

The Market as a Concept in Swedish Parliamentary Records from 1867 to 1970: A Mixed Methods Study

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Abstract

This paper presents a study of the market concept in the records of the Swedish bicameral parliament from 1867 to 1970. The study, and an underlying project, adapt a theoretical and methodological combination of history of concepts, discourse analysis and computer linguistic methods. The theoretical and methodological framework is described and discussed, including a tool for investigating linguistic representations of the market concept in the records. Results from the dimensions of productivity and agency are presented, based on working hypotheses about a change of meaning towards a more abstract and complex understanding of market over time, which also is partially supported by the findings.

Keywords

market, keywords, history of concepts, computer linguistics, parliamentary records, digital history

1. Introduction

This paper concerns the use of market as a concept in Swedish parliamentary records over time, with the underlying aim to present the outline of a larger study where both methodological and theoretical issues of multi-disciplinarity are raised. *Market* ('marknad' in Swedish) is a recurring concept in many types of official and private texts and has an original meaning of being a physical place for trade and commerce. This meaning lives on in contemporary language usage, but market as a concept has over time also taken on several other nuances of meaning, with increasingly more abstract roles (e.g., *labor market*) and even roles including agency with *the market* as an acting agent (e.g., *the market reacted slowly*).


The limited study of parliamentary records presented here is part of a larger project with the aim to investigate how *market* has been used and interpreted from medieval times to contemporary days in Swedish text material. A fundamental question for our larger study is to map and discuss how market as a concept has been used and talked about in different discourses by emphasizing how different meanings have been ascribed to the notion of market in the process of meaning change. This question remains as the main aim for the study of parliamentary records at hand. A starting point is the mainly theoretical but also methodological use of history of concepts to understand the usage and development of market as a recurring notion under


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a longer period of time. We further make use of a language-as-discourse perspective to map conceptions and ideas about market as a changing concept over time in different types of materials and practices. Finally, a computer linguistic methodological framework is adapted and used to handle large sets of text data, both in this smaller study of parliamentary records and in the project as whole. The present paper then focuses on the workshop topic of analysis of political discourse and concepts by using parliamentary data, together with creation and annotation of parliamentary data in textual format and also methods and tools for research and accessibility of parliamentary data.

2. History of concepts, discourse analysis and the study of market over time

Market or even *the market* is a ubiquitous concept in our contemporary societies – it is present and prevalent in business and politics and plays a central role for today’s dynamics of public administration. We also tend to talk about our everyday, individual lives in terms of markets – for private economic matters and even for relations and love interests. The marketization of both public and everyday life may be seen as an evident, global change but is a rather recent development [1]. The static view of the overarching *market* as a dominant and almost hegemonic force is not consistent over time and, as mentioned above, a major aim of our project is to describe and discuss this process of meaning change for the concept of market . A basic assumption is that markets do not exist beyond and independently of the actions of humans, and that their discourses are essential to the institutional reproduction of markets. This further implies that the social and linguistic aspects of an ongoing process of reproduction are intertwined. A history of concepts perspective helps us understand conceptual change as something that must be seen both as an indicator and a factor in historical processes of change.

A very brief example is to see market in its original meaning, in medieval and premodern days, as predominantly a distinct place for commerce with connotations of happening at a certain time and being focused on the actual interchange of goods and wares from a local, physical perspective. This conception stands in contrast to contemporary, wider and abstract services, like employment or credit, exchanged on a market. Such meanings connote commercial possibilities and risks from a larger and perhaps professional perspective and indicate how the concept is decoupled from physical and local constraints. The example can be further elaborated by the contemporary usage of market as an agent with the option to function as a lexical subject, which may act upon objects or other agents.

The example shows a line of change for the market both as a concept and in terms of word usage, where linguistic and societal roles are discursively closely related to each other. From this point of view, the history of concepts perspective of seeing notions such as market as both indicators and factors in processes of historical change brings forward the intrinsic relation between societal interpretation of concepts and their lexical representations, i.e., words or phrases, which we must use to be able to talk and write about the meanings we ascribe to these concepts.

The etymology for the word *marknad* (Eng.: *market*) shows that it has been used since at least the early 1500s in written accounts in Swedish (SAOB, svenska.se). It is most likely much older,

and the Swedish word is etymologically related to several other similar words in Germanic languages, all stemming from the Latin word *mercatus*, with the same meaning of a physical place of trade. Market as a concept also has similar long roots in time, but to this date, there is no comprehensive study of the use of market as a concept over time. The mainstream of literature in the history of concepts has predominantly focused on other notions, related to the classic fundamentals of civilization, culture and politics [2, 3]. Such keywords or “essentially contested concepts” [4] are in this tradition seen as parts in a societal backbone. In a society increasingly dependent on economics and finance, we argue that the concept of market has such a keyword role and that it has gained this position over time.

In recent years, the increasingly dominant role of the market has been in focus in several relevant studies about the concept of market, but without a longer scope of study in time and with an emphasis on the role of the market as a contemporary phenomenon [5, 6]. Also, the linguistic representations of the market as a concept have largely been overlooked in these studies even if exceptions can be found [7]. Our study of the market as a concept fits well into a history of concepts tradition but emphasizes a language-in-use perspective over a longer period, in contrast to previous studies of market as a concept. Another difference is the linguistic empirical starting point as well as the methodological framework.

A history of concepts-informed study seeing concepts as both indicators and factors in processes of change is meta-theoretically related to a language as discourse-perspective in which representations of language (i.e., utterances in spoken or written language) have a reciprocal relation with a surrounding practice and a larger interpretative community [8]. Such orders or communities of discourse obviously change over time, albeit often slowly. This can be illustrated by the aforementioned contemporary view and use of the market as a dominant and hegemonic concept in the public debate and in the literature on the view of the market in economics and social science since the mid 1900s [9]. From a historical point of view, this state of affairs is a rather recent development, and our expectation is that an analysis of the market as a concept will increase our understanding of both the change of this concept and the roles it plays and has played in different discourses.

3. A computer linguistics framework for the study of parliamentary data

An established conceptual-historical method is close reading of texts, which is also often used in language-oriented discourse analysis. However, this is impractical and inefficient as a method for a project with the ambition to span over a long period of time and to include very large amounts of text. Another challenge for a methodological framework, based primarily on qualitative or close reading techniques, is the issue of selection and representativeness, and thus subsequently how to reach more generalizable conclusions from a restricted sample of empirical material. All these issues can be somewhat mitigated with a combination of quantitative corpus linguistics methods and qualitative analysis based on first-step results from such methods. Already in the planning stage of our project, the strategy was to use computer linguistic methods to handle and analyze large corpora of different kinds of materials. Such an approach is also an established methodology in corpus linguistic analysis of language from a structural perspective. Corpus

methodologies have increasingly also been employed in more context- and discourse-oriented studies of language use from both synchronous and diachronic perspectives [10]. It is thereby possible to talk about a methodological feedback loop in which quantitative methods are initially used to indicate larger trends of linguistic change over time and as a subsequent step then conduct more detailed and in-depth analyzes using qualitatively focused close reading and manual analysis [11]. This is also a mode of analysis that will be used in our larger project. It is however important to keep in mind that even if corpus linguistics methods have several advantages, the challenge of sample bias is still present, as is also the case with more qualitative methods.

A starting point for our studies of the market as a concept over time is thus to examine very large amounts of text in Swedish with the combination of quantitatively oriented computer linguistic methods and qualitative analysis of the market concept's linguistic representations in context (i.e., word and phrases). Context is an important notion in the analysis set-up, and the notion can be seen from more than one perspective. From a corpus linguistic perspective, context denotes the immediate surrounding or neighbouring words of a query word. An analysis of the context may then bring knowledge on connotations, i.e., regularly co-used words and their syntactic or semantic roles. From a discourse analysis perspective, context denotes more than the immediate syntactic surrounding of a word such as the practice and cultural setting in which a concept, represented by words, is used. We will involve both meanings of context in the project, but in this paper the corpus linguistic view on context is mainly used. The project's sample of texts has primarily been guided by the degree of access to materials, and also with awareness of the great variation in terms of both availability, scope and representativeness of these texts. Quite naturally, there exist fewer early texts and also types of texts that can be used for computer linguistic processing. The absolute majority of available texts consist of public material such as press, legal and political texts. Older texts, as well as texts of a more private nature, are fewer and also more difficult to handle with the help of computer linguistic methods. As a first step, we have turned to existing research resources, such as the corpora collected by Språkbanken Text [12], and to the National Library of Sweden collection of press texts (tidningar.kb.se).

The chosen material for the this study are the texts of the Swedish bicameral parliament that existed between 1867 and 1970 (*Tvåkammarriksdagen*). It succeeded the previous parliament of the estates and preceded the current one-chamber Swedish parliament or *Riksdag*. There are both methodological and theoretical reasons for using this material in the light of the goals and aims of our project.

There are several methodological advantages in using the parliamentary records of *Tvåkammarriksdagen*. The texts are publicly accessible, and cover a relatively long period of time. The documents are not previously syntactically or semantically annotated, which can be seen as a shortcoming. However, this also means that we can annotate the material ourselves with the option to choose mark-up protocols that fit our project questions. Further more, we have the possibility to let the full context of the texts remain accessible, something that not usually is the case when texts are annotated for the purpose of linguistic analysis. A common trait when the focus is on structural type analysis is, for example, to separate and split sentence structure and to basically restrict access to the complete context of a single word instance. This is done in order to optimize very large and time-consuming computer operations, but becomes a problem

when both quantitative and qualitative methods are to be employed for analytical purposes. By having complete access to and control over the parliamentary source records, we have also been able to build a unique tool, which allows us to search for word instances in the data set documents over the complete timeline and get immediate access to the query words in their contexts as well as getting a statistical overview of word use.

From a more theoretical point of view, the set of the bicameral parliament texts represents a rich and large material from a time when the Swedish political landscape evolved from an early modern parliament to modern democratic representation in the parliamentary system. The important processes of democratization, industrialization and emancipation all took place during the period, processes that make the corresponding text material interesting from a historical perspective. How a concept as market is invoked, discussed, and debated in the records is obviously linked to the political and societal changes that took place in the years from 1867 to 1970, and also stands in relation to global events such as the two world wars and the great depression in the 1930s. Another benefit of working with the parliamentary records is that this material is representative of a specific and distinct discourse with continuity over time. The discourse of political debate and preparing legislation is typically characterized and stabilized by using certain types of text – proposals, legislative drafts and protocols to mention a few – and these types of texts are present as material examples over the full time period. These texts are also typically formal texts; they adhere to strict norms of structure, correctness, and style. Even if such norms always change over time, the formal nature of the parliamentary discourse will not allow for quick changes or random variation in the written accounts. These discourse and text aspects are together indicators of a stable communicative and archive environment over time, which gives us reason to believe that a concept like “market” as well as other concepts are used and managed in a similar way over the long time period. This is an important factor for an in-depth analysis of concept use both from the statistical macro perspective, and in the analyses of single cases of use in context.

4. Methodology – a mixed approach

4.1. The *Riksdagstryck* Corpus

In this section, we present the dataset modelling employed for the study at hand. The Tvåkammarriksdagen texts are accessible as the *Riksdagstryck* material, which is a closed set of historical documents from the bicameral Swedish parliament of 1867–1970. The data is an example of a relatively limited political discourse and consists of a well-defined and narrow collection of documents. Nonetheless, the material is diverse in terms of style and genre, and is commonly divided into 10 subcollections¹. In the various kinds of texts that make up the parliamentary material, there are four primary categories with their own characteristics. The motions are written by an individual, or a small group of persons with a common understanding of a specific issue, and are fairly straight-forward in terms of texts with intentions. The government bills

¹‘berättelser och redogörelser’ (*narratives and accounts*), ‘betänkanden, memoria, och utlåtanden’ (*reports, memorandums and opinions*), ‘motioner’ (*motions*), ‘propositioner och skrivelser’ (*propositions and letters*), ‘register’ (*register*), ‘reglementen’ (*regulations*), ‘riksdagens författningssamling’ (*the constitution of the Riksdag*), ‘riksdagsskrivelser’ (*letters of the Riksdag*), and ‘statens offentliga utredningar’ (*government official investigations*)

are generally more complex as they must speak for all members of the cabinet, at the same time as they can comprise lengthy accounts of previous deliberations and proposals on complicated issues. The reports from different standing committees are often even more diplomatic as they are univocal despite being written by bodies that reflect the political situation in the parliament, but the proposals are not seldom accompanied by reservations from committee members who also can motivate their differing opinions. The minutes are a genre of their own as they are renderings, albeit edited before printing, of the oral debates leading up to the final decision in parliament.

The collections were retrieved from the National Library of Sweden (riksdagstryck.kb.se/) and processed with tokenization, lemmatization and dependency parsing by means of the Sparv Pipeline tool [13, 14], used for automatic statistical and neural annotation of documents with textual structure and linguistic properties, specialized in Swedish applications [15, 16]. The processed collection of records was then, in a second step, made accessible by means of a tool for investigating linguistic representations, i.e., words and phrases, in a set of texts. The tool, named Context, was developed by the team research engineer, and enables the production of quantitative results, such as absolute and relative frequency for queries as well as direct access to the context of a search query, which permits qualitative analysis. It is thus a good example of the planned feedback loop of going from quantitative search statistics on the macro level to analysis of smaller samples of word instances in context on the micro level.

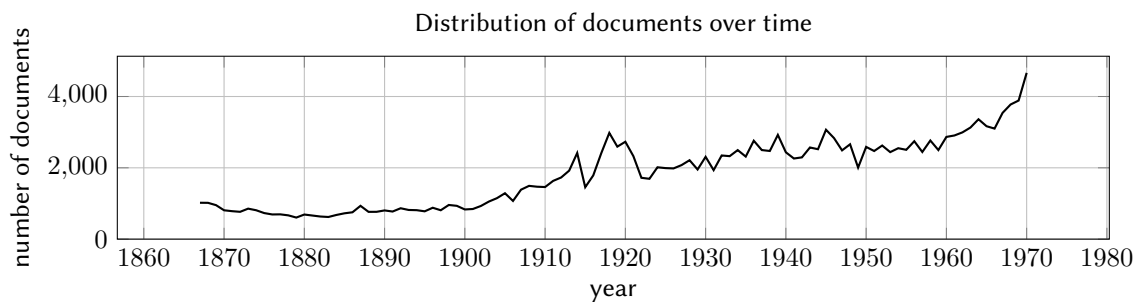


Figure 1: The distribution of documents over time in the *Riksdagstryck* corpus, showing a steady increase over the 20th century. Furthermore, not visible in this graph, the documents themselves also grow in size.

4.2. Data model

The model used for the study takes as its starting point the research question of describing and discussing how market as a concept has been used over time. The data of concern is text and words with linguistic and computed properties. A more detailed protocol is needed to single out and define the variety of linguistic representations or words and phrases that are used for the concept and to return quantifiable results. This work has been guided by working hypotheses, such as the knowledge that market (or *marknad* in Swedish) has developed from something concrete to a more abstract notion over the long period. We also know from lexicon sources

such as the SAOB that *marknad* has been commonly used as an element in compound words and thus is a source for new words in Swedish. In short, our model of the data is based on the following properties:

- *marknad* (*market*) as lemma, i.e., the use of all forms of the word, including inflections in the syntax system of Swedish.
- Word embeddings, i.e., the collocative patterns of *marknad* in context and a scrutiny of the surrounding words for *marknad* and its forms.
- The productivity of *marknad*, i.e., *marknad* as an element in compounds, either as prefix or suffix element.
- Agency of *marknad*, i.e., focus on the syntactic roles of the *marknad* word forms.

Given the format of this paper, we limit the study to focus on the productivity of *marknad* in terms of compounds, and its agency in terms of syntactical functions and roles.

5. Results – two tests of the data model

In the results section, we present examples from the data model dimensions of agency and productivity for *marknad* in the parliamentary records. The selection of these two examples is partly motivated by the restricted format of the paper, but also because they are ample illustrations of the project main question or how actors talk about market in a certain discourse. The presented examples also shed some light on the adjacent research question on how meaning can be ascribed to the concept of market, with obvious emphasis on the political discourse of Sweden during the period from 1867 to 1970. Based on what is known about the development of the market concept, from our own pilot studies of other types of material such as press texts [17] and from documentation on the political and economic development of Sweden from previous projects [18], we have also formulated some working hypotheses that have guided the analysis.

One working hypothesis, which is related to the dimension of agency, concerns the development of distinct agent roles for the market concept. They can be seen in the relation between indefinite and definite word forms for *marknad* and in syntactic roles of *marknad* in the texts. Due to the more common syntactic use of the definite form of *marknad* ('marknaden') over the indefinite form as a subject, we expect that this tendency can be seen as an indication of a stronger agentive role. More explicitly, the agentive role can be modelled by describing the syntactic role of subject vs. object, where we would expect the subject role to grow more frequent over time.

Another working hypothesis for the analysis in this paper is linked to the data model dimension of productivity in which the use of compounds including *marknad* as an element indicates a relation between the concept and other subjects – spanning a stratum from the very concrete to rather abstract issues. The hypothesis is then to investigate whether the rate of compounds with *marknad* as an element increases over time and also if new types of compounds are produced. Such an increase, alongside what can be called a colonization of the market concept into new subject areas, has been seen in other types of texts, i.e., press texts and legislation [17].

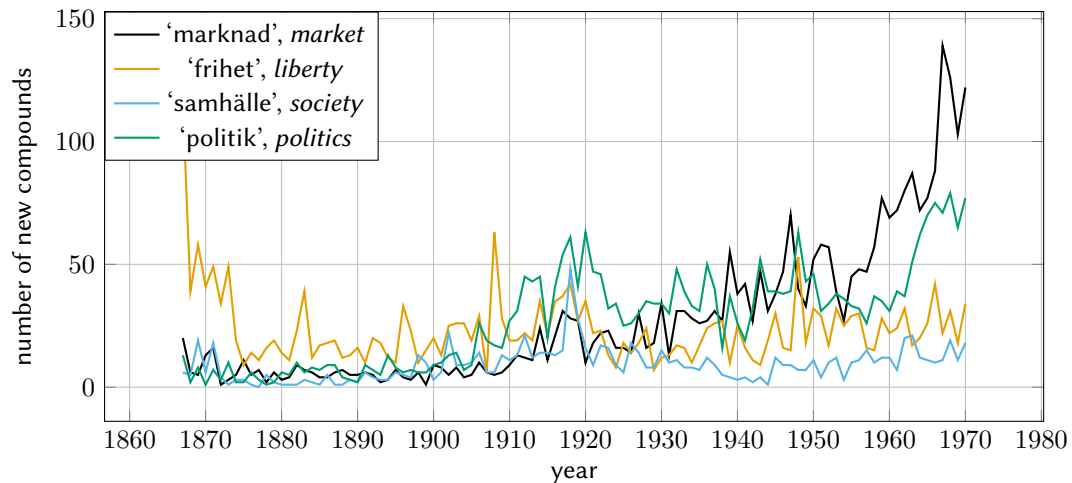


Figure 2: The number of new compound words per year from the heads ‘marknad’, ‘frihet’, ‘samhälle’ and ‘politik’, indicating that *market* stands out in terms of its productivity compared to the rest of the examples.

5.1. Productivity

In a synthetic language such as Swedish, the number of new compounds created from a single word could reasonably be assumed to increase indefinitely as new concepts and words are coined and adopted, if the word remains in use. However, the pace of this increase for any specific word is potentially socially and culturally dependent.

We compare the productivity of *marknad* with a selection of grand concepts from the history of concepts, namely ‘frihet’ (*liberty, freedom*), ‘samhälle’ (*society, community*), ‘politik’ (*politics*). These terms are all commonplace in political discourse and occupy similar and adjacent semantical spaces to our topic of interest, *the Market*, and are known to be productive in terms of composition.

The parliamentary documents are grouped by year, irrespective of their subcollection, and tokenized into individual words. The processed documents are subsequently lemmatized and queried for the head word, e.g ‘frihet’ per year. Figure 2 shows the number of unique words encountered a given year compared with all previous years, and thus indicates yearly growth in compounds. Interestingly, and perhaps counterintuitively, the number of new compounds do not increase with time for all concepts, even though the size and number of documents do, see Figure 1. In this selection, *market* stands out with a near exponential curve from the early 1900s and onwards. It is thus important to note that otherwise widely used and productive words like *society* and *politics* in Swedish do not share the growth of *market*, and that compound productivity is unique and characteristic for different words. In precise terms, *market* shows clear phases of compounds grounded in the societal currents of the time e.g *penningemarknad*, *kreatursmarknad*, *elmarknad* (Eng.: money market, cattle market, electricity market) during 1870-1910, *marknadsmässig*, *räntemarknad*, *marknadsanalys* (Eng.: market based,

interest market, market analysis) during the semi-linear growth from 1910-1950 and finally more modern terminology like *marknadsdata*, *marknadsspel*, *idémarknad* (Eng.: market data, market game, idea market) from 1950-1970.

5.2. Agency

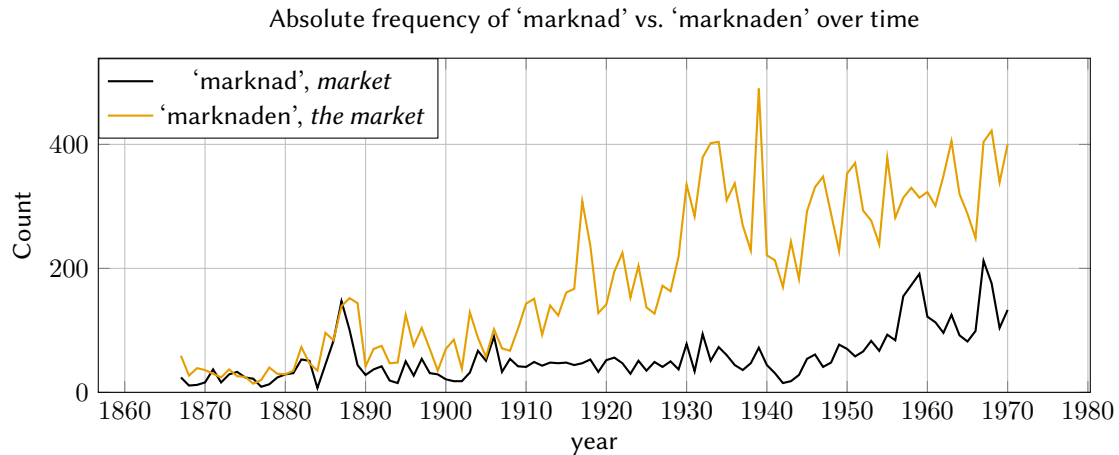


Figure 3: The absolute frequency, or count, of the indefinite vs. the definite form of *market* in Swedish ('marknad' vs. 'marknaden'), indicating a significant growth for the definite form over the indefinite one across the corpus.

The syntactic roles of *marknad* are interesting from an agency point of view, as stated above in our working hypotheses. The Swedish language has a rather fixed system for clause order but nominal phrases (NPs) such as the noun *marknad* may function both in subject and object roles. The concrete definition of *marknad* as a place and time for trade and commerce suggests a more passive syntactic role in clauses with *marknad* in object position and in relation to prepositions, as in “go to the market” or “at the time for winter market”. When this concrete definition is used in subject position, it is generally in copular verb constructions, expressing description or status, e.g., “this year’s market was fun”. The role of *marknad* in subject position may also indicate a more active agency with verb phrase constructions that carry meanings of action or judgement, e.g., “the market punishes the sellers”.

For this part of the analysis, and in accordance with the analysis of agency above, the *Riksdagstryck* documents were grouped by year, and processed by means of sentence segmentation, tokenization and finally parsed in terms of dependency relations. This allows us to extract grammatical function, such as subject and object from a sentence. The dependency relation analysis is sensitive to noise, and due to poor OCR quality and a relatively small set of data in the early 1900s and late 1800s, the analysis was restricted to 1911–1975.

An initial example from the dimension of agency is to simply compare the usage frequency of the indefinite and definite forms of the lemma *marknad*, i.e., *marknad* and *marknaden*. Definite forms are expressed by an added inflective suffix in Swedish (in the case of *marknad*, *-en* for

sing. and *-erna* for plur.), which makes it easy to search for and to single out definite forms in both singular and plural forms. We have looked at the singular forms and due to the increasing number of texts in the parliamentary texts over time, frequencies for both the indefinite and definite forms are decreasing in the period.

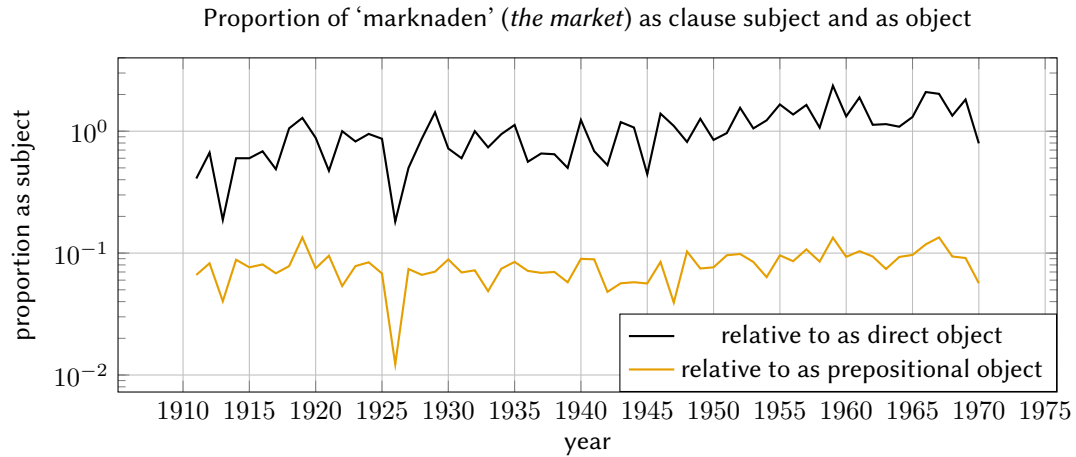


Figure 4: The proportion of the word 'marknaden' as the subject of a clause, compared with as the direct object of a clause and with as a prepositional object of a clause. The results indicate a slight increase over time, but that the prepositional use still dominates.

It is however quite clear that the use of the definite form decreases at a slower rate than the use of the indefinite form. This would then indicate an increased use of the definite form *marknaden* over time (as seen in Figure 3), a trend that can be interpreted in two ways: an increased use of the definite form may indicate a discourse where it is deemed necessary to talk about “the market” as an entity; it may also indicate a more active clause subject role where specific actions and opinions are ascribed to the market as agent. These interpretations do however demand more qualitative investigations to which we will return in coming publications.

A further scrutiny of data from this subset of records was conducted with focus on the roles of *marknad* in clauses. We looked especially at *marknad* as direct object and as prepositional object in clauses, and compared these with the use of *marknad* as clause subject. The result is shown in Figure 4 as the proportion of subject uses over direct object and prepositional object, uses respectively. The prepositional use of *marknad* dominates over the selected period, which also is in line with a general pattern in Swedish clause structure. Constructions with direct objects are in lesser use for NPs overall, and the same pattern is found also in our investigation in direct object constructions with *marknad*. However, it is interesting to see a slight increase over time of the direct object construction, which would indicate an emphasized interpretation of the market concept as a more agentive actor in the parliamentary records.

6. Discussion

The aim of this paper is to present our project idea and to show some initial findings from the investigations of the data of the bicameral parliament Tvåkammarriksdagen. The title of the paper states that this is a mixed methods study, and the presentation of the project design with its combined theoretical and methodological approach is also a recurring theme in the paper. We hope that both the project outline and its methods will invite and inspire other researchers working in similar multidisciplinary environments. The primary question for our larger project and this study is to describe and discuss how market as a concept has been used and talked about in different discourses by following the concept's linguistic representations. Further more, we take an interest in how different meanings have been ascribed to the market concept in the process of meaning change over a long period of time in Swedish history.

The results presented here are mainly a brief orientation and also a test of a still developing data model based on computer linguistic methodology. The data model dimensions of productivity and agency are the basis for our tentative findings, which yet show some evidence that the working hypotheses stated in the beginning of the results section hold out. By scrutiny of agency factors such as the relation between definite and indefinite forms for the lemma *marknad*, we can see that while the definite form is more widely used, the increased gap in the 1900s is indicative of a change in language use in the parliamentary records. There is also a tendency of increasing agent properties for the concept, shown by the analysis of the use of *marknad* in different syntactic roles, but these findings should not be seen as strong evidence for a changed meaning of the concept. The dataset used for this part of the analysis is smaller and the occasional lower quality of the OCR of the records makes it difficult to get a complete basis for analysis. Elaborated preprocessing to mitigate OCR errors in combination with manual reading of smaller, representative samples is necessary in coming studies in order to say more about the syntactic roles of *marknad*. Further more, the analysis of *marknad* as a productive element in compounds shows an increase in compound word usage that indicate a stronger focus on the concept over time.

We will continue our analysis of the parliamentary records and of similar data sets from other types of discourses and sources in line with the larger project aim. As of this, we would like to emphasize the restricted study at hand as one step in our ambition to reach long-term goals. The results from this study indicate how the market concept becomes an option and part of a mindset in how issues of politics and governance are processed and presented over the time period in the parliamentary discourse. The inclusion of *market* as an element in compounds with other concepts such as *housing* or *labor* indicates new directions in a political landscape. And before an abstract market concept with agentive properties can be contested and debated, it most probably needs to find its place as the obvious and even undisputed way of economic, governmental and political guidance – i.e., this study gives us a glance of how a more abstract market concept may enter the political scene. In coming studies of material from later time periods and from other types of discourses, we expect to see how this process, and a more dominant or hegemonic view on market as a self-evident concept, is contested. For the material studied here, we primarily propose to show how the market concept evolves towards a more abstract meaning and as an idea of thought for political debate. To compare results from different types of texts and discourses will most likely tell us more about how the market

concept was developed in terms of usage and meaning change. Another planned step in the project process is to shift the necessary quantitative lens of analysis, made possible by computer linguistic methods, to a more in-depth analysis of cases in detail, both in the parliamentary records material and elsewhere. This combination of approaches will hopefully enable a richer and more well-informed discussion of results in coming publications.

Finally, the use of parliamentary records as data set as presented here, has given us promising initial results and has also proven to be an excellent test bed for search techniques and for developing a robust data model. The material has shown an interesting variety in terms of content, which to some degree was expected, but also in terms of linguistic variation where the subcollections of the data set invite to further inquiries on genre and style. We hope to continue the analysis by problematization of how the market concept is handled in different text types and genres of the parliamentary records. We invite researchers from other disciplines, working with the same parliamentary records or other similar data sets, for mutual collaboration and both broader and deeper analysis in the future.

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