Maritime Cooperative Working Agreements: Variability as a Proxy for Legal Atomization

Mary C. Lavissière & Laurent Fedi

Abstract Textual standardization is the expected route for documents in specialized disciplinary fields, particularly for legal documents. In this paper, however, we question this representation, contradicting literature that represents contracts as "frozen" genres. We argue that variation in certain legal documents is a result of complex legal contexts. We carry out a textometric study of 46 Cooperative Working Agreements in the maritime industry. We observe substantial differences in the lexical content of these contracts, despite the fact that they are all considered technical contracts. We argue that this linguistic variability stems from the lack of a uniform legal framework for the maritime industry. We conclude that the fluid legal framework and the variety of agreements that result from it are exploited to meet the parties' objectives under the guise of purely technical collaboration.

Keywords contracts, discourse analysis, English for Specific Purposes, genre analysis, legal English

1 Introduction

In language for specific purposes, textual standardization is the expected route for documents in specific disciplinary fields. This is especially true of legal genres because compliance with textual norms is strongly characteristic of legal genres in general, and, specifically, of contracts (Gotti 2012). Indeed, standardization underlies the very notion of genre. A genre can be defined as an event with a recognizable and accepted – i. e. standardized – form that allows for legitimately reaching a professional goal (Orts Llopis 2014). This is especially true of contracts. We argue, therefore, that a simplified representation of contractual language as fixed and highly-standardized is erroneous. Instead, we defend the view that variability and innovation are also crucial to the functionality of professional language (Bhatia 2012), including contractual language. Additionally, our study adds depth to this second vision of contracts by bringing a description of Cooperative Working Agreements (CWAs), which are currently understudied from a genre perspective. Second, we show that the variability in contractual language stems from a legal framework that is atomized. This variability in language allows for private companies to meet their latent objectives under the guise of purely technical collaboration.

These cooperation tools are classified as technical contracts with an operational dimension (Ghorbani et al. 2021) and not commercial contracts (Fedi/Tourneur 2015, Brooks et al. 2019, Fedi et al. 2022). Yet they have a substantial impact on the maritime transport market (Merk/Teodoro 2022) since they constitute transboundary agreements around the world. They have been identified as highly controversial from legal, economic, and political perspectives

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(ITF 2018, 2019). Most recently, they came under sharp criticism during President Joe Biden's 2022 *State of the Union Address*,

> We see it happening with ocean carriers moving goods in and out of America. During the pandemic, these foreign-owned companies raised prices by as much as 1,000 % and made record profits. Tonight, I'm announcing a crackdown on these companies overcharging American businesses and consumers. (The White House 2022)

The American President's words were followed by a press release from the American Department of Justice and the Federal Maritime Commission (FMC), signaling increased scrutiny about the way these companies work under the framework outlined in CWAs (Justice Department 2022). These remarks are the latest of a series of criticisms about the impact of maritime CWAs from international, American, and Chinese business and legal authorities. The recent civil penalty of 2 million USD against the fifth largest container liner company, clearly shows the abuses of the sector regarding demurrage and detention fees (FMC 2022b).

From a business perspective, CWAs aim to rationalize risks and costs in maritime shipping, which has been characterized as a volatile, risky, and competitive sector (Stopford 2009, Caschili et al. 2014). Notwithstanding the significant work of harmonization undertaken by the International Maritime Organization (IMO) with regard to safety, security and environmental protection (IMO 2020), the legal context remains atomized. Neither domestic nor international law can govern all disputes (Orts Llopis 2014). In response to this context, actors in the industry have begun working together in legal arrangements governed by CWAs (Caschili et al. 2014). As private documents, however, the contents of most CWAs have remained opaque. This opacity continues today even though American law (Shipping Act 1984, Ocean Shipping Reform Act 1998) mandates that liner companies operating in American jurisdictions file their agreements with the FMC. The FMC then makes these documents public through their website. Despite this availability, however, no linguistic studies have yet to be published on the nature of CWAs and their various forms. This is a significant gap because these instruments underpin global shipping alliances and main trade routes of containers in the world (Fedi et al. 2022).

Our study aims to fill this gap. It is based on a corpus of 46 CWAs from the container liner shipping sector. The agreements were filed with the FMC by international actors in the industry between 1985 and 2020. They are published on the FMC's website (FMC 2022a). Using textometry through the software program Iramuteq, we analyze the variation in lexical content according to their secondary classification as determined by the FMC and to their effective date as determined by this authority.

Our study is organized as follows. First, we include a brief overview of the literature about genre and variation in legal language and, specifically, in contracts. We also survey the literature on the historical and legal contexts of CWAs. Second, we describe our corpus of CWAs. We further explain the textometric methods we used for the study. Third, we present the results of the textometric analysis. Fourth, we discuss how our results contribute to the current literature. Fifth, we conclude with the limits of our study and perspectives for future research.

To facilitate reading, we provide a table of the abbreviations used in the article.

Table 1: Abbreviations used in the article

Full form	**Abbreviation**
Cooperative Working Agreement	CWA
Digital Container Shipping Association Agreement	DCSAA
Descending Hierarchical Classification	DHC
Federal Maritime Commission	FMC
Research Question	RQ
Slot Charter Agreement	SCA
Vessel Sharing Agreement	VSA

2 Literature review and research questions

The aim of this section is twofold. First, we review the literature concerning the relationship between the concept of genre, and its standardization or variability in legal discourse. We also review literature on contract language, though it is sparse from a genre theory perspective. Second, we review the particular legal and historical contexts of CWAs which make these documents specifically interesting for a study on the variability of contracts.

2.1 Legal genres: standardization or variation?

In this article, we approach genre with the conceptual framework created by researchers in language for specific purposes (Swales 1990, Bhatia 1993, Hopkins/Dudley-Evans 1988). Bhatia (1993: 13) defines genre as "a recognizable communicative event characterized by a set of communicative purpose(s) identified and mutually understood by the members of the professional or academic community in which it regularly occurs. Most often it is highly-structured and conventionalized with constraints on allowable contributions in terms of their intent, positioning, form and functional value." In this tradition, genres are stabilized communicative endeavors within a community of professionals. Genres, therefore, presuppose a degree of standardization that makes them culturally recognizable and judged as normatively legitimate by the members of the professional community itself.

Legal genres in particular face pressure to become and to remain standardized. They must be considered well-formed according to the legal standards of the jurisdictions and the legal authorities under which they are considered instruments. Legal texts that vary from an established legal genre may be judged void of legal force or can lead to sanctions by judicial authorities. In this way, legal genres tend to be distinct not only from non-specialized language, but also from other specialized genres (Gotti 2012: 52). This additional pressure towards standardization and risk-aversion leads to the oft-cited conservativeness and fixedness of legal documents (Gotti 2012: 52, Hiltunen 2012: 39). Indeed, innovation increases the risk of ambiguity and misinterpretation by stakeholders of legal genres. To avoid these risks, researchers argue, legal professionals aim for adhesion to approved legal genres (Gotti 2012: 52).

However, variation should be recognized as an equally necessary component of legal genres. Genres such as contracts are also instruments for accomplishing goals in dynamic

and long-term business relationships. As such, they must vary to meet the needs of the actors who employ them. This has not been stated clearly enough in the literature about legal genres, including contracts. While the literature highlights variability when comparing different legal genres or across legal systems (Trosborg 1997, Tiersma 1999, Bhatia 2012, Goźdź-Roszkowski 2012, Sun/Cheng 2017), there is little literature about variability within one genre, one language and one legal system, with the exception of Groom/Grieve's study of British patents (2019).

Linguistic studies on contractual language and its variability are, therefore, lacking. Most current literature about contractual language can be divided into two types: 1) prescriptive material, such as manuals and guides for professionals who draft and interpret contractual language (Chesler 2009, Bugg 2016, Cartwright 2016); 2) stylistics literature that is often focused on the question of simplifying contractual language (Richard 2021). Neither of these fields takes a genre-based approach as we do here. In the sparse linguistic studies, which deal directly with contracts as a genre, contracts have been represented as a "frozen" legal genre (Danet 1980: 471). Trosborg (1997) compares the pragmatics of contract language to other legal genres, also cites Danet (1980). From a pragmatic approach to genre, Trosborg (1997) argues that both the parties (exoteric audience) and their lawyers (esoteric audience) are receivers of contractual language. Trosborg further emphasizes the importance of the lawyers and the legal framework in which the contract functions:

> The function of the intermediary filter of the communicative process – the lawyer – is to ensure that the contents of the contract are in agreement with the scope for dispositional freedom on the part of the parties to the contract as limited by the legal framework. In this respect, legal discourse within the scope of language of the law can be described as formula-based communication in as regards form: the legal rules and their accumulated precedents function as a sort of matrix or mold, so that the form side of contracts is, in effect, determined normatively. For this reason, it is claimed that the form side is mainly oriented towards the esoteric audience – jurists and lawyers. (Trosborg 1997: 61)

Trosborg's (1997: 61) claim raises the question of how variation in the "matrix or mold" that is the legal framework would affect the "form" of a contract in terms of genres.

CWAs provide an opportunity to address this gap. Container liner shipping is characterized by a fluctuating legal framework and the need for strategic adaptation in a high-risk sector (OECD 2015). These conditions affect CWAs, which are the contracts that govern this industry. Returning to Trosborg's claim, we ask if and how a variable legal framework will affect this contractual genre, using lexical content as a proxy for genre. In addition, despite their enormous impact on the world economy (UNCTAD 2021), these contracts have not yet been the subject of linguistic analysis. There is, consequently, little information about their content, nor about how variation of these features interacts with the fragmented legal framework in which they function. We describe this framework in the following section.

2.2 Legal background of CWAs

This section describes the specific legal framework and historical context of liner shipping and of the related contracts in order to understand the impact this context has on the evolution and current function of CWAs. According to the World Shipping Council (WSC),

> Liner shipping is the service of transporting goods by means of high-capacity, ocean-going ships that transit regular routes on fixed schedules. There are approximately 400 liner services in operation today, most providing weekly departures from all the ports that each service calls […] (WSC 2022).

With regard to competition rules, liner shipping benefits from a derogatory regime and the sector is by nature highly-standardized around the globe (OECD 2015). While some model contracts such as CWAs exist, the rules applied are complex and unharmonized, which make this sector a unique context for studying the variation of the CWAs governing it.

2.2.1 Derogatory legal framework

Since its development in the last quarter of the 19th century, the liner shipping industry has been characterized by different forms of close cooperation between ocean carriers both at commercial and technical levels (Brooks 2000, Stopford 2009, Fedi 2021). This collaboration has been materialized and enforced through CWAs that evolved over time. Crucially, these agreements have been exempted from competition law (OECD 2015) and thus, their legal framework has always been derogatory regarding antitrust principles. In most countries, a block exemption regime is still granted to liner companies while monitored by competition authorities pursuant to different regulations (Fedi 2019, ITF 2019).

Historically, conferences and rate discussion agreements allowing price-fixing have led the contractual relationships of shipowners since the early beginning of the liner shipping development (circa 1870) till the nineties in the 20th century. Their aim was to limit a price war between maritime companies and to adjust transport capacities. Even though these types of agreements are still in force (ITF 2018, Fedi 2019), with the boom of containerization, they have progressively lost their dominance in favor of more technical CWAs. The latter agreements, such as 'consortia' and 'alliances,' mutualize and rationalize means of production while also minimizing the risks between shipowners (Fedi/Tourneur 2015, OECD 2015). Furthermore, the European Union (EU) prohibited maritime conferences as of 18 October 2008 (EU Council 2006, Fedi/Besancon 2008). The EU decision, however, had little impact (FMC 2012) and the conferential system has remained in many countries (Fedi 2013, Merk/Teodoro 2022).

To summarize, notwithstanding a strict compliance regime in some countries like the United States, liner shipping continues to evolve under a specific legal framework in the 21st century. However, this regime raises many questions particularly concerning competition law (Corruble 2018, Fedi 2019, 2021). The container liner industry is especially problematic. It is worth noting that the current contracts organizing the liner services bind direct competitors that are increasingly horizontally and vertically concentrated (Cariou 2008, ITF 2018). In 2020, more than 80 % of containers were carried by the ten leading maritime companies and the 'big four', i. e., Maersk, MSC, CMA CGM and COSCO represented around 58 % of this total volume (Alphaliner 2020). The three main alliances (2M, Ocean Alliance, THE Alliance) owned more than 90 % of market shares in 2018 (ITF 2018). Some voices, therefore, are calling for the modification of the current legal framework since it enables the most powerful companies to become larger (ITF 2018) and strengthen their bargaining power to the detriment of customers and suppliers as the COVID-19 crisis clearly showed (UNCTAD 2021).

2.2.2 Lack in law regulating container liner industry

Paradoxically, while container liner shipping is one of most globalized and standardized industries, its legal context is variable. There is neither an international convention setting out uniform provisions for the key clauses generally stated in the most common contracts nor a supranational institution in charge of the monitoring and or the settlement of disputes related to those contracts (Fedi/Tourneur 2015). The current legal framework applicable to CWAs is fragmented within different national or regional legislations (Fedi 2019). Consequently, as illustrated by the famous P3 Network, the same contract can receive a different interpretation depending on the competent competition authority (Corruble 2015, Fedi/Tourneur 2015). The P3 was approved by the EC and the FMC. It was, in contrast, refused by the Chinese competition authority (Braakman 2013). Even though this case highlighted the lack of uniform rules applied to CWAs (Fedi/Tourneur 2015), the shipping companies in question easily overcame the Chinese refusal by signing other contracts with additional partners. Finally, as merchants, liner companies have broad contractual freedom in the negotiation of their CWAs despite using model contracts. In this respect, we can underline that the principle of party autonomy attached to the theories of contract law is recognized in the context of international trade (UNIDROIT 2010: chap.1, art.1.1, Bix 2012). Fedi et al. (2022) have recently underlined that the existing CWAs entitle sea carriers to freely manage their activities with wide powers and ultimately to satisfy their needs. Obviously, the related parties benefit from broad contractual freedom providing them significant rights to achieve their objectives in terms of cost optimization, economies of scale and risk sharing. Moreover, the current digitalization trend prevalent in this sector has encouraged the adoption of digital cooperation contracts (e. g. DCSAA and Tradelens) facilitating the interoperability of information technology (IT) systems and raising questions on the exchange of sensitive information between members (Braakman 2020).

Notwithstanding abundant literature on transport economics and management of liner shipping (notably Brooks 2000, McLellan 2006, Cariou 2008, Luo/Fan/Wilson 2014), few scholars have paid attention to the content of the contracts governing the carriers' relationships so far (Corruble 2018, Fedi 2019, 2021). This research is crucial as strong criticism of shipping alliances and their possible strategic use of CWAs has recently emerged. A 2018 report from the International Transport Forum (ITF) underlined the negative effects of alliances beyond the significant market concentration, especially with regard to lower service frequencies, declining schedule reliability, longer waiting times, concentration of port networks, overcapacity, and barriers to entry into some trades (ITF 2018).

2.2.3 CWAs in container liner shipping

In terms of legal genres, the CWAs signed by container liner companies are private contracts that are not released to customers or suppliers of the co-contracting parties nor to any third parties. Crucially, CWAs are considered technical and not commercial contracts by international authorities and institutions (ITF 2018, 2019, EC 2020, Fedi et al. 2022). With the notable exception of the United States, the limited access to these contracts is linked to the sensitive information they contain and that liner companies are reluctant to divulge. It certainly justifies why the existing legal and linguistics literature merely refers to the main CWAs such as VSAs or SCAs but provides no description or analysis of their content. In this way, these instruments have been the subject of few studies. In addition, these contracts are diverse, especially in con-

tainer liner shipping (Fedi 2021). Whereas contracts covering liners that operate in American jurisdictions are published by the FMC (2022a), public access to these contracts has not been widely known and never exploited for a linguistic study (Lavissière/Fedi 2021).

In order to explain the relationship between variability, contractual genres, and legal context in the case of CWAs, we formulate three research questions (RQ) as follows:

RQ1: Are CWAs variable as a genre?

RQ2: Are there discernible trends in this variation?

RQ3: Can the variation be explained in terms of CWAs' fragmented legal framework?

3 Corpus and methodology

We chose to study variation in the CWA genre through the proxy of lexical words and textometry. The link between patterns in lexical content and genre was shown in research by Biber/Connor/Upton (2007). These authors take this approach to studying rhetorical structure divisions (*moves*) in genre. They use Vocabulary-Based Discourse Units (Biber/Connor/Upton 2007: 17). These are a group of words that appear frequently together in a given type of document. Vocabulary-Based Discourse Units allow researchers to divide a document into coherent units according to lexical trends.

The textometric software that we use to analyze the CWAs also works on the principle of finding and representing lexical words that appear in the same type of unit of discourse. In our case, the unit of discourse is smaller and generally corresponds to a sentence. This unit is relevant for law as legal clauses are often contained in one sentence, although sentences in legal documents tend to be long (Hiltunen et al. 2001: 56). Reinert (1983: 189–192), whose algorithm we use in Iramuteq, argued that utterances or sentences ("énoncés") bear the subjective mark of their utterers who make a statement about the outside world by putting lexical words together in the form of an object (the subject of the sentence) and a statement about the object (the predicate). When two lexical words appear in the same unit of context, Reinert (1990: 31) calls this a "local representation". When two words appear in a unit of context multiple times in a corpus, Reinert (1990: 31) calls this a "lexical world": "a set of statements that show the same global perception of a world."[1] He operationalizes the concept of 'lexical world' through a descending hierarchical classification (DHC) algorithm, which we describe in section 3.2.2.

In sum, this method was chosen because it can show overall trends in variation of lexical content of different subtypes of documents and in time. In Reinert's (1990) theory, this variation corresponds to different representations of the world within a corpus. It descends from the school of Geometric Data Analysis (Le Roux/Rouanet 2005), initiated by Jean-Paul Benzécri (Beaudouin 2016). While some corpus linguists have criticized this method as descriptive, it aims at making underlying lexical trends visible for qualitative interpretation (Beaudouin 2016). This section is divided into two parts. We first describe our corpus. Then we describe our method as applied through Iramuteq.

[1] This is our translation of "un ensemble d'énoncés connotant une même perception globale d'un monde".

3.1 Corpus

Our corpus consists of 46 agreements collected from the official website of the FMC (FMC 2022a).[2] We included all the CWAs that were available between May and September 2020 and that were classified by the FMC as Vessel Sharing Agreement (VSAs), Slot Charter Agreement (SCAs), Alliances, and CWAs without a secondary classification. They represent CWAs published between 1985 and 2020. All the agreements included in our corpus have the term *Cooperative Working Agreement* on their official title page. The total number of words in the corpus is around 88,140.[3]

While all of the agreements included are CWAs according to their official title page, some also have a secondary classification as VSAs, SCAs, or Alliances by the FMC. We only included the contents of the articles of these agreements. Their title pages, table of contents, signature page(s), and appendices were excluded. No republications of agreements were incorporated in order to avoid introducing the bias of similar republished texts into the corpus because republications may contain the same wording, while simply introducing a new partner into the agreement.

3.2 Methodology

Our methodology included two steps. The first step was the preparation of the corpus, and the second was a textometric analysis using the software Iramuteq (Ratinaud 2014). The corpus was prepared in two stages. First, the documents were manually converted into a text file, and the text file was checked for accuracy. Second, we coded each agreement for type on the official title page (TYPE), for second classification (TYPE2), for title (TITLE), for agreement number (NUMBER) and for effective date, in terms of the year the agreement became effective (DATE).

To analyze the content of the articles themselves, we carried out a textometric analysis using the software Iramuteq (Ratinaud 2014). The software goes through preliminary steps before performing selected algorithms. First, upon importation, the software divides the corpus into units of context[4]. The length of the units of context is determined by the researcher during the importation stage (Loubère/Ratinaud 2014). In this study, the length of the unit of context was set to 45 words, which corresponds to the average length of sentences in certain legal texts (Hiltunen et al. 2001: 56). Second, Iramuteq lemmatizes the text and divides it into three categories of *forms*: *active* (henceforth, *lexical words*), *supplementary* (henceforth, *grammatical words*), and *hapax legomenon* (henceforth, *hapax*). Lexical words include adjectives, adverbs, verbs, and nouns. Grammatical words include prepositions, pronouns, determiners, conjunctions, and other grammatical elements. Hapax includes all words that appear only once in the corpus. The categorization is carried out according to the software's dictionaries (Loubère/Ratinaud 2014).

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[2] A complete list of the agreements and their variables, including secondary classification and effective date, can be provided upon request to the authors.

[3] Some of the agreements are short, around 2000 words. These are full contracts. They usually concern slot sharing on vessels.

[4] These are called *text segments* in Iramuteq's terminology. We use the term *unit of context* in this article because we find that it more clearly expresses the concept behind the term as theorized by Reinert (1983).

After these steps, we used the DHC proposed by Reinert (1983) and modified for Iramuteq (Marchand/Ratinaud 2012). The software creates a contingency table with units of context in rows and lexical words in the columns. It uses presence (1) or absence (0) as criteria for filling the table. Iramuteq then carries out a correspondence analysis using the contingency table. The first division in the table is made according to maximum inter-class inertia. The DHC algorithm then continues dividing the table iteratively until further division does not increase inter-class inertia. Then, chi-squared values are used to determine which lexical words are specific to each class and to assign them accordingly. The classes produced by the DHC are interpreted in the following section. Finally, the software also allows for comparing the association strength of each variable in comparison with the classes resulting from the DHC. We compared the association of the variables DATE and TYPE2 with the classes produced by the DHC.

4 Results

The following section describes the four classes constructed by the DHC and the trends in variation that we observed thanks to the textometric analysis.

4.1 Classes

The DHC results in four classes which we named *Business framework*, *Strategic exchanges*, *Technical exchanges* and *Legal framework*. It should be highlighted that these classes, or lexical worlds, were constituted by the software through statistical methods and were not created by the authors. The authors interpret the results of the statistical analysis by assigning coherent names to the classes, as can be seen in Figure 1 on page 139.

In our corpus, the first division is made between the classes containing lexical words that refer to what is exchanged through the agreement and the frameworks within which this exchange takes place. We provide an overview of the lexical words in these four classes and the characteristic units of context in the following paragraphs. We also include most characteristic units of context, as determined by the software. The examples of lexical words and units of context provided below are all significantly associated with their classes according to Pearson's chi-squared test ($p = <.001$).

First, the class *Business framework* includes 43 % of the corpus, the largest percentage of the corpus. This is a surprising finding because CWAs are technical contracts and several jurisdictions forbid commercial exchanges between the parties. However, CWAs concluded over the last decade encompass the entire maritime supply chain and involve a door-to-door collaboration in all transport modes and interfaces (warehouses, logistic platforms or seaports). This may partially account for the continuing dominance of this class. This class includes lexical words related to formal communication, such as *notice* and *write*. It also includes lexical words referring to the limits of the agreement in time*, effective, date, day, terminate, termination*. While many contracts contain these words, recent CWAs have been concluded without an expiration date or renewed indefinitely by tacit acceptance as seen in example (1) below (emphasis added by the authors):

(1) This agreement shall remain in effect until *terminated* by unanimous consent of the Parties or until all but one Party has withdrawn.

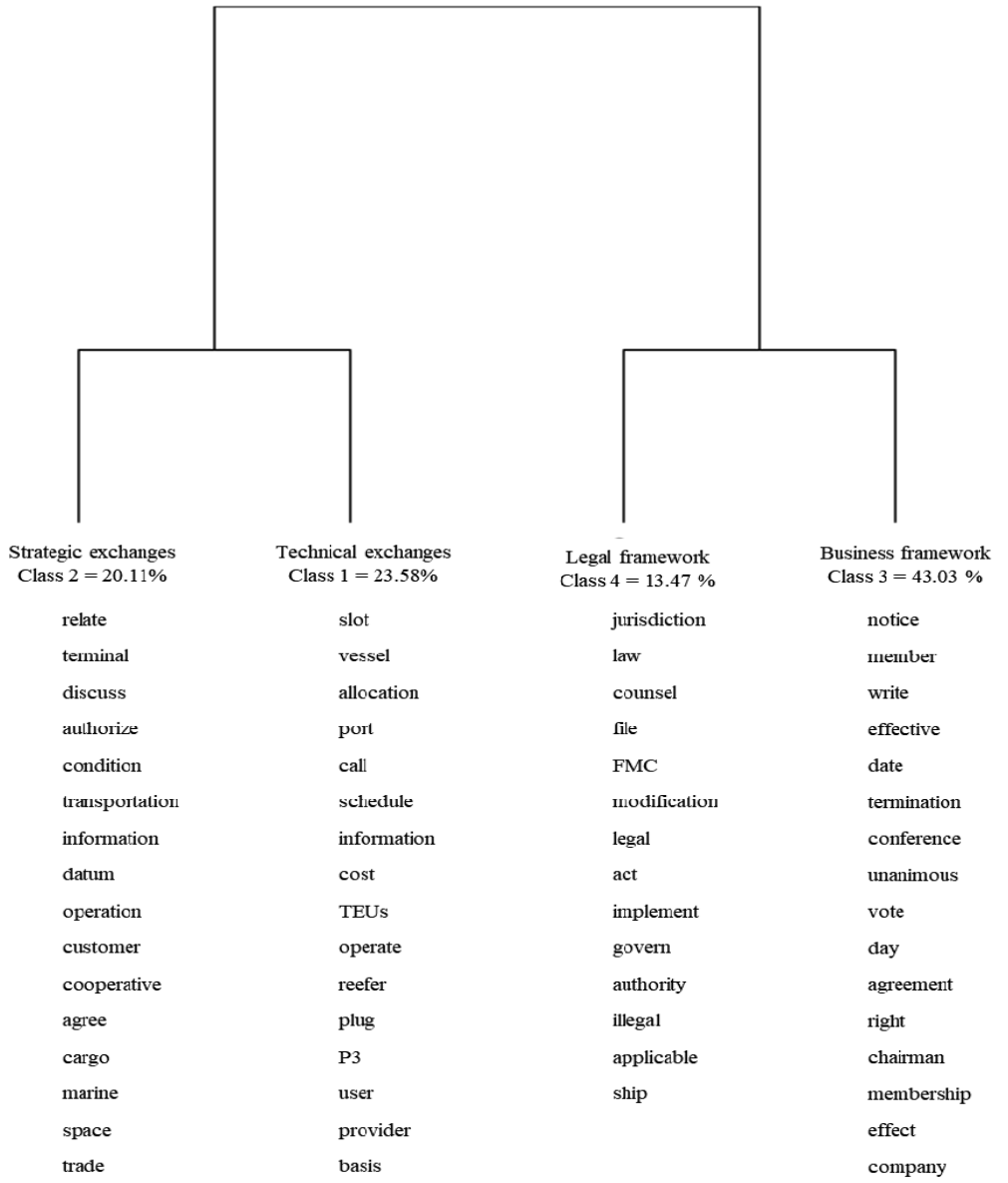

Figure 1: Four classes resulting from the DHC analysis

Furthermore, *Business framework* includes lexical words referring to the parties to the agreement and their relationship within the agreement. These include *member*, *conference*, *vote*, *unanimous*, *chairman*, *right*, *membership*, *company*, as seen in (2):

(2) The active *members* are authorized to form, own, operate, and dissolve the Digital Container Shipping Association […] as a separate legal entity under Dutch law to carry out the authorities set forth herein and are authorized to discuss and agree on all aspects of the structure.

Second, the class *Strategic exchanges* includes 23 % of the corpus and is the second largest class. Many of the units of context in this class come from the article *Agreement Authority,* which is the most complex article and sets out a wide field of action for the parties. It includes lexical words referring to collaborative action, such as *relate*, *discuss, authorize*, *agree*, *cooperative*, as seen in (3) below:

(3) The parties are *authorized* to exchange information on any scope of this agreement and to reach agreement on any and all administrative functions related hereto including but not limited to forecasting, terminal planning, insurance liability, cargo claims, indemnities.

This class also includes units of context referring to some limits on exchanges, showing that the contracts discursively distance themselves from being commercial. This is especially true of more recent contracts as in (4), which was approved by the FMC in 2015:

(4) Each party shall conduct its own separate *marketing* and sales activities, shall issue its own bills of lading, and unless otherwise agreed, handle its own claims […].

This class includes lexical words related to strategic gains from the relationship established by the CWAs. It confirms the latent objectives of the contracting parties as regards rationalization, optimization, risk sharing and economic efficiency to be sought, including words such as *terminal*, *operation*, *marine*, *trade*, *transportation*, as seen in (5):

(5) The parties are authorized to discuss and agree upon arrangements for the use of *terminals* in connection with the chartering of space hereunder including entering into exclusive preferential or cooperative working arrangements with marine *terminal* operators and other persons relating to marine *terminal* stevedoring or other shoreside services.

Finally, the class includes lexical words related to the actual exchanges*, cargo*, *space*, *datum*, *information,* and *customer*. This includes units of context referring to the exchange of these strategic resources as well as to certain limits, as seen in (6) below:

(6) Notwithstanding the preceding sentence, no information which is commercially sensitive (*customers* (save as necessary to comply with the terms of a particular contract of carriage), *customer* pricing and other, similar commercially sensitive information) may be exchanged hereunder directly or indirectly between any of the Parties.

It should be noted, however, that this example comes from the P3 VSA agreement, an alliance which was judged as in violation of Chinese competition law, despite being first approved by the FMC.

Third, the class *Technical exchanges* represents around 20 % of the corpus. This class incorporates the lexical words referring to the technical aspects of the terms and gains for each party. This covers lexical words related to vessel chartering, such as *slot, space, allocation, cost, teus (twenty equivalent units i.e. a container)*. It also includes lexical words referring to the sharing of vessels and other material, *vessel, capacity*, *reefer plug,* and to the actors and their actions, *user*, *provider, operate, agree*. Finally, this class incorporates lexical words related to the routes of the ships, *call*, *port*, *schedule*, such as in (7):

(7) The parties are authorized to discuss and agree on the *ports* to be called, *port* rotation, itineraries, service speed, and all other aspects of the structure and scheduling of the services to be operated hereunder.

Interestingly, this class is statistically associated with the article entitled *Agreement Authority*, rather than with the more technical articles such as *Geographic Scope* or *Purpose*. We interpret this to mean that technical exchanges are highly related to the strategic exchanges and the market, despite clauses such as (4) above which declare otherwise.

Fourth, the class *Legal framework* represents around 13 % of the corpus, the smallest percentage. This class integrates words related to the actors, such as the *Federal Maritime Commission, authority*, *implement*, *ship*, and *counsel*. It also includes the actions that are carried out concerning the agreement and its parties, *file* and *govern*. Finally, it refers to legal frameworks and instruments: *jurisdiction, law, legal, act,* and *applicable*.

4.2 Variation according to type and to date

In terms of the variation in CWAs, the DHC shows that there is significant variation between the contracts according to the variables TYPE2 and DATE. We observe that certain classes are more highly associated with the different categorizations on the website of the FMC (2022a), or with different effective dates.

Figure 2a below shows a graph of the Chi-squared values for significant associations ($p < .001$) between TYPE2 and the DHC classes. The class *Technical exchanges* is significantly associated with SCAs, VSAs and Alliances. It is negatively associated with CWAs with no secondary classification. *Business framework* is significantly associated with CWAs that do not have a secondary classification. *Legal framework* is also significantly associated with CWAs whose secondary classification by the FMC is VSA.

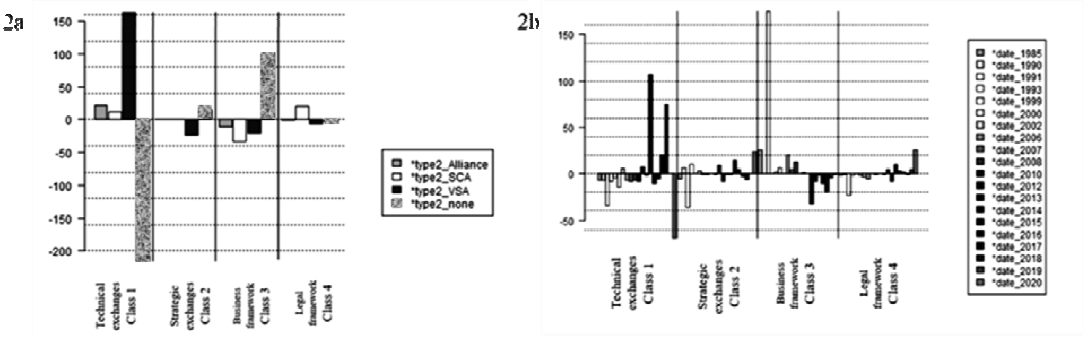

Figure 2a and 2b: Chi-squared values for the associations between TYPE2 (2a) and DATE (2b) and the DHC classes

However, as we highlighted in section 4.1, the units of context that contain language expressing *Technical Exchanges* are statistically associated with the same article as those in the *Strategic Exchanges* class. We interpret this as more technically-oriented contracts aiming for the same strategic goals as those that are business-oriented. This was the conclusion of the Chinese competition law authority concerning the P3 Alliance in 2014.

In terms of diachronic variation, the Chi-squared values indicate significant associations

between the DHC classes and the variable DATE. This is shown in figure 2b. The class *Technical exchanges* has higher Chi-squared values in association with more recent CWAs. This constitutes a trend in the industry: opting for more technical agreements, probably caused by the greater complexity of end-to-end services provided by the parties and also by the pressure from several different competition law authorities in reaction to the effects of the contracts on the market. *Legal framework* also shows slightly higher Chi-squared values in more recent CWAs, perhaps another reaction to increasing pressure to comply with competition law. The class *Business framework* shows higher Chi-squared values with older CWAs. The Chi-squared values of *Strategic exchanges* varies in time, but shows a slight overall positive trend. It is important to note that the change towards more technical language began around 2014, the year when the P3 Alliance failed to gain approval from the Chinese competition law authority.

In sum, CWAs vary in terms of the amount of language dealing with either the technical nature of the cooperation or the business structure created through the contract. We observe an overall trend towards more technical lexical items, probably in reaction to increasing complexity of door-to-door transport service provision and stricter monitoring from competition law entities. Given that there is no one single authority, however, important exceptions to this trend exist, such as the DCSAA.

5 Discussion

Our results make several contributions to the literature about contracts, which from a linguistics and genre analysis perspective, is scarce. In terms of contractual language, the literature is limited to prescriptive guidelines about how to draft or interpret contracts for legal professionals (Chesler 2009, Bugg 2016, Cartwright 2016) or about simplifying contractual language in the wake of the Plain Language movement (Richard 2021). We contribute to this literature by describing the actual lexical content of a specific type of technical contracts, CWAs. These contracts have not been subject to a linguistic or legal description despite their importance for the industry and for individual consumers. While this is only a first step towards filling the larger gap of defining contracts as a genre, we show that CWAs have four lexical worlds: *Business framework*, *Strategic exchanges*, *Technical exchanges* and *Legal framework*. These results led us to answer our RQs in the paragraphs below.

First, in RQ1, we asked whether CWAs are a "frozen" genre in the larger panorama of contracts (Danet 1980). Our results show that, on the contrary, CWAs vary substantially. While all four of these lexical worlds exist in each contract, they are not equally represented if we compare the lexical content to the FMC's categorization (TYPE2). VSAs, SCAs, and Alliances tend to be more clearly associated with technical exchanges. However, we cannot simply assume that this variation is due to evolving technical needs in the industry rather than commercial stakes. As our results demonstrate, the technical language replaces business framework language in the article *Agreement Authority* rather than increasing the length of articles dedicated to technical subjects.

Second, we asked whether there were discernible trends in CWAs' variation (RQ2). We observed a clear trend towards more technical lexical items in time. The lexical items more closely associated with older documents focus on the members and their relationship in activities such as voting and being a shareholder. In more recent contracts, the focus is on the specifics of the technical exchanges, such as the shipping capacity, which one company will put at the disposal of another. This more technical bend in the words used in the agreements be-

gins around 2013–2014, the period in which the 3P Alliance was declared in breach of Chinese competition law (Braakman 2013). However, this trend has many exceptions. CWAs with no secondary classification have also been published recently. In line with Fedi (2021), we observe that recently filed CWAs, such as the DCSAA and Tradelens, may diverge widely from the general trend towards contracts with more technical lexical items that deal with the digitalization strategies set up by the maritime companies. The management of IT systems, electronic bills of lading, blockchain, internet of things, data security or software holds a central place in this new type of CWA, which covers end-to-end services (Braakman 2020).

Third, we show that the fragmented legal framework in which CWAs exist allows them to take on multiple forms, such as SCAs, VSAs, Alliances, or newer forms that have not yet been named by the FMC (RQ3). The DHC reinforces our interpretation that the fragmented framework allows agreements to change their linguistic approach to reaching the same strategic goals for the parties while trying to avoid sanctions from authorities. The agreements not only set up technical exchanges of slots or of vessels, but they also lay the framework for business cooperation. The dominance of the *Business framework* and the presence of *Strategic exchanges* confirms the relevance of the legal literature classifying these documents as problematic: CWAs create merger or joint venture-like frameworks. As a result, they challenge competition law and call into question the relevance of the current exemption rules (Corruble 2018, Fedi et al. 2022). The latest digital CWAs that aim to share interoperable IT standards along the international transport supply chain (e.g. DCSAA) also reinforce this question on the suitability of US and EU rules (Braakman 2020). Moreover, CWAs ensure more rights than obligations and appear as the expression of an unilateral power, a contractual trend highlighted notably by Lokiec (2021) and Ancel (2008).

In sum, the fragmented legal framework allows CWAs to be dynamic and polymorphic legal instruments. They adapt to new legal restraints by changing their lexical tone and to operational constraints by enlarging the purpose of CWAs. For this reason, they are increasingly used by maritime shipping lines to reach goals such as terminal integration, equipment optimization, economies of scale, data sharing, IT development or customer exchange. These companies can exploit the variability of the genre to create contracts such as the recent digitally-oriented CWAs that meet goals beyond merely sharing technical capacities. We conclude this variation of CWAs is justified by the current fragmented legal framework applicable to the sector and the leading companies, which take great advantage of the lack of legal "mold" to constrain the CWA genre. This also confirms the "degree of opportunism" shown by the parties of cooperation agreements as demonstrated by Axerold (1984) in the 1980s.

6 Conclusion

From legal and linguistic perspectives, the fragmented legal framework has allowed CWAs to evolve over time and to avoid new legal constraints in the liner shipping industry. Our results show that the CWAs vary lexically in time and according to the secondary classification by the FMC. This variation gives evidence for Bhatia's (2012) argument that genres do not need to exhibit full standardization in order to act as instruments for given professional communities to reach their goals. The fragmented legal framework in which CWAs currently exist allows much margin for evolution rather than the firm constraining mold described by Trosborg (1997).

With regard to our future research agenda, more research should be done on CWAs both

from a linguistic and legal perspective. From a linguistic point of view, the articles in CWAs should be studied and the date of their appearance analyzed. The articles should also be further divided into legal clauses and their position analyzed in time. From a legal perspective, considering the lack of coherence between some of the CWAs' titles and their content, such as the DCSAA, we will propose a more detailed study of the legal nature of clauses contained in CWAs. In line with preliminary research (Fedi 2021), this classification would facilitate the knowledge and contribute to a better understanding of CWAs in container liner shipping. Further, a comparison between the language of CWAs and that of other legal documents used in business collaboration such as joint ventures will be necessary to understand the role of CWAs in the context of increasing concentration in the liner shipping industry (ITF 2018).

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