	Era	Era			vetro artistico	vetro di Murano	specializzato	Sostanziali modifiche avvengono nel Novecento, con il distacco del forno – di fusione dal forno di ricottura , con l'impiego dell'olio combustibile prima e del metano poi, e infine con la larga diffusione dei forni "a un crogiolo", dotati di recupero del calore e della necessaria strumentazione.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	mettere nel forno di ricottura
Sofia Spagnolo. 2015/2016.	Die Definition wurde	/Ofen/ /Kühlung/ /Glas/	Kühlofen				Kunstglas	Muranoglas	fachsprachlich	Mittels einer Eisenhaube, des so genannten "Pferdchens", werden die	https://museovetro.visitmuve.it/wp-	MUVE - Fondazione	

Master Thesis - ANALISI EMERGETICA DELLA PRODUZIONE DI VETRO ARTISTICO DI MURANO.	von mir formuliert.									Rauchgase aus dem Schmelzofen in den "Nachbrennofen" geleitet, dessen Leistung dadurch erheblich gesteigert wird.	content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	Musei Civici Venezia	
IATE		/forno/ /fusione/ /vetro/ /alta temperatura/	forno fusorio, forno di riscaldamento	forno di riscaldamento			vetro artistico	vetro di Murano	specializzato	Pertanto, il forno fusore più utilizzato era quello a tre piani.	https://www.artigianatomuranese.it/la-vetreria/	Artigianato Muranese	forno fusore impiegato, forno fusore utilizzato
IATE		/Ofen/ /Schmelzen/ /Glas/ /hohe Temperatur/					Kunstglas	Muranoglas	fachsprachlich	Diese Notwendigkeit ergab sich aus der beschränkten Leistungsfähigkeit der Schmelzöfen und der damit verbundenen unverhältnismäßig langen Schmelzzeit, die sich auf die Reinheit des Glases sowie seine Formbarkeit ungünstig ausgewirkt hätte.	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2022. Die Geschichte vom Glasmachen 1550 bis 1700.	Leistungsfähigkeit der Schmelzöfen
IATE		/processo/ /alta temperatura/ /fondere/ /forno fusore/					vetro artistico	vetro di Murano	specializzato, non specializzato	La tecnica consiste nella fusione al calore del forno di sezioni di canna vitrea policroma o di canne millefiori, canne di vetro a strati concentrici dal motivo a stella o a rosetta.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano	GV Oggettistica	fusione e raffreddamento, completare la fusione, la fusione avviene, la fusione comporta, vetrofusione, fusione nel forno
IATE		/Prozess/ /Hochtemperatur/ /Schmelzen/ /Schmelzofen/	Schmelzvorgang, Verflüssigung. Hitzeverschmelzung				Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Kohle verflüchtigt sich bei der Schmelze als Kohlendioxid, aus Eisenoxydul, das grün färbt, wird Eisenoxid, das nur einen leichten Gelbstich ergibt, der wiederum mit Braunstein und etwas	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2002. Die Geschichte vom Glasmachen 1550 bis 1700.	Schmelze der Glasmasse, Dauer der Schmelze, Schmelze zu verkürzen

										Kobaltoxid neutralisiert werden kann.			

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	incisione	sostantivo	femminile	singolare	[in.ʧiˈzjoːne]	[dal lat. incisio -onis, der. di incīdĕre «incidere2»]			Decorazione con tratti poco profondi eseguiti con uno strumento a punta.	https://www.storiadelvetro.it/wp-content/uploads/2017/02/Glossario.pdf
DE	Gravur	Substantiv	Femininum	Singular	[ɡʁaˈvuːɐ̯]	f. ‘Erzeugnis der Gravierkunst, Kupfer-, Stahlstich, Steinschnitt’, im 19. Jh. auch (latinisierend)			Veredelungstechnik durch Abtragung von Material auf Werkstoffen wie z.B. Metallen, Kunststoff, Glas oder anderen Materialien.	https://www.hach.de/glossar/gravur
IT	incisione a punta di diamante	sostantivo	femminile	singolare	[in.ʧiˈzjoːne][a][ˈpun.ta][di][di.aˈman.te]			"Incisione puntinata" e "graffito a punta di diamante" sono varianti discorsive secondo la classificazione di Freixa (2006).	Tecnica di incisione in cui vengono impiegati dei trapani con rotelle diamantate che incidendo il vetro fanno spesso scoprire uno strato di colore altrimenti invisibile.	https://www.massimilianoschiavon.com/lavorazione/
DE	Diamantgravur	Substantiv	Femininum	Singular	[diːamatgʁavyːɐ̯]				Kaltbearbeitung, bei der Bohrer mit Diamantscheiben verwendet werden.	https://www.glassway.vda.it/vetro-artigianale-e-artistico/tecniche-di-produzione-del-vetro/incisione-a-punta-di-diamante
IT	incisione all'acido	sostantivo	femminile	singolare	[in.ʧiˈzjoːne][al][ˈaːʧiːdo]				Decorazione della superficie del vetro ottenuta con l'uso di acido fluoridrico, ottenendo un'incisione di profondità variabile.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	Ätzgravur	Substantiv	Femininum	Singular	[ɛt͡sgʁavyːɐ̯]				Verzierung der Glasoberfläche, bei der das Glas mithilfe von Flusssäure verschieden tief eingeätzt wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	incisione alla ruota	sostantivo	femminile	singolare	[in.ʧiˈzjoːne]			"Incisione a rotina" è una variante dialettale del termine.	Decorazione della superficie del vetro con disegni realizzati grazie all'incisione più o meno profonda mediante dischi di rame ricoperti da materiale abrasivo.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf

DE	Rollgravur	Substantiv	Femininum	Singular	[ɛtsg͡ʁavyːɐ̯]				Verzierung der Glasoberfläche, bei der das Glas mithilfe von mit Schleifmitteln überzogenen Kupferrädchen mehr oder weniger tief eingraviert wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Daniela Ferrari, Annamaria Larese, Gioia Meconcelli Notarianni, Marco Verità - Comitato Nazionale Italiano. 2017. GLOSSARIO DEL VETRO.		/disegno/ /decorazione/ /vetro/	Kupfertisch				vetro artistico	vetro di Murano	specializzato, non specializzato	Fanno parte invece della seconda lavorazione l'elaborazione a lume con l'utilizzo di bacchette di vetro, la vetrofusione e le lavorazioni a freddo quali la decorazione, l' incisione e la molatura.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. MURANO PIXEL - Economia Circolare per gli scarti del vetro artistico.	incisione alla ruota, incisione a punta di diamante, ottenere una incisione
Hach.de		/Design/ /Dekoration/ /Glas/					Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Die Arbeit kann dann von erfahrenen Schleifern kalt bearbeitet werden, die mit dem Schleifen oder einer anderen Endbearbeitung fortfahren; die figurative Gravur wird in unabhängigen Werkstätten durchgeführt, in denen hochspezialisierte Dekorateure arbeiten.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker?srsltid=AfmBOooIFP-E0Asus8LE2rsRpraHnmpIsmy4IcbZgWMjvxsemFrIH9Sc	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker	tiefe Gravur, Schliff und Gravur
Massimo Schiavon Art Team	La definizione è stata da me	/industrielle Diamantspitze/ /Dekoration/	graffito a punta di diamante, incisione puntinata				vetro artistico	vetro di Murano	specializzato	Nel Rinascimento, inoltre, vennero sviluppate nuove tecniche di lavorazione come la filigrana a retortoli, a reticello, e l'incisione a	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola	decorazione con incisione a punta di diamante

	formulata .									punta di diamante , che sancirono la supremazia assoluta della vetraria veneziana.		Careno, Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia Circolare per gli scarti del vetro artistico.	
Glassway - La via del vetro	Die Definition wurde von mir formuliert .	Diamantgravierung					Kunstglas	Muranoglas	fachsprachlich	In der schöpferischen Explosion des sechzehnten Jahrhunderts wurden alte Techniken erprobt und innoviert, wie die Diamantgravur, mit der dem Glas raffinierte, spitzenartige Texturen verliehen wurde, von denen Sie im Schaukasten 6 zahlreiche prächtige Beispiele sehen können.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf	MUVE - Musei Civici di Venezia. Glasmuseum Murano	
MUVE - Fondazione Musei Civici Venezia		/superficie/ /decorazione/ /materiale abrasivo/	incisione con acido			incisione con acido	vetro artistico	vetro di Murano	specializzato	Infine, c'è la tecnica dell'incisione con acido. Questo prevede l'applicazione di un acido sulla superficie del vetro dopo aver dipinto l'ultimo con bitume. L'acido renderà ruvida la superficie, lasciando intatta l'area con il bitume.	https://www.yourmurano.com/it/finiture-decorative-in-vetro-di-murano-articolo	Your Murano Vetreria	
MUVE - Fondazione Musei Civici Venezia		/Oberfläche/ /Dekoration/ /Schleifmittel/					Kunstglas	Muranoglas	fachsprachlich	Die Ätzgravur ist eine Verzierung der Oberfläche, bei der das Glas mithilfe von Flusssäure verschieden tief eingeätzt wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-	MUVE - Fondazione Musei Civici Venezia	

											IST-GLAS-DEU.pdf		
MUVE - Fondazione Musei Civici Venezia		/decorazione/ /superficie/ /vetro/ /disco di rame/	incisone a rotina	incisione a rotina			vetro artistico	vetro di Murano	specializzato	Nell'incisione a ruota, il disegno viene creato facendo rotolare un utensile, come uno strumento a punta o uno scalpello, sul pezzo di vetro con un movimento circolare.	https://muranoglam.com/incisione-e-decorazione-del-vetro/?srsltid=AfmBOooiBCrSMTliJYaBpgb1F9c1gWdskDya3VqRSBDNRwlsoc2QwN0i	Murano Glam Vetreria Artistica	
MUVE - Fondazione Musei Civici Venezia		/Dekoration/ /Oberfläche/ /Glas/ /Kupferscheibe/	Walzengravur				Kunstglas	Muranoglas	fachsprachlich	Es wird vorzugsweise auf zwei Arten auf farblose oder leicht gefärbte Kristalle aufgebracht: Diamantpunkt-Graffiti und Rollgravur.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker.	

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	incolore	aggettivo	maschile	singolare	[iŋ.koˈloːre]	dal lat. mediev. incŏlor -oris, comp. di in-2 e color «colore».			Di corpo che appare alla vista come privo di colore proprio.	https://www.treccani.it/vocabolario/incolore/
DE	farblos	Adjektiv			[ˈfaʁpˌloːs]	Ableitung vom Stamm des Substantivs Farbe mit dem Ableitungsmorphem -los.			ohne Farbe, fahl.	https://www.dwds.de/wb/farblos
IT	intaglio	sostantivo	maschile	singolare	[inˈtaʎ.ʎo]	Der. di intagliare - sec. XIII.			Tecnica di decorazione a freddo, in cui gli elementi sporgenti del disegno sono scavati profondamente nella superficie del vetro.	https://lestanzedelvetro.org/didattica/vetro-inciso-intagliatoe-molato/
DE	Schliff	Substantiv	Maskulinum	Singular	[ʃlɪf]	‘das Schleifen, geschliffene Stelle’, ahd. slif ‘abgeschliffene Metallreste’ (Hs. 13. Jh.), mhd. slif ‘Abgeschliffenheit, Abgenutzheit, das Ausgleiten’; übertragen ‘gutes Benehmen’ (19. Jh.). Auch Schliff, Schlief ‘unausgebackene Stelle im Brot, Kuchen’ (17. Jh.), die glatt, wie geschliffen aussieht. Obsächs. Schliff backen ‘Pech haben’.			Kaltbearbeitung, bei der die hervorstehenden Elemente des Designs tief in die Glasoberfläche eingraviert werden.	https://lestanzedelvetro.org/didattica/vetro-inciso-intagliatoe-molato/
IT	lattimo	sostantivo	femminile	singolare	[ˈlat.ti.mo]	der. di latte, per l’aspetto opalescente		Il termine "lattimo" può essere accompagnato dal termine "vetro"; la traduzione rimane invariata. Il termine "vetro opalino" è una variante cognitiva del termine "vetro lattimo", secondo la classificazione di Freixa	Tipo di vetro di colore bianco opaco, che ricorda quello del latte, dal quale deriva il nome, destinato fino al XV secolo alla produzione di mosaici e smalti. Assai simile alla porcellana, viene poi realizzato anche per la soffiatura, per produrre oggetti ad imitazione delle prime porcellane cinesi giunte a Venezia. Era opacizzato di solito utilizzando calcina di piombo-stagno o ossido di stagno.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/lavorazioni-e-composti-vetro/

DE	Milchglas	Substantiv	Neutrum	Singular	[ˈmɪlçglaːs]	milchig-weißes, undurchsichtiges Glas (19. Jh.)		„Opalglas“ ist nach der Klassifikation von Freixa (2006) eine kognitive Variante des Begriffs „Milchglas“.	Milchweißes, mattes Glas, das ab dem 15. Jahrhundert zur Herstellung von Mosaiken und Emaille verwendet wurde.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	lavorazione a caldo	sostantivo	femminile	singolare	[la.vo.ratˈʦjoːne][a][ˈkal.do]				Tecnica molto usata a Murano consistente nella modellazione del vetro o nell’applicazione, durante la lavorazione dell’oggetto, di fili, bordi, manici ecc. di varia foggia, colore e dimensione. Il risultato è da considerarsi esteticamente valido quando tali applicazioni risultano regolari e precise.	https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/
DE	Heißbearbeitung	Substantiv	Femininum	Singular	[haɪ̯sbəaɐ̯baɪ̯tʊŋ]				Glastechnik von Murano, die in dem Modellieren des Glases oder in der Anwendung von Fäden, Kanten, Griffen usw. besteht.	https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Treccani							vetro artistico	vetro di Murano	specializzato, non specializzato	Sono state indagate le potenzialità di impiego e di valorizzazione estetica della polvere di vetro utilizzata con la tecnica della serigrafia e come colorante steso a pennello tramite medium (sostanza incolore per veicolare i pigmenti).	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. MURANO PIXEL - Economia Circolare per gli scarti del vetro artistico.	vetro incolore
DWDS							Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Es wird vorzugsweise auf zwei Arten auf farblose oder leicht gefärbte Kristalle aufgebracht: Diamantpunkt-Graffiti und Walzengravur.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker?srsltid=AfmBOooIFP-E0Asus8LE2rsRpraHnmpIsmy4IcbZgWMjvxsemFrIH9Sc	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker	farbloses Glas, farbloses Kristall
Le Stanze del Vetro		/tecnica/ /scavare/ /superficie vetro/					vetro artistico	vetro di Murano	specializzato	L'incisione, l'intaglio e la molatura sono tecniche decorative del vetro realizzate a freddo, ossia a cottura ultimata.	https://lestanzedelvetro.org/didattica/vetro-inciso-	Le Stanze del Vetro	tecnica dell'intaglio

											intagliatoe-molato/		
Le Stanze del Vetro	Die Definition wurde von mir formuliert.	/Technik/ /Graben/ /Glasoberfläche/	Schliffdekor				Kunstglas	Muranoglas	fachsprachlich	Das für den Schliff und tiefe Gravuren taugliche böhmische Kreideglas soll der Überlieferung nach 1683 von Michael Müller auf der Helmbachhütte bei Winterberg im Böhmerwald erfunden worden sein.	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2022. Die Geschichte vom Glasmachen 1550 bis 1700.	Schliff und Gravur
MUVE - Fondazione Musei Civici Venezia		/tipologia di vetro/ /bianco/ /opaco/	opaline, vetro opalino, vetro lattimo, vetro girasol				vetro artistico	vetro di Murano	specializzato	Simile al lattimo, da un punto di vista estetico, è il vetro smalto a base di arseniato di piombo, utilizzato soprattutto nella lavorazione delle perle e della filigrana.	https://it.wikipedia.org/wiki/Vetro_di_Murano	Wikipedia	vetro lattimo, bianco lattimo, lattimo decorato, in vetro lattimo
MUVE - Fondazione Musei Civici Venezia		/Glasart/ /weiß/	Opalglas, Trübglas, Opalinglas				Kunstglas	Muranoglas	fachsprachlich	Später wurde aus Milchglas auch geblasenes Glas als Porzellanimitat gefertigt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	wie durch Milchglas betrachten
Gambaro & Tagliapietra glossario		/tecnica/ /decorazione/ /a caldo/	tecnica a caldo				vetro artistico	vetro di Murano	Specializzato, non specializzato	Le complesse lavorazioni a caldo , tipiche della tradizione veneziana, beneficiano notevolmente di questo aspetto.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano	GV Oggettistica Murano	durante la lavorazione a caldo
Gambaro & Tagliapietra glossario	Die Definition wurde von mir formuliert.	/Technik/ /Dekoration/ /heiß/					Kunstglas	Muranoglas	Fachsprachlich, nicht fachsprachlich	Kali, eine für die nordischen Länder typische Alternative zu Soda, erzeugt ein brillantes Glas, das sich zum Schleifen und Gravieren eignet (wie englisches Bleiglas), jedoch nicht für die komplexe	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen	komplexe Heißbearbeitung

										Heißbearbeitung, typisch venezianisch.		Italienischen Handwerker.	

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	lavorazione a freddo	sostantivo	femminile	singolare	[la.vo.ratˈʦjoːne][a][ˈfred.do]				Decorazione di rifinitura effettuata su manufatti finiti per levigare, appiattire, incidere o lucidare il vetro.	https://air.iuav.it/handle/11578/334268
DE	Kaltbearbeitung	Substantiv	Femininum	Singular	[kaltbəaɐ̯baɪ̯tʊŋ]				Technik der Verzierung, der an fertigen Artefakten durchgeführt wird, um diese zu glätten, zu gravieren oder zu polieren.	https://air.iuav.it/handle/11578/334268
IT	lucidatura	sostantivo	femminile	singolare	[lu.ʧi.daˈtuːra]	Der. di lucidare - 1869.			Tecnica successiva alla molatura, che viene effettuata utilizzando una ruota in sughero, impregnata di un impasto di polvere di pietra pomice ed acqua, che porta a rendere brillante il vetro.	https://www.zogia.it/blog/la-fabbricazione-del-vetro-di-murano/
DE	Polieren	Substantiv	Neutrum	Singular	[ˌpoˈliːʁən]	mittelhochdeutsch polieren von altfranzösisch polier aus lateinisch polire.			Kaltbearbeitung, bei der einen Bohrer mit Diamantscheiben verwendet werden.	https://www.glassway.vda.it/vetro-artigianale-e-artistico/tecniche-di-produzione-del-vetro/incisione-a-punta-di-diamante
IT	marmorizar	verbo			[mar.moˈrid.ʣar]	Dal dialetto veneto, der. di marmo perchè la lastra utilizzata era anticamente di marmo, oggi di bronzo o ferro.	marmo		Operazione che consiste nel far rullare il bolo sul bronzin per dargli forma cilindrica o a pera.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	drehen	Verb			[ˈdʁeːən]				Vorgang, der darin besteht, die aus dem Tiegel entnommene Glasmasse mit dem Blasrohr auf dem Bodenplatte zu rollen, um ihr eine zylindrische Form zu geben, und sie vor dem Blasen leicht abkühlen zu lassen.	https://www.carlodona.com/glossario/#pll_switcher
IT	molatura	sostantivo	femminile	singolare	[mo.laˈtuːra]	[der. di molare]		"Levigatura" è una variante funzionale secondo la classificazione di Freixa (2006).	Lavorazione di rifinitura del vetro in cui esso viene sottoposto a un trattamento speciale che serve a migliorare il suo aspetto, a personalizzarlo e a rifinirlo attraverso l'uso di acqua, di getti di sabbia e di apposite mole diamantate.	https://www.vetreriavenier.com/inside.php?page=5&cat=5&element=0&lang=it

DE	Schleifen	Substantiv	Neutrum	Singular	[ˈʃlaɪ̯fn]	‘eine rauhe Oberfläche bearbeiten und glätten, schärfen’. Das starke Verb ahd. slīfan ‘schärfen’ (8. Jh.), intransitiv ‘(aus)gleiten, hinsinken, in Verfall geraten’ (9. Jh.), mhd. slīfen ‘schärfen, glätten’, intransitiv ‘(aus)gleiten, hinsinken, fallen’, mnd. mnl. slīpen, nl. slijpen, afries. slīpa (germ. *slīpan) stellt sich mit griech. (neutr.) olibrón (ὀλιβρόν) ‘schlüpfrig, glatt’ und vielleicht auch kymr. llym ‘scharf’, bret. lemm ‘scharf, Schneide eines Messers’ zu ie. *(s)leib- ‘schleimig, schlüpfrig, gleiten, darüber streichen, glätten’, einer mit s-anlautenden Labialerweiterung der unter Leim (s. d.) angeführten Wurzel ie. *lei- ‘schleimig, durch Nässe glitschiger Boden, ausgleiten, worüber hinschleifen oder -streichen, schmieren’			Technik, mit der bestimmte Effekte auf den Oberflächen des Objekts erzielt werden. In dieser Phase werden die Unvollkommenheiten geglättet und mit verschiedenen Markierungen verziert, die unterschiedliche Licht- und Farbeffekte bewirken. Auf diese Weise werden Unvollkommenheiten geglättet und Teile mit Schnitten verschiedener Formen und Größen verziert.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia circolare per gli scarti del vetro artistico	La definizione è stata formulata da me.	/tecnica/ /decorazione/ /vetro/	tecnica a freddo				vetro artistico	vetro di Murano	specializzato	Fanno parte invece della seconda lavorazione l'elaborazione a lume con l'utilizzo di bacchette di vetro, la vetrofusione e le lavorazioni a freddo quali la decorazione, l'incisione e la molatura.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia Circolare per gli scarti del vetro artistico.	operazione di lavorazione a freddo
Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia circolare per gli scarti del vetro artistico	Die Definition wurde von mir formuliert.	/Technik/ /Dekor/ /Glas/					Kunstglas	Muranoglas	fachsprachlich	Der Anwendungsbereich der Norm umfasst alle gängigen Sägetypen (horizontale und [...] vertikale Bandsägen, Kreissägen, Bügelsägen) für die Kaltbearbeitung von Eisen- und Nichteisenmetallen sowie zugehörige Einrichtungen, [...] z.B. Spann- und Transporteinrichtungen.	https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:157:0024:0086:DE:PDF	2006. RICHTLINIE 2006/42/EG DES EUROPÄISCHEN PARLAMENTS UND DES RATES. Amtsblatt der Europäischen Union	
Zogia Arte e Antiquariato	La definizione è stata formulata da me.	/operazione/ /superficie/ /lucentezza/					vetro artistico	vetro di Murano	specializzato	Devono poi essere considerati anche i fanghi di moleria: un impasto di vetro e acqua ottenuto a valle di processi di levigatura, lucidatura o taglio con lame diamantate.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno,	lucidatura meccanica, lucidatura chimica

												Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia Circolare per gli scarti del vetro artistico.	
Zogia Arte e Antiquariato	Die Definition wurde von mir formuliert.	/Bedienung/ /Oberfläche/ /Glanz/					Kunstglas	Muranoglas	fachsprachlich	Ein hoher Gehalt an Kieselsäure und Kalium allein genügte jedoch nicht, um daraus ein bildsames, elastisches und nach dem Polieren glänzendes Schleifglas zu erzeugen.	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2022. Die Geschichte vom Glasmachen 1550 bis 1700.	nach dem Polieren
MUVE - Fondazione Musei Civici Venezia		/operazione/ /rollare/ /bronzin/	marmorizzar, marmorizzare			marmorizzar, marmorizzare	vetro artistico	vetro di Murano	specializzato	Questa operazione viene detta anche " marmorizar ".	https://www.zogia.it/blog/vetro-di-murano-gli-strumenti-del-maestro-vetraio/	Zogia Arte e Antiquariato	operazione detta "marmorizar"
Diego Lazzarini / Vesign Studio – Venice. Carlo Donà glossario.	Die Definition wurde von mir formuliert.	/Betrieb/ /Rollen/ /Bodenplatte/	ausrollen				Kunstglas	Muranoglas	fachsprachlich	Verarbeitung von geblasenem Glas mit der Glasmacherpfeife entnimmt der Meister einen Posten, d.h. eine bestimmte Menge geschmolzenen Glases aus dem Tiegel oder Hafen und dreht es auf der Bodenplatte zum Kölbl.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	unter ständigem Drehen mit der Abschneidschere
Vetreria Venier	La definizione è stata da me formulata.	/rifinitura/ /vetro/ /acqua/ /sabbia/ /mole diamantate/	moleria, smerigliatura, levigatura, moladura, filo lucido	levigatura		moladura	vetro artistico	vetro di Murano	specializzato	La molatura è sempre realizzata con l'acqua per evitare di surriscaldare il vetro per attrito.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro,	molatura del vetro, processo di molatura

												Filippo De Benedetti. 2022. Murano Pixel - Economia Circolare per gli scarti del vetro artistico.	
Viadurini.de. 2021.Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker		/Veredelung/ /Glas/ /Wasser/ /Sand/ /Diamantscheiben/					Kunstglas	Muranoglas	fachsprachlich	Die Arbeit kann dann von erfahrenen Schleifern kalt bearbeitet werden, die mit dem Schleifen oder einer anderen Endbearbeitung fortfahren; die figurative Gravur wird in unabhängigen Werkstätten durchgeführt, in denen hochspezialisierte Dekorateure arbeiten.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de. 2021.Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker.	mit dem Schleifen fortfahren

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	monocromo	aggettivo			[moˈnɔːkro.mo]	Dal gr. monókhrōmos ‘di un solo colore’, comp. di mono- e khrôma ‘colore’ - sec. XV.			Caratteristica di avere solo un colore.	https://www.treccani.it/vocabolario/monocromo/
DE	monochrom	Adjektiv			[monoˈkʁoːm]	von griechisch μόνος „allein“ und χρώμα „Farbe“			Eigenschaft, nur eine Farbe zu haben.	https://www.dwds.de/wb/monochrom
IT	multicolore	aggettivo		singolare	[dal lat. multicŏlor -oris, comp. di multi- e color «colore»]	[dal lat. multicŏlor -oris, comp. di multi- e color «colore»]			Caratteristica di avere più di un colore.	https://www.treccani.it/vocabolario/multicolore/?search=multicolóre%2F
DE	polychrom	Adjektiv		Singular	[poliˈkʁoːm]	aus griech. poly „viel–“ und griech. chroma „Farbe“			Eigenschaft, mehr als eine Farbe zu haben.	https://www.duden.de/rechtschreibung/polychrom
IT	opaco	aggettivo	maschile	singolare	[oˈpaːko]	dal lat. opācu(m), propr. 'che è all'ombra'.			Proprietà di un corpo che non si lascia attraversare dalla luce o da radiazioni di una determinata lunghezza d'onda.	https://www.treccani.it/vocabolario/opaco_(Sinonimi-e-Contrari)/#
DE	undurchsichtig	Adjektiv			[ʊndʊʊ̯ɐ̯çzɪçtɪç]	Ableitung von durchsichtig mit dem Präfix un- Synonyme: [1] intransparent, lichtundurchlässig, opak.			Eigenschaft eines Objekts nicht durchsichtig, intransparent zu sein.	https://de.wiktionary.org/wiki/undurchsichtig
IT	pasta vitrea	sostantivo	femminile	singolare	[ˈpaːsta][ˈviːtre.a]			Il termine "pasta vitrea" designa sia un tipo di vetro, ovvero un vetro opaco colorato, sia il concetto generale di "vetro", inteso come miscela vetrosa. "Pasta vetrosa" e "pasta di vetro" sono varianti discorsive secondo la classificazione di Freixa (2006).	Composto di vetro, con cui si imita ogni genere di pietra.	https://www.capriccivenezia.com/post/le-paste-vitree
DE	Glaspaste	Substantiv	Femininum	Singular	[glaspastə]				Mischung des Glases, mit dem jede Art von Stein imitiert wird.	https://www.capriccivenezia.com/post/le-paste-vitree

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Treccani	La definizione è stata formulata da me.						vetro artistico	vetro di Murano	non specializzato	Le perle di conteria, documentate a Murano dal XIV secolo, sono monocrome , piccolissime, utilizzabili anche per ricami – e composizioni diverse.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	bacchetta monocroma, perle di conteria monocrome
DWDS	Die Definition wurde von mir formuliert.		einfarbig				Kunstglas	Muranoglas	nicht fachsprachlich	Es besteht in der Hitzeverschmelzung des Ofens aus monochromen Mosaiksteinen oder Abschnitten aus polychromem Glasrohr nach einem geplanten Design, um ein sehr buntes glasiges Gewebe zu erhalten.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de, 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker.	Aus monochromen Mosaiksteinen
Treccani	La definizione è stata formulata da me.		policromo				vetro artistico	vetro di Murano	specializzato, non specializzato	Sezioni di vetro di diverso colore vengono accostate su una piastra di fibra ceramica e fuse in un forno elettrico in modo da ottenere un tessuto vitreo multicolore detto vetro mosaico o murrina.	https://www.mademuranoglass.com/it/lisola-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b	Made Murano Glass	vetro multicolore
Duden	Die Definition wurde von mir formuliert.		verschiedenfarbig				Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Ein ungelochter Glasstab wird durch die Hitze des Feuers, das aus einer Fackel kommt, erweicht, dann um ein Metallrohr gewickelt, um der Perle die gewünschte Form zu geben und schließlich verziert mit polychromem Glas.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen	polychromes Glas

											italienischen-handwerker	Italienischen Handwerker	
Treccani	La definizione è stata formulata da me.						vetro artistico	vetro di Murano	non specializzato	In questo caso fili di vetro opaco vengono "retorti" cioè intrecciati in varie forme fino a creare una spirale, successivamente racchiusa da uno strato esterno in cristallo.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano	GV Oggettistica Murano	vetro opaco, colore opaco, finitura opaca
Wiktionary	Die Definition wurde von mir formuliert.						Kunstglas	Muranoglas	nicht fachsprachlich	Die transparenten oder undurchsichtigen Farbkombinationen werden mit verschiedenen halbfertigen Glasstäben verschmolzen.	https://originalveniceshop.com/de/15-muranoglas/	Original Venice Shop	undurchsichtiges Glas
Capricci Venezia		miscela vetrosa/ /vetro/ /silice/	pasta di vetro, pasta vetrosa, esemplare vitreo, miscela vetrosa				vetro artistico	vetro di Murano	specializzato	Decorazione nota fin dall'antichità, ottenuta accostando secondo un disegno predeterminato piccoli pezzi, detti tessere, di pasta vitrea – o vetro su una base di intonaco.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/lavorazioni-e-composti-vetro/#:~:text=Mosaico%3A%20decorazione%20nota%20fin%20dall,ricettari%20fin%20dal%20XV%20secolo.	MUVE - Fondazione Musei Civici di Venezia	produrre una pasta vitrea
Vitrum Magazin. 2024. Glaspaste: eine zeitlose Kunst zwischen Tradition und Innovation	Die Definition wurde von mir formuliert.	/glasartige Mischung/ /Glas/ /Siliciumdioxid/	Glasmasse, Glaskörper				Kunstglas	Muranoglas	fachsprachlich	Die Glaspaste bleibt bis zu einer Temperatur von 500° formbar.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker?srsltid=AfmBOoolFP-E0Asus8LE2rs	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker	

											RpraHnmpIsm y4IcbZgWMjvx semFrIH9Sc		

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	perla a lume	sostantivo	femminile	singolare	[ˈpɛr.la][a][ˈluːme]	[dal lat. incisio -onis, der. di incīdĕre «incidere2»]			Perla veneziana che si ottiene da una canna massiccia, riscaldata a fiamma e colata su un filo metallico tenuto manualmente in costante rotazione, con infinite varianti di possibili aggiunte, effetti e colori.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-collezioni/perle-veneziane/
DE	gedrehte Perle	Nominalphrase			[gədʁeːtə] [pɛɐ̯lə]	f. ‘Erzeugnis der Gravierkunst, Kupfer-, Stahlstich, Steinschnitt’, im 19. Jh. auch (latinisierend)			Venezianische Perle, gewonnen aus einem massiven Glasstab, der über einer Flamme erhitzt, auf einem Metalldraht in kleine Portionen gezogen und durch kontinuierliches Drehen in Form gebracht wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	perla di conteria	sostantivo	femminile	singolare	[ˈpɛr.la] [di][kon.teˈriːa]			Il termine si trova anche spesso al plurale.	Piccole perle ottenute da sottili canne vitree forate, monocrome o con semplice ornamentazione a linee longitudinali di forma arrotondata, sfaccettata o a cilindro.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-collezioni/perle-veneziane/
DE	Rocailleperle	Substantiv	Femininum	Singular	[ʁoːkljəpɐlə]				Kleine Perlen, die aus dünnen perforierten Glasstäben gewonnen werden. Das sind kleine einfarbige Perlen oder höchstens einfache Längslinienornamente in runder, facettierter oder zylinderförmiger Form.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf
IT	perla rosetta	sostantivo	femminile	singolare	[ˈpɛr.la][roˈzet.ta]	Il nome deriva dalla canna rosetta			Perla prodotta tagliando in cilindrati, della misura desiderata, una canna vitrea forata composta da più strati policromi concentrici formanti motivi a stella.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-collezioni/perle-veneziane/
DE	Chevronperle	Substantiv	Femininum	Singular	[kəfʁɔp̃ɐlə]				Perle, die durch Schneiden eines perforierten Glasstabs, der aus mehreren konzentrischen, polychromen und Sternmotive bildenden Schichten besteht, in kleine Zylinder der gewünschten Größe hergestellt wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf
IT	perla soffiata	sostantivo	femminile	singolare	[ˈpɛr.la][sofˈfjaːta]				Perla veneziana a lume ottenuta soffiando con un ferro forato il vetro colato da una canna massiccia riscaldata alla fiamma.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-

										collezioni/perle-veneziane/
DE	geblasene Perle	Nominalphrase			[gəˈblaːzənə] [pɛrlə]				Venezianische lampengearbeitete Perle, die durch Blasen des Glases gewonnen wird, das aus einem massiven, flammenbeheizten Stab mit einem gebohrten eisernen Werkzeug gegossen ist.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
MUVE - Fondazione Musei Civici Venezia	La definizione è stata formulata da me.	/perla/ /fiamma/ /rotazione/ /decorazione/ /canna/					vetro artistico	vetro di Murano	specializzato	Alessandro Moretti durante la lavorazione di una perla a lume.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia Circolare per gli scarti del vetro artistico.	lavorazione di perle a lume
MUVE - Fondazione Musei Civici di Venezia	Die Definition wurde von mir formuliert.	/Perle/ /Flamme/ /Rotation/ /Dekoration/ /Rohrstock/	lampengearbeitete Perle				Kunstglas	Muranoglas	fachsprachlich	Die Röhrchen werden für Rocailleperlen (conterie) verwendet, während die bis ins späte 15. Jahrhundert ausschließlich verwendeten massiven Stäbchen nach wie vor für gedrehte Perlen genutzt werden.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	
MUVE - Fondazione Musei Civici Venezia		/perla/ /lavorazione a caldo/ /decorazione/ /forma rotonda/					vetro artistico	vetro di Murano	specializzato	Le perle di conteria, documentate a Murano dal XIV secolo, sono monocrome, piccolissime, utilizzabili anche per ricami – e composizioni diverse.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	lavorazione della perla di conteria

MUVE - Fondazione Musei Civici Venezia		/Perle/ /Heißverarbeitung/ /Dekoration/ /runde Form/					Kunstglas	Muranoglas	fachsprachlich	Die Röhrchen werden für Rocailleperlen (conterie) verwendet (s. ebd.), während die bis ins späte 15. Jahrhundert ausschließlich verwendeten massiven Stäbchen nach wie vor für gedrehte Perlen genutzt werden.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	die Kategorie der Rocailleperle
MUVE - Fondazione Musei Civici Venezia		/perla/ /policroma/ /disegno/					vetro artistico	vetro di Murano	specializzato	In base alla tecnica produttiva, – le perle veneziane possono essere di conteria, rosetta o a lume.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	creare una perla rosetta
MUVE - Fondazione Musei Civici Venezia		/Perle/ /polychrom/ /Zeichnung/	Rosettaperle				Kunstglas	Muranoglas	fachsprachlich	Venezianische Perlen lassen sich nach den Herstellungsverfahren in die drei Kategorien Rocailleperlen, Rosetta - oder Chevronperlen und gedrehte – Perlen einteilen.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	
MUVE - Fondazione Musei Civici Venezia		/perla/ /soffiatura/ /ferro/ /vetro colato/ /canna massiccia/					vetro artistico	vetro di Murano	specializzato	Perla soffiata e modellata a mano utilizzando canne in vetro di Murano.	https://www.ferrotoso.it/copia-di-barena	Ferro Toso Vetreria	
MUVE - Fondazione Musei Civici Venezia		/Perle/ /Blasen/ /Eisen/ /Gussglas/ /massiver Glasstab/					Kunstglas	Muranoglas	fachsprachlich	In die Form geblasene Perle aus Glas waren ein wohlfeiler Gebrauchsartikel.	https://files.battenberg-gietl.de/public/leseproben/leseprobe-glas.pdf	Walter Spiegl. 2009. Glas – 17. Jahrhundert bis 1940.	Die Form der geblasenen Perle

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	perla sommersa	sostantivo	femminile	singolare	[ˈpɛr.la][somˈmɛr.sa]				Perla a lume ottenuta sovrapponendo al nucleo di vetro centrale uno strato di vetro trasparente, cristallino o colorato.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-collezioni/perle-veneziane/
DE	untergetauchte Perle	Nominalphrase			[ʊntɐgətaʊ̯xtə] [pɛɐ̯lə]				Lampengearbeitete Perle, die durch Auflegen einer Schicht aus kristallinem, oder farbigem Glas aus den zentralen Glaskern erhalten wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf
IT	pittura a freddo	sostantivo	femminile	singolare	[pitˈtuːra][a][ˈfred.do]				Tecnica di pittura eseguita con colori a lacca o ad olio su vetri senza cottura e trattamento termico.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf https://www.muranoglass-shop.it/blog/i-processi-di-colorazione-del-vetro-fusione-e-colorazione-a-freddo.html
DE	Kaltbemalung	Substantiv	Femininum	Singular	[kaltbəmaːlʊŋ]				Technik der Verzierung, bei dem eine Mischung aus Glaspulver, Farbpigmenten, Metalloxiden und Fetten mit einem Pinsel auf Glasoberflächen aufgetragen wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	pittura a smalto	sostantivo	femminile	singolare	[pitˈtuːra] [a][ˈzmal.to]				Decorazione eseguita a pennello sulle pareti dell'oggetto, utilizzando un miscuglio di vetro polverizzato, pigmenti colorati, ossidi metallici e sostanze grasse. La fissazione si ottiene riportando l'oggetto alla bocca del forno a circa 900-1000° C.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	Lackbemalung	Substantiv	Femininum	Singular	[lakbəmaːlʊŋ]				Seit dem 15. Jahrhundert verwendete, auch Schmelzlack genannte Dekoration. Dabei wird mit dem	https://museovetro.visitmuve.it/wp-content/uploads/2020/

									Pinsel eine Mischung aus Glaspulver, Farbpigmenten, Metalloxiden und Fetten auf den Flächen der jeweiligen Glasware aufgetragen. Nach dem Bemalen wird das Stück an die Ofenöffnung gehalten, um den Lack bei 900-1000 °C zu fixieren.	12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	pizzicare	verbo			[pit.ʦiˈkaːre]	forma intensiva di pizzare - sec. XIV.			Tecnica di moderazione del vetro effettuata con le borselle da pisségar.	https://www.cristalboutique.it/es/murano-12
DE	kneifen	Verb			[ˈknaɪ̯fn]	als mundartliche Form von kneipen aus dem Mitteldeutschen in die Standardsprache eingedrungen.		„Zwacken“ ist nach der Klassifikation von Freixa (2006) eine funktionale Variante.	Technik des Modellierens des Glases, die mit den Zwackeisen durchgeführt wird.	https://www.cristalboutique.it/es/murano-12

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
MUVE - Fondazione Musei Civici Venezia		/perla/ /nucleo di vetro/ /vetro trasparente/ /vetro colorato/					vetro artistico	vetro di Murano	specializzato	La perla sommersa viene adagiata sopra un'anima di vetro insieme a graniglia e successivamente ricoperto con altro vetro.	https://costantiniglassbeads.com/it/perle-di-vetro-veneziano/perle-a-lume/perle-sommerse/	Costantini Glassbeads Vetreria	
MUVE - Fondazione Musei Civici di Venezia		/Perle/ /Glaskern/ /undurchsichtiges Glas/ /farbiges Glas/					Kunstglas	Muranoglas	fachsprachlich	Die untergetauchte Perle sind lampengearbeitete Perle, die durch Auflegen einer Schicht aus kristallinem, oder farbigem Glas aus den zentralen Glaskern erhalten wird.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf	MUVE – Fondazione Musei Civici Venezia	
MUVE - Fondazione Musei Civici Venezia Murano Glass Shop	La definizione è stata formulata da me.	/decorazione a freddo/ /pennello/ pigmento colorato/ /miscela/ /superficie/ /ossidi metallici/	verniciatura a freddo				vetro artistico	vetro di Murano	specializzato	Il Museo del vetro di Murano conserva alcune lastre con pittura a freddo sul retro.	https://www.jstor.org/stable/24191231	Paolo Zecchin. 2009. Il vetro decorato	tecnica della pittura a freddo
MUVE - Fondazione Musei Civici Venezia	Die Definition wurde von mir formuliert.	/Kaltdekoration/ /Pinsel/ Farbpigment/ /Mischung/ /Oberfläche/ /Metalloxide/					Kunstglas	Muranoglas	fachsprachlich	Zu dieser Zeit bevorzugte man die Verwendung von reinem und transparentem Kristallglas, aus dem Kelche einzigartiger Harmonie und Eleganz mit neuen Dekorationstechniken, darunter die Diamantgravur	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf	MUVE - Fondazione Musei Civici Venezia	

										und die Kaltbemalung, hergestellt wurden.			
MUVE - Fondazione Musei Civici Venezia		/decorazione/ /pennello/ /miscela di vetro/ /lavorazione a caldo/	pittura a smalti fusibili, decorazione a smalto, smaltatura				vetro artistico	vetro di Murano	specializzato	Segue gli stessi procedimenti della pittura a smalto (vedi) ma senza il trattamento termico.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	tecnica della pittura a smalto
MUVE - Fondazione Musei Civici Venezia		/Dekoration/ /Pinsel/ /Glasmischung/ /Heißbearbeitung/	Emailmalerei, Emaildekoration				Kunstglas	Muranoglas	fachsprachlich	Ähnlich wie die Lackbemalung (s. ebd.), allerdings ohne Wärmebehandlung, weshalb es zu häufigen Farbausfällen kommt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	
Cristal Boutique Vetreria	La definizione è stata formulata da me.	/borselle/ /tecnica di modellazione/ /vetro/	strozzare				vetro artistico	vetro di Murano	specializzato	Tipica decorazione muranese a forma ondulata, eseguita applicando a caldo un cordoncino di vetro pizzicato con le borselle da "pissegar" (pizzicare).	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	pizzicare il vetro
Cristal Boutique Vetreria	Die Definition wurde von mir formuliert.	/Zwackeisen/ /Technik des Modellierens/ /Glas/	zwacken	zwacken			Kunstglas	Muranoglas	fachsprachlich	Raffinierte Schmuckgebilde, wie sie viele venezianische Gläser aufweisen, konnte man daraus nicht gestalten, vermutlich, aber gekniffene Verzierungen wie zum Beispiel an den frühen böhmischen Barockpokalen, die häufig graviert, aber zum	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2022. Die Geschichte vom Glasmachen 1550 bis 1700.	Verzierung kneifen

										Schleifen zu dünnwandig sind.			

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	soffiatura	sostantivo	femminile	singolare	[sof.fjaˈtuːra]	Der. di soffiare, sec. XVI.			Nell'industria vetraria, metodo di lavorazione consistente nel modellare la pasta vetrosa fusa soffiando attraverso un cannello metallico.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/glossario/ https://dizionari.repubblica.it/Italiano/S/soffiatura.html
DE	Blasen	Substantiv	Neutrum	Singular	[ˈblaːzn̩]	mit Luft oder Flüssigkeit gefüllter Hohlraum', ahd. blāsa 'Blase, Harnblase, Hautblase' (10./11. Jh.), asächs. blāsa, mhd. mnd. blāse, mnl. blase. Der scherzhaft gebrauchte Ausdruck Blase für 'Gesellschaft, Bande' stammt aus der Studentensprache der 50er Jahre des 19. Jhs. und war Scheltwort für eine nicht farbentragende, lose studentische Verbindung.			Bei dem Blasen, wird Luft in eine Masse geschmolzenen Glases geblasen.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	soffiatura a bocca	sostantivo	femminile	singolare	[sof.fjaˈtuːra] [a][ˈbok.ka]			La soffiatura a bocca è anche detta "libera".	Tecnica di soffiatura effettuata gonfiando il vetro fuso con l'utilizzo di una canna, senza l'utilizzo di stampi.	https://muranoglam.com/tipi-di-lavorazione/
DE	Mundblasen	Substantiv	Neutrum	Singular	[mʊntbla:zən]				Glasblasen, bei dem das geschmolzene Glas mithilfe einer Glaspfeife handwerklich hergestellt wird, ohne dass eine Form verwendet wird.	https://www.dwds.de/wb/mundgeblasen
IT	tagianti	sostantivo	femminile	plurale	[taˈʤan.ti]	Dal dialetto veneto, der. tagiar		Il termine è a comunemente usato al plurale.	Forbici o cesoie utilizzata dal vetraio durante la formatura del pezzo per tagliare via il vetro eccedente.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/glossario/
DE	Abschneidschere	Substantiv	Femininum	SIngular	[apʃnaɪ̯dsʃəʁə]				Scheren verschiedener Formen zum Abschneiden des noch heißen, überschüssigen Glases.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf

IT	taglio	sostantivo	maschile	singolare	[ˈtaʌ.ʌo]	derivazione di tagliare, (dal francese antico tailler)			Operazione di modellazione del vetro, con cui vengono asportate parti dal pezzo in lavorazione.	https://www.keyence.it/ss/products/measure-sys/machining/cutting/about.jsp
DE	Schneiden	Substantiv	Neutrum	Singular	[ˈʃnaɪ̯dn]	'mit der Sichel abmähen, ernten', vgl. noch heute Gras, Getreide, Korn schneiden.			Technik des Modellierens, bei der Teile aus dem zu bearbeitenden Werkstück entfernt werden.	https://www.keyence.it/ss/products/measure-sys/machining/cutting/about.jsp

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Scientific name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
MUVE - Fondazione Musei Civici Venezia Dizionario La Repubblica	La definizione è stata da me formulata.	/tecnica/ /soffiatura/ /vetro/ /modellazione/					vetro artistico	vetro di Murano	specializzato	Dilatando il manufatto con la soffiatura , la foglia d'oro o d'argento si spezza in una sorta di pulviscolo.	https://www.massimilianoschiavon.com/lavorazione/	Massimiliano Schiavon Art Team	effettuare la soffiatura, soffiatura a bocca, soffiatura a stampo, soffiatura del vetro, procedere con la soffiatura
MUVE - Musei Civici Venezia	Die Definition wurde von mir formuliert.	/Technik/ /Blasen/ /Glas/ /Modellieren/	Blaserei, Glasblasen, Glasbläserei				Kunstglas	Muranoglas	fachsprachlich	Vor allem in Venedig war das Blasen die bevorzugte Technik für hochwertige Glasarbeiten.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de. 2021. Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker	Technik des Blasens
Murano Glam	La definizione è stata formulata da me.	/soffiatura/ /vetro fuso/ /canna/	pinze di strozzamento	soffiatura libera, soffiatura a mano libera			vetro artistico	vetro di Murano	specializzato	La soffiatura è "a bocca " e le varie applicazioni (bordi, fili colorati, fiori, decorazioni varie) sono a caldo, cioè eseguite durante la lavorazione dell'oggetto.	https://muranoglam.com/tipi-di-lavorazione/	Murano Glam	tecnica della soffiatura a bocca
DWDS	Die Definition wurde von mir formuliert.	/blasen/ /geschmolzenes Glas/ /Zuckerrohr/		freihändiges Blasen			Kunstglas	Muranoglas	fachsprachlich	Mit Leidenschaft, Perfektionismus und jahrhundertealten Traditionen im Mundblasen war ein neuer Stern am Weinhimmel geboren.	https://it.techdico.com/traduzione/tedesco-italiano/mundblasen.html	Tech Dico	
MUVE - Fondazione		/forbice/ /tagliare/					vetro artistico	vetro di Murano	specializzato	Altro strumento fondamentale, sono le "tagianti", delle grosse	https://www.zogia.it/blog/vet	Zogia Arte e Antiquariato	utilizzare le tagianti

Musei Civici Venezia		/vetro/ /vetro eccedente /								forbici utilizzate per tagliare il vetro in eccesso durane la lavorazione.	ro-di-murano-gli-strumenti-del-maestro-vetraio/		
MUVE - Fondazione Musei Civici Venezia		/Schere/ /geschnitten/ /Glas/ /überschüssiges Glas/					Kunstglas	Muranoglas	fachsprachlich	Dann setzt er sich auf seinen Schemel (scagno), stützt die Pfeife auf die Gabel (bardelle) und bearbeitet das Kölbl unter ständigem Drehen mit der Abschneidschere, bis es die gewünschte Form erhält.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	mit der Abschneidschere
Keyence Italia S.p.A	La definizione è stata formulata da me.	/modellazione/ /asportare/ /parti vetro/					vetro artistico	vetro di Murano	specializzato, non specializzato	Pinza di dimensioni e forme diverse utilizzata per specifiche operazioni di modellatura, strozzatura, taglio e decorazione del vetro in lavorazione.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	taglio manuale
Keyence Italia S.p.A	Die Definition wurde von mir formuliert.	/Modellieren/ /Entfernen/ /Glasteile/					Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Die einfachsten sind die Conterie: abgerundete oder scharfkantige Perlen, die durch Schneiden von perforierten Rohren erhalten werden, die im Ofen über eine Länge von mehreren zehn Metern gezogen werden.	https://www.viadurini.de/blog/was-macht-glas-venedig-einzigartig-besten-produkte-grossen-italienischen-handwerker	Viadurini.de. 2021.Was Macht das Glas von Venedig Einzigartig? Die Besten Produkte der Großen Italienischen Handwerker	durch Schneiden von perforierten Rohren, Scheren verschiedener Form und Größe zum Schneiden

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	tecnica di decorazione	sostantivo	femminile	singolare	[ˈtɛk.ni.ka][di][de.ko.ratˈʦjoːne]			"Tecnica decorativa" è una variante discorsiva secondo la classificazione di Freixa (2006).	Tecnica di lavorazione che mira a rifinire e abbellire un oggetto.	https://www.treccani.it/vocabolario/decorazione/?search=decorazione%2F
DE	Technik der Verzierung	Nominalphrase			[tɛçnɪk] [deːɐ̯] [fɛɐ̯t͡siːʁʊŋ]				Bearbeitungstechnik, die darauf abzielt, ein Objekt zu veredeln und zu verschönern.	https://www.treccani.it/vocabolario/decorazione/?search=decorazione%2F
IT	tecnica di lavorazione	sostantivo	femminile	singolare	[ˈtɛk.ni.ka][di][la.vo.ratˈʦjoːne]			"Tecnica lavorativa" è una variante discorsiva secondo la classificazione di Freixa (2006).	La tecnica del lavorare una materia per darle la forma e l'aspetto voluti.	https://www.treccani.it/vocabolario/lavorazione/
DE	Verarbeitungstechnik	Substantiv	Femininum	Singular	[fɛɐ̯ˈʔaʁbaɪ̯tʊŋsˌtɛçnɪk]				Methode, Verfahren der Verarbeitung eines Grundstoffs.	https://www.dwds.de/wb/Verarbeitungstechnik
IT	tecnica di modellazione	sostantivo	femminile	singolare	[ˈtɛk.ni.ka][di][mo.del.latˈʦjoːne]				Tecnica con cui i maestri vetrai espandono, restringono e danno la forma desiderata al vetro incandescente.	https://www.venini.com/it_it/savoir-faire/vetro-soffiato-murano
DE	Technik des Modellierens	Nominalphrase			[tɛçnɪk] [dɛs] [moːdɛliːʁns]				Technik, mit der Glasmachermeister sich ausdehnen, verkleinern und glühendem Glas die gewünschte Form geben.	https://www.venini.com/it_it/savoir-faire/vetro-soffiato-murano
IT	tiratura	sostantivo	femminile	singolare	[ti.raˈtuːra]	[der. di tirare].			Tecnica di modellazione di un prelievo di vetro (crogiolo), con la quale vengono create le canne di vetro.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/lavorazioni-e-composti-vetro/
DE	Ziehen	Substantiv	Neutrum	Singular	[ˈt͡siːən]	Althochdeutsch ziohan, mittelhochdeutsch ziehen; urverwandt mit lateinisch dūcere „ziehen, führen“ und griechisch :dēūkein „(nach-)denken, Sorge tragen“.			Technik des Modellierens des Glases, mit der Glasstäbe hergestellt wird.	https://museovetro.visitmuve.it/it/il-museo/approfondimenti/lavorazioni-e-composti-vetro/

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Scientific name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Treccani	La definizione è stata formulata da me.	/lavorazione/ /rifinitura/ /abbellire/ /oggetto/ /vetro/	tecnica decorativa				vetro artistico	vetro di Murano	specializzato	Queste tecniche di decorazione fiorirono nella seconda metà del XV secolo, quando l'industria vetraria muranese raggiunse il suo apice. Intorno al 1450, Angelo Barovier, un vetraio che combinava la conoscenza pratica della lavorazione del vetro con la comprensione scientifica, inventò un vetro incolore abbastanza chiaro da essere chiamato "cristallo".	https://muranoglam.com/storia-del-vetro-di-murano/?srsltid=AfmBOoq7gobouDtMtHDKAVEZsVFnUPkHFfZEe64Ad4Epd8P9u8fwETA8	Murano Glam Vetreria Artistica	tecnica di decorazione su vetro
Treccani	Die Definition wurde von mir formuliert.	/Verarbeitung/ /Veredelung/ /Verschönerung/ /Objekt/ /Glas/	Erzeugung, Ausschmückung, Verzierung, Dekorationstechnik				Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Die Technik der Verzierung – Nuppen, Warzen und Fadendekors – wurden verfeinert, die Gläser selbst wurden abwechslungsreicher und höher.	https://files.battenberg-gietl.de/public/leseproben/leseprobe-glas.pdf	Walter Spiegl. 2009. Glas - 17. Jahrhundert bis 1940.	die raffinierteste n Techniken der Verzierung
Treccani		/tecnica/ /modellazione/ /decorazione/ /vetro/					vetro artistico	vetro di Murano	specializzato, non specializzato	Le tecniche di lavorazione del vetro di Murano sviluppate nel corso dei secoli e la produzione dei vetri artistici rappresentano per la città di Venezia un'importante realtà.	https://gvoggettistica.it/tecniche-di-lavorazione-del-vetro-di-murano	GV Oggettistica Murano	effettuare una tecnica di lavorazione
DWDS		/Technik/ /Modellieren/ /Dekoration/ /Glas/					Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Der Sand war nicht der gleiche, statt der gewohnten Flussmittel musste er andere nehmen, die Mengenverhältnisse stimmten nicht mehr, und wahrscheinlich musste er sogar die Glasbläser mit neuen Verarbeitungstechniken vertraut machen.	http://glas-forschung.info/pageone/pdf/cristallo.pdf	Walter Spiegl. 2002. Die Geschichte vom Glasmachen	mit neuen Verarbeitung stechniken

Vetreria Venini	La definizione è stata formulata da me.	/vetro incandescente/ /tecnica/ /dare forma/ /espandere/ /restringere/					vetro artistico	vetro di Murano	specializzato	Oggi, invece, la comprensione della fisica e della chimica del vetro consente di passare dalla lunga sperimentazione per tentativi ed errori a sofisticate tecniche di modellazione per prevedere le proprietà e il comportamento che avrà un materiale.	https://air.iuav.it/handle/11578/334268	Maria Antonia Barucco, Elti Cattaruzza, Paola Careno, Stefano Centenaro, Filippo De Benedetti. 2022. Murano Pixel - Economia Circolare per gli scarti del vetro artistico.	abilità nella tecnica di modellazione, tecnica di modellazione di vari oggetti
Vetreria Venini	Die Definition wurde von mir formuliert.	/glühendes Glas/ /Technik/ /Form/ /ausdehnen/ /verkleinern/					Kunstglas	Muranoglas	fachsprachlich	Zangen und Scheren verschiedener Form und Größe zum Schneiden, Zwacken und Modellieren des Glases.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE – Fondazione Musei Civici Murano	
MUVE - Fondazione Musei Civici Venezia	La definizione è stata formulata da me.	/modellazione/ /canna vitrea/					vetro artistico	vetro di Murano	specializzato	L'elaborazione prevede come prima fase l'uso di stampi aperti che imprimono di volta in volta le diverse sagome a seconda di ciascun strato di diverso colore e successivamente la tiratura della canna lungo decine di metri.	https://www.mademuranoglass.com/it/lisola-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b	Made Murano Glass	das Ziehen des Glases
MUVE - Fondazione Musei Civici Venezia	Die Definition wurde von mir formuliert.	/Technik des Modellierens/ /Glastab/					Kunstglas	Muranoglas	fachsprachlich	Durch das Ziehen in die Länge wurden die Stäbchen immer dünner und das Muster, das sie bildeten, wurde feiner und zierlicher.	https://files.battenberg-gietl.de/public/leseproben/leseprobe-glas.pdf	Walter Spiegl. 2009. Glas - 17. Jahrhundert bis 1940.	la tiratura del vetro

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	translucido	aggettivo	maschile	singolare	[tranˈzluːʧi.do]	[dal lat. translucĭdus, propr. «splendente attraverso», comp. di trans- «trans-» e lucĭdus «lucido»]			Specific., di mezzo parzialmente trasparente, nel senso che alla trasparenza s'accompagna una notevole diffusività, cosicché degli oggetti si percepisce soltanto la sagoma o poco più, come capita, per es., per un vetro smerigliato.	https://www.treccani.it/enciclopedia/traslucido_(Dizionario-delle-Scienze-Fisiche)/
DE	lichtdurchlässig	Adjektiv			[ˈlɪçtˌdʊʁçlɛsɪç]	Determinativkompositum aus dem Substantiv Licht und dem Adjektiv durchlässig			Eigenschaft eines Körpers, dessen Transparenz es ermöglicht, das Bild eines Objekts zu sehen, ohne dass die Konturen klar erkennbar sind.	https://www.wordreference.com/definizione/traslucido
IT	trasparente	aggettivo	singolare		[tra.spaˈrɛn.te]	[dal lat. mediev. transparens -entis (comp. del lat. trans- «trans-» e parere «apparire»)].			Di corpo che si lascia attraversare dalla luce permettendo di distinguere nettamente un altro corpo collocato dietro di esso.	https://dizionari.repubblica.it/Italiano/T/trasparente.html
DE	durchsichtig	Adjektiv			[ˈdʊʁçˌzɪçtɪç]	Adj. ‘so beschaffen, daß man hindurchsehen kann’, übertragen ‘zart, blaß, leicht durchschaubar’, ahd. thuruhsihtīg (um 1000), mhd. durchsihtec;			Physikalische Eigenschaft eines Körpers, die Licht durchlässt.	https://www.treccani.it/vocabolario/trasparente/
IT	vetro artistico	sostantivo	maschile	singolare	[ˈveːtro][arˈtiːsti.ko]				Tipologia di vetro tipica dei mosaici e degli smalti adoperati per la decorazione e la protezione di prodotti ceramici. E' caratterizzato da temperatura di rammollimento inferiore rispetto al vetro, a causa dalla presenza di fluoruri e di ossido di piombo. I vetri vengono macinati e la sospensione formatasi, con l'aggiunta di additivi, viene applicata sull'oggetto tramite immersione o spruzzo e riscaldata fino a costituire uno strato uniformemente disteso.	http://www.vitrum.it/tipivetri.htm
DE	Kunstglas	Substantiv	Neutrum	Singular	[kʊnstglaːs]				Glasart, die aufgrund des Vorhandenseins von Fluoriden und Bleioxid durch eine niedrigere Erweichungstemperatur als Glas gekennzeichnet ist.	http://www.vitrum.it/tipivetri.htm
IT	vetro fenicio	sostantivo	maschile	singolare	[ˈveːtro][feˈniːʧo]				Tipo di vetro decorato con un avvolgimento di fili di lattimo, stirati	https://museovetro.visitmuve.it/wp-

									con uno speciale attrezzo, in modo da ottenere una decorazione ondulata.	content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	phönizisches Glas	Nominalphrase			[fø:nɪt͡sɪʃəs] [gla:s]				Seit dem 16. Jahrhundert verwendetes Glas, bei dem mit einem speziellen Kamm wellenförmig Milchglasfäden aufgebracht werden.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Scientific name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Treccani							vetro artistico	vetro di Murano	specializzato, non specializzato	Secondo la composizione e la storia termica, il vetro può essere trasparente, traslucido o opaco, incolore o colorato.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	vetro traslucido
Word Reference	Die Definition wurde von mir formuliert.						Kunstglas	Muranoglas	specializzato, non specializzato	Drei Viertel der Fläche besteht dabei aus Glas und ist so sehr lichtdurchlässig.	https://www.dwds.de/wb/lichtdurchlässig	DWDS	lichtdurchlässiges Glas
Dizionario La Repubblica			transparent, durchlässig				vetro artistico	vetro di Murano	specializzato, non specializzato	Filigrana, zanfirico, colore trasparente , colore in pasta, avventurina e ogni pezzo di canna precedentemente creato nella nostra stessa fornace.	https://www.massimilianoschiavon.com/lavorazione/	Massimiliano Schiavon Art Team	vetro trasparente, trasparente e incolore
Treccani	Die Definition wurde von mir formuliert.						Kunstglas	Muranoglas	fachsprachlich, nicht fachsprachlich	Je nach Zusammensetzung und thermischer Geschichte kann Glas durchsichtig, durchscheinend oder matt sein, farblos oder bunt.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	durchsichtiges Glas
Tipi di vetro - VITRUM glossario		/vetro/ /tipologia/					vetro artistico	vetro di Murano	specializzato	Per quanto riguarda gli attrezzi utilizzati dalla "piazza" per la lavorazione del vetro artistico sono rimasti praticamente sempre gli stessi che si tramandano da centinaia di	https://www.zogia.it/blog/vetro-di-murano-gli-strumenti-del-maestro-vetraio/	Zogia Arte e Antiquariato	lavorazione del vetro artistico

										anni. </s><s> Andiamo a scoprire i più importanti.			
Tipi di vetro - VITRUM Glossar	Die Definition wurde von mir formuliert.						Kunstglas	Muranoglas	fachsprachlich	Nordböhmische und Wiener Kunstgläser.	https://files.battenberg-gietl.de/public/leseproben/leseprobe-glas.pdf	Walter Spiegl. 2009. Glas 17. Jahrhundert bis 1940.	
MUVE - Fondazione Musei Civici Venezia		/decorazione/ /applicazione/ /fili pettinati/	vetro a piume, vetro piumato, vetro a pettine, vetro a penne, decorazione a fili applicati a festoni				vetro artistico	vetro di Murano	specializzato	Attrezzo simile a un pettine che serve per ottenere decorazioni superficiali come quella del vetro fenicio.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf	MUVE - Fondazione Musei Civici Venezia	decorazione superficiale del vetro fenicio
MUVE - Fondazione Musei Civici Venezia		/Dekoration/ /Anwendung/ /gekämmte Fäden/					Kunstglas	Muranoglas	fachsprachlich	Seit dem 19. Jahrhundert ist auch die Bezeichnung "phönizisches Glas" üblich.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	vetro ghiaccio	sostantivo	maschile	singolare	[ˈveːtro][ˈgjat.ʧo]				Decorazione consistente in un'apparente crepatura della parete dei soffiati, ottenuta immergendoli nel corso della lavorazione, ancora caldi, in acqua.	https://gambaroetagliapietra.it/chi-siamo/lessico-muranese/
DE	Eisglas	Substantiv	Neutrum	Singular	[aɪ̯sgla:s]				Dekorative Technik, die darin besteht, das am Blasrohr befestigte Glas in einen Eimer mit Wasser zu tauchen, wodurch ein dichtes Netz von Oberflächenrissen entsteht.	https://www.massimilianoschiavon.com/lavorazione/
IT	vetro mimetico	sostantivo	maschile	singolare	[ˈveːtro][miˈmɛːtiːko]				Tipologia di vetro realizzato in modo da simulare altri materiali.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-collezioni/vetro-xviii-secolo/
DE	mimetisches Glas	Nominalphrase			[mi:me:tɪʃəs] [gla:s]				Glas, das so hergestellt wird, dass es andere Materialien simuliert.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf
IT	vetro mosaico	sostantivo	maschile	singolare	[ˈveːtro][moˈzaj.ko]				Decorazione ottenuta dall'accostamento a freddo di tessere e/o sezioni di canne di vetro di forme e colori diversi per formare il disegno voluto, che viene poi scaldato in forno, ove i pezzi aderiscono ottenendo un effetto di mosaico policromo.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	Mosaikglas	Substantiv	Neutrum	Singular	[mo:zɛ:kgla:s]				Bereits in römischer Zeit bekanntes, im 15. Jahrhundert von den Venezianern wieder eingeführtes Verfahren, bei dem Glasplättchen bzw. Scheibchen von Glasstäben in verschiedenen Formen und Farben kalt zu einem Muster zusammengefügt und anschließend im Ofen verschmolzen werden.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf
IT	vetro pulegoso	sostantivo	maschile	singolare	[ˈveːtro][pu.leˈgoːzo]	pulegoso - [der. di puliga (o pulica)]	pulegoso - puliga	"Vetro bullicante" è una variante dialettale secondo la classificazione di Freixa	Tipo di vetro ornamentale opaco creato da Napoleone Martinuzzi per Venini con inclusione di miriadi di	https://museovetro.visitmuve.it/wp-content/uploads/2020/

								(2006). Il termine deriva dal dialetto veneto “puléghe”.	bollicine d'aria (puleghe) che conferiscono alla superficie dell'oggetto un aspetto ruvido.	12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	Glas mit Luftblasen	Nominalphrase			[gla:s] [mɪt] [bla:zən]				Undurchsichtiges Material mit schwammartigem Aussehen, gekennzeichnet durch den Einschluss unzähliger Luftblasen, die sich nach der Zugabe von Natriumbicarbonat oder Erdöl in die glühende Glasmasse bilden.	https://lestanzedelvetro.org/didattica/vetro-pulegoso/

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Scientific name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Gambaro e Tagliapietra glossario		/tecnica/ /immergere/ /shock termico/	vetro a ghiaccio, vetro craquelé				vetro artistico	vetro di Murano	specializzato	All'"Esposizione Industriale nel palazzo dei Dogi nell'anno 1868" - scriveva Zanetti - Salviati presentò "le più belle prove" di avventurina soffiata (Fig. 9) e vetri a ghiaccio "con qualunque colore e perfino colla pasta avventurina sì difficile ad adattarsi a tal uso".	https://www.jstor.org/stable/24191089	Paolo Zecchin. 2005. La pasta venturina, vetro speciale muranese	tecnica decorativa del vetro a ghiaccio
Massimiliano Schiavon Art Team	Die Definition wurde von mir formuliert.	/Technik/ /Eintauchen/ /Thermoschock/	Craquelé Muster				Kunstglas	Muranoglas	fachsprachlich	Seit dem 16. Jahrhundert verwendetes, brüchiges Eis erinnerndes Glas.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	Eisglas herstellen
MUVE - Fondazione Musei Civici Venezia		/vetro/ /simulazione/ /effetto ottico/					vetro artistico	vetro di Murano	specializzato	Nel Settecento hanno particolare fortuna a Murano vari tipi di vetri “mimetici”, cioè realizzati in modo da simulare altri materiali.	https://museovetro.visitmuve.it/it/il-museo/percorsi-e-collezioni/vetro-xviii-secolo/	MUVE - Fondazione Musei Civici Venezia	
MUVE - Fondazione Musei Civici Venezia		/Glas/ /Simulation/ /optischer Effekt/					Kunstglas	Muranoglas	fachsprachlich	Im achtzehnten Jahrhundert waren in Murano vor allem verschiedene Arten von „mimetischem“ Glas beliebt, also Glas, das so hergestellt wurde, dass es andere Materialien simulierte.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf	MUVE - Fondazione Musei Civici Venezia	
MUVE - Fondazione		/vetro/ /canna colorata/	vetro murrino,				vetro artistico	vetro di Murano	specializzato	È una tecnica antichissima, in cui rientra anche il vetro mosaico.	https://www.mademuranoglass.com/it/lisol	Made Murano Glass	oggetti in vetro mosaico,

Musei Civici di Venezia		/disegno/ /colore/	vetro millefiori								a-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b		fabbricare vetro mosaico
MUVE - Fondazione Musei Civici Venezia		/Glas/ /farbiges Rohr/ /Design/ /Farbe/	Mosaikglasdekor, Glasmosaik				Kunstglas	Muranoglas	fachsprachlich	Aus unterschiedlich dickem, einfarbigem Glas oder aus verschiedenfarbigen konzentrischen Schichten gebildete Glasstäbchen, die für die Herstellung von Mosaikglas in Scheiben geschnitten werden.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-WAS-IST-GLAS-DEU.pdf	MUVE - Fondazione Musei Civici Venezia	Stücken aus Mosaikglas, Herstellung von Mosaikglas
MUVE - Fondazione Musei Civici di Venezia		/vetro opaco/ /bolle/ /tecnica/	vetro bullicante				vetro artistico	vetro di Murano	specializzato	Il vetro pulegoso si presenta pieno di bollicine ottenute introducendo nella massa fusa una sostanza atta a produrre lo sviluppo di bolle di gas.	https://lestanzedelvetro.org/didattica/vetro-pulegoso/	Le stanze del vetro - glossario del vetro	
Le stanze del vetro	Die Definition wurde von mir formuliert.	/undurchsichtiges Glas/ /Blasen/ /Technik/	Glas mit Luftbläschen				Kunstglas	Muranoglas	fachsprachlich	Anhänger und Ohrringe in klarem Glas mit kleinen Luftblasen.	https://www.schwarzwaldglas.de/shop/schmuck/luftblasen/	Peter Eckhardt, Glaskunst Altglashütten	

Lang	Term.	Part of speech	Gender	Number	Pronunciation	Etymology	Derivative	Notes (term.)	Definition	External cross-ref (def.)
IT	vetro soffiato	sostantivo	maschile	singolare	[ˈveːtro][sofˈfja ːto]				Vetro ottenuto con la tecnica della soffiatura.	https://muranoglam.com/tipi-di-lavorazione/
DE	Blasglas	Substantiv	Neutrum	Singular	[blɛsgla:s]				Mit dem Blasen hergestelltes Glas.	https://muranoglam.com/tipi-di-lavorazione/
IT	vetro sommerso	sostantivo	maschile	singolare	[ˈveːtro] [somˈmɛr.so]				Tipo di vetro che si ottiene immergendo il vetro in lavorazione in crogioli con diversi colori.	https://museovetro.visitmuve.it/wp-content/uploads/2020/12/DOWNLOADS-APPROFONDIMENTI-CHE-COSE-IL-VETRO-ITA.pdf
DE	untergetauchtes Glas	Nominalphrase			[ʊntɐgətaʊ̯xtəs] [gla:s]				Bei dieser Technik wird ein sehr dickes geblasenes Glas in den Tiegel getaucht, der transparentes Glas einer anderen Farbe und gleicher Dicke enthält.	https://www.mademuranoglass.com/it/lisola-di-murano-e-la-lavorazione-del-vetro/?v=2997dd3a515b

Source (def.)	Notes (def.)	Semic analysis	Synonym	Common name	Sci. name	Orthogr. variant	Subject field	Subdomain	Register	Context	External cross-ref (context)	Source (context)	Collocation
Murano Glam Vetreria		/vetro lavorato/ /soffiatura/					vetro artistico	vetro di Murano	specializzato	Il Maestro, levata con la canna da soffio una piccola quantità di vetro, dopo averla soffiata lievemente (se intende realizzare un vetro soffiato) la immerge nuovamente.	https://www.massimilianoschiavon.com/lavorazione/	Massimiliano Schiavon Art Team	lavorazione del vetro soffiato, immersione del vetro soffiato, tecnica del vetro soffiato, oggetto in vetro soffiato
Murano Glam Vetreria	Die Definition wurde von mir formuliert.	/Glasverarbeitung/ /blasen/					Kunstglas	Muranoglas	fachsprachlich	1820 waren es nur noch 16, von denen nur 5, die Blasglas produzierten.	https://museovetro.visitmuve.it/wp-content/uploads/2020/06/SCHEDE-DI-SALA-Museo-del-Vetro-DEU-1.pdf	MUVE - Fondazione Musei Civici Venezia	die Form dem geblasenen Glas zu geben
MUVE - Fondazione Musei Civici Venezia		/tecnica decorativa/ /strato sovrapposto/ /colore/					vetro artistico	vetro di Murano	specializzato	Possono essere incamiciate, cioè ricoperte con vetro fuso ed avere così un effetto sommerso , valido soprattutto per l'argento così non si ossida.	https://muranoglam.com/tipi-di-lavorazione/	Murano Glam	tecnica del vetro sommerso, in vetro sommerso
Made Murano Glass	Die Definition wurde von mir formuliert.	/Technik des Modellierens / /überlappende Schicht/ /Farbe/					Kunstglas	Muranoglas	fachsprachlich				

Summary in Italian

La presente tesi mira ad affrontare un lavoro terminologico ben preciso, ovvero l'elaborazione di risorse terminologiche da inserire all'interno del progetto terminologico CAMEO. L'ipotesi del lavoro è stata quella di creare dati terminologici standardizzati e FAIR per la diffusione ottimale della terminologia bilingue (italiano – tedesco) del vetro di Murano. Infatti, i rapporti tra i due paesi sono proficui e l'interesse della Germania nei confronti dell'arte e della cultura italiane sono da sempre molto vivi. La Germania importa molto dall'Italia e tra i prodotti più esportati dalla regione Veneto vi è il vetro muranese. L'Università di Padova si è da sempre impegnata nella realizzazione di banche dati terminologiche che mirano a un uso corretto e consapevole della terminologia multilingue. Infatti, il lavoro di questa tesi vuole completare un progetto terminologico già avviato, ossia quello legato alla banca dati commerciale terminologica CAMEO. L'obiettivo della tesi è stato quello di integrare la lingua tedesca per il settore del vetro artistico, creando schede terminologiche bilingue italiano – tedesco. Infatti, la lingua tedesca per questo settore non era ancora presente all'interno del database. Inoltre, si è visto che glossari multilingue specifici per la terminologia del vetro di Murano non esistevano, e questo ha reso il progetto ancora più valorizzante. La creazione delle schede ha permesso di approfondire la lingua del vetro e le relative terminologie italiano - tedesco, analizzando i comportamenti e le peculiarità di ciascuna lingua. Esse vogliono essere un supporto nel processo traduttivo dei documenti legati all'esportazione dei manufatti di Murano, ma anche nel processo di redazione tecnica degli stessi. Il settore commerciale in questione è infatti incluso nei domini contemplati dalla banca dati, in quanto esso è di grande valore per il valore delle esportazioni della regione Veneto. Inoltre, i dati terminologici così ottenuti sono utilizzati come metro di giudizio della terminologia utilizzata in due pubblicazioni dell'LWL Industry Museum, che testimoniano e descrivono l'arte vetraria di Murano in occasione di alcune mostre a lei dedicate. Le pubblicazioni in questione sono: *Spuren der Vergangenheit. Drei Glasshütten auf Murano – Le tracce del passato. Tre vetrerie a Murano* e *L'arte del vetro. Glas des 19. Jahrhunderts aus Murano - Il vetro di Murano dell'Ottocento*. I libri presentano testo a fronte e possono quindi essere un oggetto di studio interessante. Infatti, la valutazione

della terminologia utilizzata ci ha portato a capire quanta attenzione è stata dedicata all'aspetto terminologico e alla corretta diffusione della conoscenza, anche fuori dall'Italia. Il Museo ha aderito al presente progetto di tesi, e i libri sono stati da loro gentilmente offerti. Il lavoro non vuole presumere che i libri contengano una scorretta terminologia, ma vuole anzi migliorarne la loro qualità solo dal punto di vista terminologico. L'aspetto terminologico nella trasmissione della conoscenza, soprattutto se vi è l'ostacolo della lingua, diventa infatti ancor più fondamentale. È importante che la conoscenza venga diffusa utilizzando termini corretti, standardizzati e che definiscono concetti propri del dominio. Il metodo di ricerca utilizzato è quindi esplorativo, perché l'obiettivo è quello di apportare nuovi dati terminologici rispetto allo stato attuale dell'arte. La tesi può essere considerata come divisa in due parti: quella teorica e quella pratica, contenente il cuore del progetto terminologico. In totale, la tesi di ricerca si snoda lungo un percorso di cinque capitoli, che sono le tappe della dimostrazione. I capitoli teorici sono 3. Il primo capitolo descrive la terminologia come disciplina: le sue nozioni fondamentali, le principali teorie terminologiche e i suoi approcci. La Teoria Generale della Terminologia (GTT) di Eugen Wüster è stata descritta, assieme ad altre correnti di pensiero ad essa successive. È stato mostrato, soprattutto, quanto la terminologia viva del contatto con le altre discipline. Questa caratteristica la rende una disciplina molto interessante da studiare e fortemente pluridisciplinare. La parte più importante del capitolo tratta la doppia dimensione di analisi della scienza terminologica, in quanto essa è stata adottata anche nel progetto terminologico di questa tesi. La buona riuscita di un progetto beneficia infatti di entrambe le dimensioni, poiché apportano vantaggi diversi alla totalità del progetto. Inoltre, il capitolo primo descrive l'obiettivo ultimo della terminologia, ovvero quello di garantire una comunicazione univoca nei diversi settori specialistici, al fine di non dare adito ad ambiguità nella trasmissione della conoscenza specializzata. Il principio fondamentale della terminologia è quello della biunivocità, secondo cui ad un termine corrisponde solo un concetto e viceversa. Successivamente, è stato affrontato il fenomeno della variazione terminologica e, in particolare, della classificazione delle cause di variazione (Freixa 2006). Le varianti terminologiche inserite nelle schede terminologiche sono state valutate in seguito, tenendo in considerazione proprio questa classificazione. Nel secondo capitolo, ci si è focalizzati sulle risorse terminologiche, in quanto i risultati ottenuti dal presente lavoro sono confluiti

in una banca dati multilingue. In particolare, sono stati spiegati il loro funzionamento e la loro struttura, prendendo come esempio alcune della banche dati terminologiche più famose: IATE, GEMET, Termium Plus, etc. L'introduzione del funzionamento delle banche dati ci ha permesso di introdurre una questione piuttosto spinosa, che rappresenta uno svantaggio per la terminologia. Infatti, molte delle banche dati terminologiche esistenti non sono standardizzate tra di loro: la loro struttura interna non è implementata in modo che i risultati terminologici siano successivamente riutilizzati o interscambiati. A questo proposito, si è fatto riferimento anche al concetto di standardizzazione, che sta alla base di questa disciplina. Il ruolo dell'Organizzazione Internazionale per la Standardizzazione (ISO) è stato presentato, insieme alle principali norme ISO che sono state seguite nella presente tesi. Esse hanno fornito le linee guida teoriche per una buona riuscita del progetto e sono state fondamentali per comprendere cosa si intende per "standardizzazione dei risultati terminologici". Le norme ISO contribuiscono alla standardizzazione della meta terminologia della terminologia e offrono, appunto, standard utili per la loro ottimale diffusione. La standardizzazione gioca un ruolo fondamentale anche nella strutturazione delle banche dati, che in futuro si auspica siano conformi ai principi FAIR. A questo proposito, l'approccio FAIR è stato introdotto e definito: esso vuole creare dati trovabili, interscambiabili, riutilizzabili e interoperabili ed è alla base del progetto CAMEO. Qui, è contenuta la terminologia bilingue dei maggiori (e più redditizi) settori di esportazione del Veneto: il settore del vetro di Murano, il settore tessile, il settore agroalimentare, il settore del cuoio e del vino. L'importanza generale della terminologia nel settore commerciale è stata approfonditamente descritta, dimostrando il suo impatto nel facilitare le esportazioni e nel beneficiare l'intera economia di un paese. Nel capitolo terzo è stato trattato il dominio di studio, ovvero il vetro artistico dell'isola di Murano. L'aspetto economico, linguistico e storico sono stati presi in considerazione. L'arte veneziana del vetro di Murano è centenaria, fatta di persone e di gergo dialettale. Le tappe storiche principali sono state presentate, fino ad arrivare a testimoniare l'impatto che la sua economia ha in termini di turnover produttivo. È stato inoltre dimostrato quanto la caratteristica dialettale sia stata e continui ad essere molto forte all'interno del linguaggio di dominio. L'importanza del successo del settore economico in questione è centrale per l'intera forza economica della regione Veneto, e dimostra quanto il *made in Italy* sia apprezzato e richiesto all'estero. L'andamento

economico del settore è stato quindi commentato, grazie all'interpretazione di alcuni dati statistici, mostrando le prospettive benefiche che un lavoro come il nostro può avere sul suo successo in futuro. Il nostro progetto ha l'obiettivo di promuovere l'internalizzazione del prodotto avente il marchio Vetro Artistico® Murano, anche a fronte dell'alto numero delle contraffazioni provenienti dal mercato asiatico. Inoltre, con dati alla mano, è stato dimostrata la prominenza che il paese Germania ha sul mercato di esportazione del vetro di Murano. Nonostante i dati siano scoraggianti per l'ultimo anno 2024, il paese si è da sempre conquistato una posizione dominante nel mercato. In questo capitolo, sono state anche introdotte le due pubblicazioni dell'LWL Industry Museum, facenti parte di una associazione di musei della regione della Westfalia, in Germania. La storia del Museo, i suoi obiettivi e le sue mostre sono stati brevemente descritti. Si è arrivati così al quarto capitolo, che è il cuore della tesi e del lavoro terminologico, pratico e metodologico. Il progetto è stato affrontato in tutte le sue fasi. Prima di tutto, è stato creato l'albero concettuale di dominio. Il sistema ha organizzato tutti i concetti appartenenti al dominio, cercando di essere il più completo possibile. Il diagramma è stato creato a partire da tutta la documentazione raccolta sul vetro. Da essa, è derivato uno studio approfondito dei concetti appartenenti ad esso. Il sistema concettuale ha, infatti, racchiuso tutti i concetti appartenenti al dominio, ritenuti interessanti al fine del nostro lavoro. I concetti individuati trattano principalmente le tipologie di vetro esistenti, le loro caratteristiche, le tecniche di lavorazione e quelle di decorazione. Le visite al Museo del Vetro di Murano e alla vetrerie artistica Colleoni sono state fondamentali per acquisire la conoscenza specializzata di dominio. Si è sempre tenuto a mente che la terminologia creata sarebbe confluita in una banca dati di supporto ai traduttori della documentazione tecnica di prodotto. Perciò, sono stati esclusi dal progetto terminologico alcuni concetti (e relativi termini per le reti lessicali) considerati superflui per questo fine. Successivamente, sono stati creati i corpora di lavoro, uno per ogni lingua di studio. Questo ci ha permesso di studiare la parte linguistica del dominio e di creare una lista di termini rilevanti da inserire nella banca dati (e di cui trovare l'equivalente). I criteri seguiti per la scelta dei testi dei corpora sono stati quelli teorizzati da L'Homme (2004). Inoltre, è stato delineato il metodo con cui sono stati trovati. La tipologia di testo maggiormente presente nel corpus è quella dei glossari specializzati e delle pagine web delle vetrerie di Murano, che contengono la terminologia di dominio in maniera completa e esaustiva. Infatti, gli esperti

del vetro di Murano sono gli stessi maestri vetrai. Un'altra delle fonti principali, da cui i testi provengono, è da individuarsi nel Museo del Vetro di Murano, che sul suo sito ufficiale contiene numerosi testi specializzati. Per quanto riguarda la compilazione dei corpora, si è osservato che essi hanno dimensioni diverse: il corpus italiano è più vasto di quello tedesco. Le ragioni di tale situazione sono state individuate nel numero dei testi selezionati. Le informazioni specializzate sul settore sono presenti prevalentemente in lingua italiana, poiché gli esperti del settore sono principalmente i maestri vetrai delle vetrerie. In generale, la bibliografia scritta di dominio non è molto ampia. La terminologia non si è mai realmente cristallizzata nel corso dei secoli, poiché è stata tramandata prevalentemente oralmente. Il tool di utilizzo per la compilazione delle collezioni di testi e la loro estrazione automatica è stato presentato nelle sue parti principali. Il tool in questione è Sketch Engine, le cui funzionalità hanno permesso di compilare in maniera veloce e semplice i corpora e di estrarre i termini candidati per le successive fasi. Una volta conclusa l'estrazione automatica, è stato necessario validare i termini estratti e scartare quelli non pertinenti. Tra di essi, sono stati trovati molti sinonimi e varianti terminologiche, che sono state poi inserite all'interno delle schede terminologiche. Successivamente, i sistemi lessicali di dominio sono stati la parte finale del lavoro: i termini ritenuti rilevanti sono stati inseriti nei sistemi lessicali (uno per ogni lingua). L'intersezione del sistema concettuale e dei sistemi lessicali è stata fondamentale per affrontare l'ultima fase del progetto. Infatti, un lavoro ha completato l'altro. Il capitolo finale ha presentato poi i risultati del lavoro. Le schede terminologiche, contenenti tutti i termini considerati utili per gli obiettivi della banca dati CAMEO, sono state create. Ogni termine è stato analizzato dal punto di vista grammaticale, semantico, etimologico e fraseologico. Le schede bilingue italiano-tedesco create sono 62, le quali sono state successivamente analizzate da un punto di vista quantitativo e qualitativo. Esse includono i termini e i loro equivalenti tedeschi, ritenuti utili per descrivere i prodotti da esportare all'estero. In particolare, i termini che definiscono l'aspetto estetico degli oggetti di vetro, i termini che definiscono il materiale, i termini che definiscono la tecnica utilizzata per la loro realizzazione e la loro decorazione e i termini che definiscono gli strumenti utilizzati per realizzare gli oggetti. I termini presenti nella banca dati hanno tutti il rispettivo equivalente tedesco. Alcuni equivalenti sono stati creati da noi, ma i casi sono relativamente pochi: "*vetro pulegoso*", il cui equivalente tedesco è "*Glas mit Luftblasen*",

e "*filigrana a retortoli*", il cui equivalente tedesco è "*Fadenglas mit sich verdrehenden spiralförmigen Fäden*". Il processo di compilazione è stato lungo, ma ha portato alla realizzazione di un dataset di termini specialistici, di grande aiuto per i traduttori del dominio del vetro di Murano. È stata inoltre presentata l'applicazione che ha permesso la compilazione delle schede, ossia FAIRterm Web Application. La risorsa è una risorsa FAIR, come suggerisce il nome. I dati che sono stati creati sono interscambiabili e riutilizzabili in futuro, anche in vista di un ulteriore studio e ricerca nello stesso campo. Ci si è poi focalizzati su alcuni casi di studio interessanti, e si sono notate le varie peculiarità delle terminologie di entrambe le lingue. È stato anche fatto un breve approfondimento sulle varianti terminologiche trovate, suddivise secondo la classificazione di Freixa (2006). Da tale analisi, sono state suddivise le varianti terminologiche del dominio di studio in varianti dialettali, sociali, funzionali, discorsive ed ortografiche. Soprattutto, si è potuta notare la grande componente orale della lingua del vetro artistico. Il linguaggio dei vetrai si è tramandato nei secoli tramite la parola e il gergo dialettale. La componente dialettale ostacola sicuramente la standardizzazione della terminologia, anche a causa della grande presenza di varianti e della mancanza di equivalenti nelle lingue in cui i termini vengono tradotti. Per alcuni termini delle schede, si è dovuto stabilire il rispettivo equivalente attraverso alcune strategie traduttive, tra cui la perifrasi esplicativa. Molti dei termini dialettali, invece, non sono stati inclusi nel database perché privi di equivalente. Tale situazione è probabilmente dovuta anche dal fatto che molti concetti non esistono nella lingua di arrivo, perché propri della lingua di origine e della cultura italiana. In conclusione, si è poi arrivati all'ultima parte della tesi, che ha voluto valutare e migliorare la terminologia delle pubblicazioni del museo, essendo sicuri e forti dei risultati ottenuti e della loro correttezza. Il lavoro ha voluto dimostrare quanto l'attenzione nei confronti dell'aspetto terminologico faccia la differenza nella qualità di un testo o di una sua traduzione. Generalmente, l'attenzione spesa nei confronti dell'aspetto terminologico all'interno dei libri è stata abbastanza alta. Tuttavia, alcuni casi particolari di traduzione dei termini sono stati commentati e sono state proposte delle alternative di traduzione, sulla base dei dati terminologici raccolti, che sono frutto di tanto studio e ricerca. Nel caso in cui, invece, siano state trovate scelte terminologiche scorrette, sono state offerte ed elencate le forme corrette. L'attenzione all'aspetto terminologico in un testo specialistico lo rende davvero tale, soprattutto nel caso in cui il testo in questione

deve essere tradotto. Se non si prestasse attenzione a tale caratteristica, anche un lettore inesperto del settore potrebbe percepire meno tecnicità, soprattutto se i termini non sono usati in modo consistente all'interno del testo. Nelle pubblicazioni dell'LWL Industry Museum, la maggior parte degli errori terminologici sono derivati dalla mancata conoscenza dei corrispettivi equivalenti terminologici dei termini della lingua di partenza. Molti termini tecnici italiani, infatti, sono stati inseriti invariati (cioè, senza essere tradotti) nel testo di arrivo, senza una spiegazione del termine in lingua tedesca (ad esempio per i termini "*lattimo*", "*calcedonio*", "*cristallo*", etc.). Se un termine non viene usato consapevolmente, il risultato sarà una traduzione errata, rendendo la comunicazione poco chiara e ambigua per il lettore. Lo scopo della terminologia è di disambiguare la comunicazione e di trasmettere i concetti di un determinato dominio dalla lingua di partenza alla lingua di arrivo. Nei libri analizzati, l'imprecisione terminologica non costituisce un serio ostacolo alla comprensione del testo da parte del lettore, poiché entrambi i libri presentano numerose immagini dei manufatti, con relative descrizioni. Tuttavia, per una corretta trasmissione della conoscenza, si sarebbe dovuto prestare maggiore attenzione alla terminologia bilingue di dominio. Inoltre, molti termini utilizzati per tradurre i termini della lingua di partenza non sono frequenti nei corpora linguistici compilati durante il progetto terminologico e pertanto, non sono la scelta terminologica corretta. In effetti, nella scienza terminologica, alcuni termini sono più frequenti di altri, e quindi preferibili da utilizzare. Alcuni dei termini utilizzati sono, piuttosto, sinonimi dei termini corretti. Per questo, essi risultano essere scelte terminologiche non completamente corrette. In caso di scelte terminologiche non del tutto errate è stata fatta una proposta di miglioramento in base ai dati precedentemente creati. Tutti i suggerimenti sono stati formulati auspicando una migliore diffusione della conoscenza per il lettore e in vista di futuri compiti di traduzione nello stesso dominio e con la stessa coppia di lingue di lavoro. In questo contesto, la standardizzazione della terminologia del maggior numero di settori specialistici possibile diventa fondamentale per evitare ambiguità, nel momento in cui si deve scegliere la designazione linguistica corretta per trasferire un concetto da una lingua A ad una lingua B. Va ricordato che, nella scienza terminologica, un termine corrisponde ad un unico concetto e viceversa. Sebbene i fenomeni della sinonimia e della variazione terminologica siano sempre più accettati nella scienza terminologica, è opportuno che la terminologia sia quanto più chiara, univoca e standardizzata possibile.

Se la terminologia utilizzata è corretta, significa che dietro la sua scelta c'è uno studio terminologico complesso dell'ambito specialistico. La ricerca ha dimostrato anche che buoni risultati terminologici derivano da una doppia prospettiva di studio. Se fosse stata considerata solo una delle due dimensioni di analisi, la ricerca avrebbe portato a risultati incompleti e insoddisfacenti. In ultima analisi, il progetto terminologico e le sue varie fasi hanno mostrato che la terminologia del dominio è generalmente piuttosto scarsa in termini di quantità di termini tecnici; tuttavia, la compilazione dei corpora ha consentito di selezionare alcune fonti scritte e di raccogliere comunque un numero soddisfacente di dati terminologici. L'attività vetraria di Murano è conosciuta in tutto il mondo e la sua unicità rende questa forma d'arte profondamente apprezzata. Il progetto affrontato in questa tesi è quindi molto prezioso, perché l'interesse per i manufatti muranesi è sempre stato vivo. La Germania ha da sempre guardato con ammirazione questa forma d'arte, e ciò è testimoniato dalle pubblicazioni dell'LWL Industry Museum, analizzate nel presente lavoro. Il progetto terminologico portato avanti per creare una terminologia standardizzata del vetro di Murano per la coppia di lingue italiano - tedesco, ha testimoniato la sua efficacia. Il lavoro terminologico è voluto servire da esempio ed è voluto essere di buon auspicio per l'integrazione futura di ancora più lingue nella banca dati terminologica CAMEO.