DIGITAL HUMANITIES COOPERATION

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A Quantitative View of Genre Poetics

Calderón de la Barca's oeuvre and the contemporaneous poetics of drama

LitLab

Pamphlet #9

July 2020

Ed. Thomas Weitin

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Abstract

While the analysis of drama against the backdrop of poetological rules is a regular feature of literary studies, computational or quantitative methods that allow digital humanities to conduct structural analyses of plays were developed only recently. Taking the example of Calderón de la Barca's oeuvre, this paper explores the range such a quantitative approach may have. For this, we draw on the contemporaneous poetics of drama of both the Spanish *comedia nueva* and French *classicisme,* and use their rules, such as the unity of action, place, and time, the provisos for characters and *Ständeklausel,* as well as the overall composition of the plays as our guidelines for the analysis. Moreover, this pamphlet explores quantitative characteristics of the two dramatic subgenres Calderón mostly worked in, and thus contributes to the discovery of patterns and structures within the corpus of plays analyzed.

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1 Introduction

The Spanish Baroque playwright Pedro Calderón de la Barca (1600–1681) is seen as the most famous and the most significant dramatist of the Spanish Golden Age, albeit a distinction he sometimes shares with Félix Lope de Vega Carpio (1562–1635). To date, the most exhaustive edition of his works was published in the first half of the 20th century, by the Madrid-based publisher Aguilar. It comprises three volumes,[1] and contains 187 plays, including 79 *autos sacramentales* (plays for the holiday of Corpus Christi). Added to this, there are 41 pieces that are assigned to the *teatro cómico breve,* i.e. short interludes *(entremés, jácaras, mojigangas)*, which were often staged between two acts.[2] When a single author produces such a comprehensive text corpus, but attends to only a few dramatic genres, we can expect structural similarities among the works. Therefore, this corpus lends itself to quantitative analysis. However, apart from a small number of studies,[3] Calderón's oeuvre has not yet been analyzed with the methods digital humanities have added to our toolbox. If nothing else, this is due to the fact that Calderón's works are not yet available in a digital standard format, which enables the quantitative study of texts in the first place. To bring about some initial exploration, the 2019 summer semester saw a lecture and two tutorials in the Department of Romance Languages at Tübingen University, headed by Professor Hanno Ehrlicher, in the course of which slightly over 50 Calderón plays were converted into a TEI-xml format and then explored with the aid of the R-package "DramaAnalysis",[4] developed in the QuaDramA project.

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[1] Calderón de la Barca, Pedro (1951–1956). *Obras completas. Textos íntegros según las primeras ediciones y los manuscritos autógrafos.* Ed. Ángel Valbuena Prat and Luis Astrana Marín. Madrid: Aguilar.

[2] Calderón de la Barca, Pedro (1989). *Teatro cómico breve.* Ed. María-Luisa Lobato. Kassel: Reichenberger.

[3] Cf. Peña-Pimentel, Miriam A. (2011). *El Gracioso en el Teatro de Calderón: Un Análisis desde las Humanidades Digitales.* Electronic Thesis and Dissertation Repository. 307. `https://ir.lib.uwo.ca/etd/307`; Peña-Pimentel, Miriam A. (2012). Aplicación de mapas de tópicos al análisis semántico de algunas comediad de Calderón. *Anuario calderoniano,* 5(2012), 115–130; de la Rosa, Javier, Adriana Soto- Corominas, Juan Luis Suárez (2018). The Role of Emotions in the Characters of Pedro Calderón de la Barca's autos sacramentales. In *Emotion and the Seduction of the Senses, Baroque to Neo-Baroque,* eds. Lisa Beaven & Angela Ndalianis. Kalamazoo: Medieval Institute Publications, Western Michigan University, 99–125.

[4] Reiter, Nils (2020). *DramaAnalysis: Analysis of Dramatic Texts.* R package version 3.0.1. https://CRAN. R-project.org/package=DramaAnalysis. The concept for this package is explained in more detail in: Reiter, Nils, Jonas Kuhn, Marcus Willand (2017). To GUI or not to GUI? In *INFORMATIK 2017,* eds. Maximilian Eibl & Martin Gaedke. Bonn: Gesellschaft für Informatik, (1179-1184). `https://doi.org/10.18420/in2017_119`.

These plays were recorded as "Calderón Drama Corpus" within the Drama Corpora Project (DraCor),[5] and are available for further use without limitation. They form the basis of the present pamphlet.

For the purpose of detecting patterns and structures, we will put the focus on characteristics of the form and pursue the following research questions: What information does a structural-quantitative analysis of the overall composition of the plays yield, primarily concerning the characteristic features of the *comedias* and the *autos sacramentales*? To what extent are the *comedias* guided by the contemporaneous poetics of the Spanish *comedia nueva*, programmatically founded by Lope de Vega in his screed *Arte nuevo de hacer comedias en este tiempo,* and how do they relate to the poetics of rules of French classicism, which emerges in the 17th century, parallel to the Spanish theater of the Baroque? Which structural characteristics can be identified in the *autos sacramentales*?

To understand and appreciate the following analyses, it is crucial to clarify a few social and institutional conditions of Spanish Golden Age theater. The two dramatic subgenres Calderón mainly worked with (*comedias* and *autos sacramentales*), were not only aimed at a different audience, but were also performed on stages that offered rather different scenographic and technical possibilities. First, there are the *corral* stages, which were established as permanent venues towards the end of the 16th century. They were representative of an urban, increasingly commercial theater and contributed significantly to the formation of the specific form of the Spanish *comedia nueva* in the early modern period. Initially, the term *corral* simply referred to the back (court)yard of a house. The stage itself was constructed between the house façades at the end of the yard, clearly separated from the auditorium because it was raised. A curtain, meant to further separate the representational space from the audience, as we know it from the proscenium stage common today, was still missing. There was only a movable curtain at the back of the stage, which created a space 'behind the scenes.' Most of the time, it was used for storing the costumes or so the actors could change behind it. Opening the curtain allowed the players to enter and exit, but a sudden pulling back of it could also be employed to open up another scenic space within the play. In addition, there was technical gadgetry such as openings in the stage itself, paintings fastened to the background or on the sides, which could preferably be revealed suddenly, or contrivances for lifting and rotating.[6] The *corral* stages thus combined architectural simplicity with a mechanical theater typical for the Baroque era; they were institutionalized solely in

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[5]See `https://dracor.org/cal`. Cf. Fischer, Frank, Ingo Börner, Mathias Göbel, Angelika Hechtl, Christopher Kittel, Carsten Milling, Peer Trilcke (2019). Programmable Corpora. Die digitale Literaturwis- senschaft zwischen Forschung und Infrastruktur am Beispiel von DraCor. In *DHd 2019. Konferenzabstracts.* Frankfurt/Main, Mainz, (194–197). `https://doi.org/10.5281/zenodo.2596094`.

[6]Compare in detail in Ehrlicher, Hanno (2012). *Einführung in die spanische Literatur und Kultur des Siglo de Oro.* Berlin: Erich-Schmidt-Verlag, pp. 127–131.

the cities, serving an audience of city dwellers across the estates. The character of the *corral* theater as a public institution changed during Calderón's lifetime, insofar as the court or palace theater was created, an establishment that was reserved for nobility, thus excluding the other estates. In 1640, Madrid's palace stage was completed – Calderón had accepted the post of court playwright under Philipp IV in 1635 – its architecture following the model of the Italian perspective stages and, in comparison with the limited staging possibilities of the *corral,* offering significantly better conditions for the deployment of elaborate backdrops and scenery, as well as technical apparatuses. Tying the theater to the court did not only entail a change of the social foundation, but also a change of the audience's taste. Henceforth, the clientele was more concerned with representation and culture, and already well familiar with the typical plots of the *comedia;* the audience was therefore a select one, equipped with the ability to appreciate artistic production and performance, and criticize it in intellectually complex ways.[7]

Both *corral* and courtly theater thus had fixed stages, but there was also the *carro* stage, a form that was particularly characteristic for the Spanish Golden Age. It was used exclusively in the context of the ceremonies of the feast of Corpus Christi. This was where the one-act plays that celebrated the sacrament of the Eucharist were performed, the ones that were therefore termed *autos sacramentales.* The name of this particular form of stage, *carro,* is drawn from the movable theater carts (*carros*) that were employed to construct the stage: While a simple, flat cart, placed in front of the façade of a house, served as the main stage, most of the time, two more carts were topped with ornate and often lavishly decorated coachwork. With this, the *carro* stage remained faithful to the medieval practice of traveling theater. The performances took place in urban spaces accessible by the public, most frequently on the central *Plaza Mayor.* Accordingly, the audience was a completely different one than that of the *corral* stage. Here, the largest part would have consisted of people from the lower estates, who participated in the ceremonies of the feast of Corpus Christi, which had been a celebratory holiday firmly established in the church calendar since the late Middle Ages. "For the majority of an uneducated audience, [... which,] beyond the rough course of events, probably didn't grasp the theological subtleties, the performance of the *auto sacramental* after the ostentatious and serious mass in the morning of the holiday was surely not an internalized conversion experience. It was however a part of the 'feast', all-important within Baroque thought and actual experience [...]. This created, for the commoners in particular, a solid emotional sense of togetherness that couldn't be grasped rationally, and also a sense of superiority vis-à-vis a European Protestantism seen as erroneous and an antique mythology

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[7]See also Couderc, Christophe (2012). *Le théâtre classique au Siècle d'Or. Cristóbal de Virués, Lope de Vega, Calderón de la Barca.* Paris: Presses Universitaires de France, pp. 7–19.

presented as obsolete."[8]

2 Structural characteristics of Calderón's *comedias*

The abovementioned Aguilar edition of Calderón's work differentiates his theatrical oeuvre into *autos sacramentales,* the *teatro cómico breve,* as well as *dramas* and *comedias.* Here, we first need to point out that further splitting Calderón's *comedias* into *dramas* and *comedias,* the way the editors proposed, represents a conceptualization ex post. The editions of the *comedias* published in Calderón's lifetime were simply a serially numbered, anthological collection of plays and did not yet know this classification.[9] As Calderón scholar Henry Sullivan notes, 'comedia' was a generic term in the Spanish Golden Age: "Though the etymology of *comedia* is simple enough – a play of high spirits and laughter with a happy ending, – in Early Modern Spain the term *comedia* meant "a play" or "work for the stage" in a quite neutral sense."[10]

As a first step, we followed the Aguilar edition's distinction by analyzing the frequency of words occurring in the different subgenres and creating what we call word vectors. Based on this operation, the similarity of the dramatic texts represented by these vectors can be computed. To this end, we took ten *autos sacramentales* as well as 13 *comedias* from the Calderón Drama Corpus; in keeping with the distinction made by the Aguilar edition, the latter were separated into seven *comedias* and six *dramas.* The ten *autos sacramentales* were given the numbers 1 to 10, the six *dramas* the numbers 20 to 25, and the seven *comedias* the numbers 30 to 36. We removed both Spanish stopwords and punctuation from this corpus of 23 dramatic texts; this left us with 18,555 words. We then proceeded to remove 40 percent of the rarest words and divided the frequency of the remaining words by the total number of words in a given dramatic text.[11] In the following chart (figure 2.1), all 23 texts are represented

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[8] Tietz, Manfred (2019). Das *auto sacramental*: Ansätze zur Gesamtdeutung einer literarischen Gattung des spanischen Theaters im Spannungsfeld zwischen profaner und religiöser Kultur des 16. und 17. Jahrhunderts. In *Auto sacramental: Aktuelle Forschungsbeiträge zum Fronleichnamsspiel in Spanien und Hispanoamerika,* eds. Marina Ortrud M. Hertrampf. HeLix 12(1): 14–38, here pp. 25/26. This and all further quotes in German were translated by Dr. Claudia Rapp.

[9] Cf. Calderón de la Barca, Pedro (1640). Primera parte de *comedias* de don Pedro Calderón de la Barca. Madrid: Sanchez. Available online at: `http://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb10529569-6` [Permalink].

[10] Sullivan, Henry W. (2018). *Tragic Drama in the Golden Age of Spain: Seven Essays on the Definition of a Genre* (= Teatro del Siglo de Oro. Estudios de Literatura 133). Kassel: Edition Reichenberger, p. 33. See also Newels, Margarete (1959). *Die dramatischen Gattungen in den Poetiken des Siglo de Oro. Eine einleitende Studie zum Thema der Dramentheorie im Goldenen Zeitalter* (= Untersuchungen zur Sprach- und Literaturgeschichte der Romanischen Völker, Bd. II). Wiesbaden: Franz Steiner Verlag, p. 17: "The new 'drama' was better classified as comedy than as tragedy. 'Drama' was an uncommon term, [. . .] so in practice, the term 'comedia' stuck in the end, not the least 'por el uso', out of habit and tradition, as Pellicer said."

[11] This procedure is described in detail in Piper, Andrew (2018). *Enumerations. Data and Literary Study.*
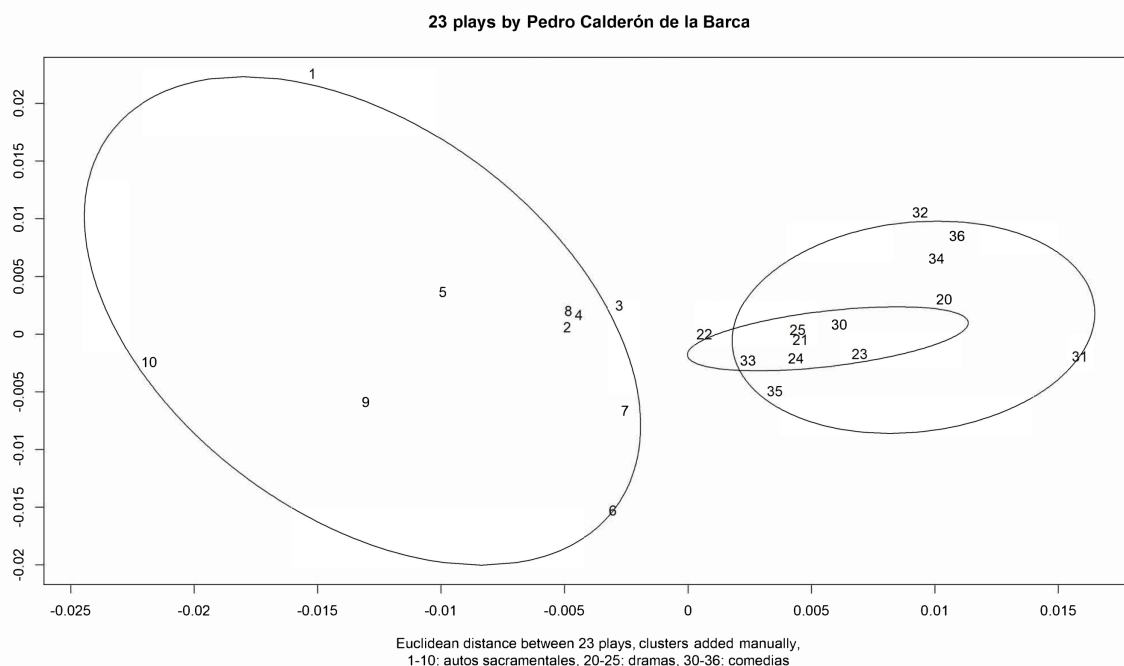
Figure 2.1: Semantic distances between *autos sacramentales*, *dramas*, and *comedias*

by their respective number, while the distances of the individual texts to one another – i.e. their respective distribution on the x- and y-axis – were computed from the distance matrix. To increase the legibility of the chart, we manually drew circles around the numbers 1-10 (*autos sacramentales*), 20-25 (*dramas*), and 30-36 (*comedias*), which roughly illustrate the position/proximity of the three subgenres named by the Aguilar edition.

This analysis of word frequency yields two insights: First, the word material used in the *autos sacramentales* is significantly distinct from the words used in the *dramas* and *comedias*. What thus becomes very clear here is that the *autos sacramentales* use a different vocabulary than the rest of the plays – all *autos sacramentales* are located in the left half of the chart. Second, it becomes evident that the word material of the other 13 plays cannot be clearly separated – the two groups *dramas* and *comedias* overlap. In other words: Based on the frequencies of the words used in the *dramas* and *comedias*, these two groups cannot be clearly separated. Therefore, the distinction made by the edition seems obsolete; those researchers who speak of *comedias* in the more generic sense and reject an additional internal differentiation are in fact validated by the result. The present study also follows this assessment.

The following analysis is based in the 13 *comedias* present in the TEI-xml markup.[12] The guideline

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Chicago: The University of Chicago Press, pp. 45–49. The computation was executed in R; the Spanish stopwords were removed with the list available in the package quanteda.

[12]Those are, in alphabetical order: *Afectos de odio e amor* ; *Amor, honor y poder* ; *Casa con dos puertas mala es de guardar* ; *El Faetonte*; *El galán fantasma*; *El jardín de Falerina*; *El médico de su honra*; *El monstruo*

for the quantitative study will be the aforementioned poetics *Arte nuevo de hacer comedias en este tiempo* by Lope de Vega, first published in 1609,[13] whose title may be translated as "The new art of making plays in this time." Calderón himself did not leave a systematic poetics of his own, but initially followed the pragmatic rules of the Spanish *comedia nueva*, which Lope de Vega in his very title described as contemporary ("en este tiempo"). He therewith established a model whose success forced all subsequent Spanish playwrights to relate and refer to him. It forms a stark contrast to the poetics of rules of French classicism formulated later, whose prescriptions will serve as a counterpoint for the profiling of Calderón's *comedias*.

The crucial feature of Lope de Vega's screed, legitimized by the new needs of the *corral* audience, is the deliberate deviation from poetological norms established in antiquity – apart from Plautus and Terence, he mentions Aristotle in particular, whose poetics Lope knows but does not consider binding –, and thus a resolute pragmatization of the classical rule-based poetics.[14] Lope de Vega makes it explicitly clear that he knows the classical rules full well, but he suspends the authority of these rules for a theater that is no longer written for an educated, humanist audience, but for the socially mixed one coming together in the *corrales*, one whose sparsely cultivated taste (*gusto*) counts as highest law (*ley*) for him. This is what permits Lope de Vega in his *Arte nuevo* to explicitly flout the unity of time and place, though he abides by the unity of action, as the latter threatens to turn episodic when dealing with historical subject matter in particular.

With regard to the action suitable for the plays, Lope confirms the traditional distinction between comedy, which deals with ordinary people in fictional plots, and tragedy, which deals with personages of high birth or members of the crown in plays that are based on historical events. However, Lope characterizes the *comedia nueva* as a mixture of comical and tragical elements. He justifies this deviation from the rule, this mixture of the two dramatic genres, with the good entertainment value and the beauty of variety, and he points out that this corresponds to nature.[15] For the *comedias*, Lope recommends a three-act structure. After selecting the topic, he writes, it should be sketched in prose

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de los jardines; La aurora en Copacabana; La dama duende; La devoción de la Cruz ; La fiera, el rayo y la piedra; La vida es sueño. Cf. https://dracor.org/cal.

[13] Lope de Vega, Félix (1921). *Arte nuevo de hacer comedias en este tiempo. Dirigido a la Academia de Madrid.* Madrid: Alonso Martin [1st 1609]. Available online at https://books.google.de/books?id=Ihh5oI6I4TsC.

[14] For more detail, see Ehrlicher 2012: pp. 137–140, Sullivan 2018: pp. 23–28, and this monograph: Eglseder, Andreas (1998). Der Arte nuevo *von Lope de Vega. Theaterwissenschaftliche Erschließung eines „der am häufigsten mißverstandenen Texte der spanischen Literatur".* Frankfurt am Main et al: Peter Lang.

[15] Compare lines 174–180: "Lo tragico, y lo comico mezclado / [...] Haràn grave una parte, otra ridicula, / Que aquesta variedad deleyta mucho, / Buen exemplo nos dà naturaleza. / Que por tal variedad tiene belleza." (Literally: "The tragic mixed with the comical makes one part grave, the other ridiculous; that this variety delights a lot is well exemplified in nature, which is beautiful because of this variety").

and then subdivided into three parts, according to the given timeframe. If a play deals with historical events, several years may be skipped from one act to the next. Within an act however, if possible, the timeframe of one day should not be exceeded.[16] His directive not to leave the stage empty affirms the classical *liaison des scènes*; he labels the empty stage as an artistic blunder here, reasoning that during this interval, disquiet could spread among the audience. And finally, Lope's advice for story development: "En el acto primero ponga el caso, / en el segundo enlaze los sucessos, / de suerte, que hasta el medio del tercero / apenas juzgue, nadie en lo que pàra." (Lines 298–301: "In the first act set forth the case. In the second weave together the events, in such wise that until the middle of the third act one may hardly guess the outcome."[17]). The last point in particular highlights the problems of an operationalization of poetological programs in the digital analysis of drama,[18] because it raises the question what exactly is meant to constitute the unity of action if changes of location and leaps in time are explicitly permitted.

Lope de Vega's remarks are contrasted with the rules of French classicim; these are an integral part of any introduction to the analysis of dramatic texts. Bernhard Asmuth gives a succinct overview: „There were indeed various conventions of form, which were consolidated in French classicist drama: 1. The unities of action, place, and time, 2. The rules of character allocation, i.e. three-actor-rule, the law of the chain of characters (*liaison des scènes*), prohibition of the introduction of new characters after the first act, 3. *Ständeklausel* and unity of discursive style, 4. Symmetrical or otherwise 'geometrical' composition."[19] First of all, this makes clear that Lope de Vega dismisses the three unities and addresses the rules of character allocation only with regard to the *liaison des scènes*. The three-actor rule in French classicism in turn says that no more than three characters are permitted to act on stage at the same time. Lope does not mention the requirement formulated by Corneille, namely that no main character may appear after the first act, if he or she hasn't been shown already in that first act. He affirms the *Ständeklausel*, which demands that tragedy show upper estates, while comedy show lower estates, and also the symmetrical composition, which for Lope is expressed in three-act plays, not in the five-act structure that is so frequent in French classicism.

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[16]In the Spanish language, the term "Jornada" is used for "day" as well as for "act" (of a play).

[17]Lope de Vega, The New Art of Writing Plays, Translated by William T. Brewster, New York: Dramatic Museum of Columbia University 1914, S.34. Available online at http://www.archive.org/details/newartofwritingp00vegauoft

[18]For a more comprehensive discussion on this, see Reiter, Nils & Willand, Marcus (2018). Poetologischer Anspruch und dramatische Wirklichkeit: Indirekte Operationalisierung in der digitalen Dramenanalyse. In *Quantitative Ansätze in den Literatur- und Geisteswissenschaften: Systematische und historische Perspektiven*, eds. Toni Bernhart, Marcus Willand, Sandra Richter, Andrea Albrecht. Berlin: de Gruyter, 45–76. https://doi.org/10.1515/9783110523300-003.

[19]Asmuth, Bernhard (1984). *Einführung in die Dramenanalyse*, 2nd revised edition Stuttgart: Metzler, p. 48.

When we examine Calderón's *comedias*, two challenges become evident in the analysis of the three unities of action, place, and time. First, the original editions of the *comedias* printed in the 17th century contain very few stage directions. Only rarely do we find information on the place and time of the action on stage; such information must be gleaned from the text that gives us the character discourse. This situation can be explained by how theater worked in early modern Spain, where, as a rule, performance had precedence over the printing of the dramatic text. Generally speaking, the plays were published only after a successful production on a stage. This practice also explains the recurring phrase *comedia famosa* as the subtitle of the printed texts, since the plays were already known to the audience, and printing was merely a form of further utilization. Compared to many modern dramatic texts, the amount of stage directions and other text in relation to dialog was thus small. The conventions regarding directions for staging and performance changed in the 19th century, which can be seen in the republication of Calderón's *comedias* as part of the "Biblioteca de autores españoles" series, which was edited by Juan Eugenio Hartzenbusch from 1848. The erstwhile director of the Spanish National Library not only added numerous stage directions to the *comedias*, he also subdivided the plays further into separate scenes.[20]

The second challenge arising when we analyze Calderón's *comedias* is how to operationalize the three unities. Missing stage directions that tell us the time and place of the action could possibly be included in the TEI-xml markup in the same way the critical apparatus is marked up. Furthermore, the TEI markup offers the possibility of standardizing stage directions or explanatory remarks, so they can be filtered in regard to time and place.[21] Still, this can only be taken as a technological aid, since it doesn't yield a stringent, machine-readable classification, such as whether the unity of place or time is upheld or not. Rather, that assessment is left to the interpreters. They must decide if the unity of place is upheld if for example, two scenes take place in a house and on the street in front of said house, or whether the indication "Night" refers to the same day the play or act is set. To date at least, there is no convincing conceptual operationalization for the key poetological categories of the three unities, none that might be technologically implemented in such a way that it renders possible reproducible analyses on the basis of well-defined criteria.

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[20]See Calderón de la Barca, Pedro (1848). *Comedias de don Don Pedro Calderón de la Barca*. Vol.I., ed. Juan Eugenio Hartzenbusch. Madrid: M. Rivadeneyra. Available online at https://archive.org/details/comediasdedonpe03hartgoog. For a comprehensive discussion, see Vitse, Marc (1990). *Éléments pour une théorie du théâtre espagnol du XVIIe siècle*. Toulouse: Presses Universitaires du Mirail 1990, pp. 268–273, with an in-depth discussion of the classifications 'à la française', as undertaken by Hartzenbusch.

[21]This possibility has already been implemented for the stage directions of French *classicisme* plays. Cf. http://www.theatre-classique.fr/.

The following assessments were therefore reached on a hermeneutic basis; several generic examples were selected to avoid having to make recourse to all 13 *comedias* at hand. For Calderón's *La dama duende* for example, place and time can be pinpointed easily: The initial dialog tells us that the play is set in Madrid on the day of the christening of Prince Baltasar Carlos, i.e. November 4, 1629. In the course of the three acts however, there are numerous changes of place and leaps in time. Within the first act, the setting changes from a street in Madrid to Doña Ángela's room, later to a room in the house of Don Manuel. The second act switches between these two rooms at first, and ends once again in a street, and this last scene is set at night. The third act in turn begins at night in front of a churchyard door and then changes back to Doña Ángela's room, later to Don Manuel's room.[22] Calderón does similar things in *Casa con dos puertas mala es de guardar*: Place and time are given as Ocaña in the early morning. At first, the action takes place in the street, but then switches back and forth several times between the house of Don Félix, Laura's apartment, and Marcela's room, while the second act is set approaching evening. In these two plays, Calderón obviously takes his liberty with regard to the unity of place and time described by Lope de Vega. These liberties become especially clear when we look at *El médico de su honra*.

As can be gleaned from the first utterance of the king, Don Pedro, the opening scene is set in the country house of Don Gutierre Alfonso de Solís near Seville. From line 575, the action is set in the hall of the royal castle in Seville.[23] The second act once again opens with a night scene in Don Gutierre's country house, only to switch back to the royal castle in Seville later, starting with line 1402. Finally, in the third act, starting with line 2330, the setting changes from the royal castle to a room in Don Gutierre's house in Seville. Similar changes of place and leaps in time can also be found in *La vida es sueño*: As can be gleaned from the initial monolog, the play is set in Poland, the first scene shows a mountain on one side and a tower on the other, the latter being the location where the protagonist Segismundo is imprisoned, and the time is approaching evening. Starting with line 475, the action moves to the royal palace. The second (see line 1032) and third acts (lines 240 and 468) see the setting switch between these two locations as well. These few examples show clearly that Calderón did not stick to the rigid prescriptions of French classicism, but instead, similar to Lope de Vega before him, subordinated the unity of place and time to the requirements of his dramaturgy.

With regard to the rules of character allocation, what stands out first is that Lope de Vega's poetics of drama doesn't say anything about the three-actor rule nor about the prohibition of new

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[22] For more on the complex spatial logic of *La dama duende*, see Ehrlicher 2012, pp. 159–161.

[23] For more detail on this, see Couderc 2012, p. 139, who notes a change of place, a complete exchange of characters on stage, and a change in poetic meter for this passage.

characters appearing after the first act; the thing he does impose as a norm is the *liaison des scènes*, i.e. the rule that the characters on stage must be linked from one scene to the next. It should therefore not surprise us that Calderón often doesn't adhere to the three-actor rule of French classicism. For example, the first scene of the first act of *Casa con dos puertas mala es de guardar* has four characters appear; this is also explicitly stated in the stage directions: "Salen Marcela y Silvia en corto con mantos, como recelándose, y detrás Lisardo y Calabazas." ("Marcela and Silvia appear in short dresses with cloaks, acting as if they're wary, behind them appear Lisardo and Calabazas.") In the first scene of the second act, we have again four characters speaking on stage (Marcela, Escudero, Laura, and Celia), and the same happens in the third act starting from line 100 (Marcela, Silvia, Laura, and Celia). There are numerous further examples that prove that Calderón did not adhere to the three-actor rule or rather, that it is quite obviously irrelevant to him: In *La dama duende*, at least four characters speak in act one from line 180, in act two from line 2420, in act three from line 2280. In *El galán fantasma*, four characters each speak in act one from line 895, in act two from line 85, in act three from line 155. In *Amor, honor y poder*, at least four people speak in the first scene of act one, the first scene of act two, and the final scene of act three, starting with line 755. Further examples can be found in *El médico de su honra, La vida es sueño*, as well as *La devoción de la Cruz*.

The rule of prohibition of new characters appearing after the first act calls for nuanced inspection, since we need to pay attention to which character can be seen as a main character and which cannot. In the 13 plays analyzed here, the cast of characters ranges from nine (*Amor, honor y poder* and *La dama duende*) to 28 characters (*La aurora en Copacabana*). The mean number of characters across all 13 plays would thus be 16.5. With such a range, it is not a matter of simply deciding which characters are main characters and which aren't. The share of speech time of a given character in tokens offers however an approximation.[24] The "DramaAnalysis" package offers visualizations for the distribution of speech. In *La dama duende*, the following distribution results, as visualized in figure 2.2.

We can see clearly that the two servants Rodrigo (279 tokens) and Clara (8 tokens) must be minor characters, while the character with the next larger number speaks 1,103 tokens (Don Juan); the latter character is still plainly different from the one with the most tokens, namely 4,858. Moreover, the character utterances can be visualized over time; the chart below visualizes each utterance of a character with a dot, regardless of the length of the utterance. The course of the action should be read from left to right (figure 2.3).

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[24]A token is a string separated by a space, while the punctuation marks form individual tokens as well. This also includes the period marking the end of a character's utterance.
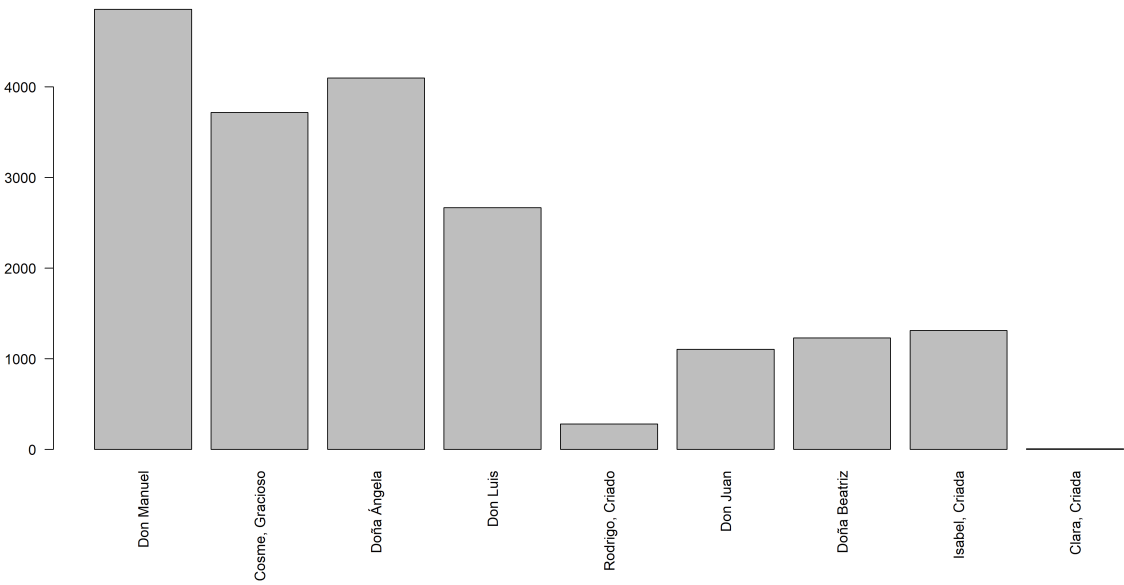
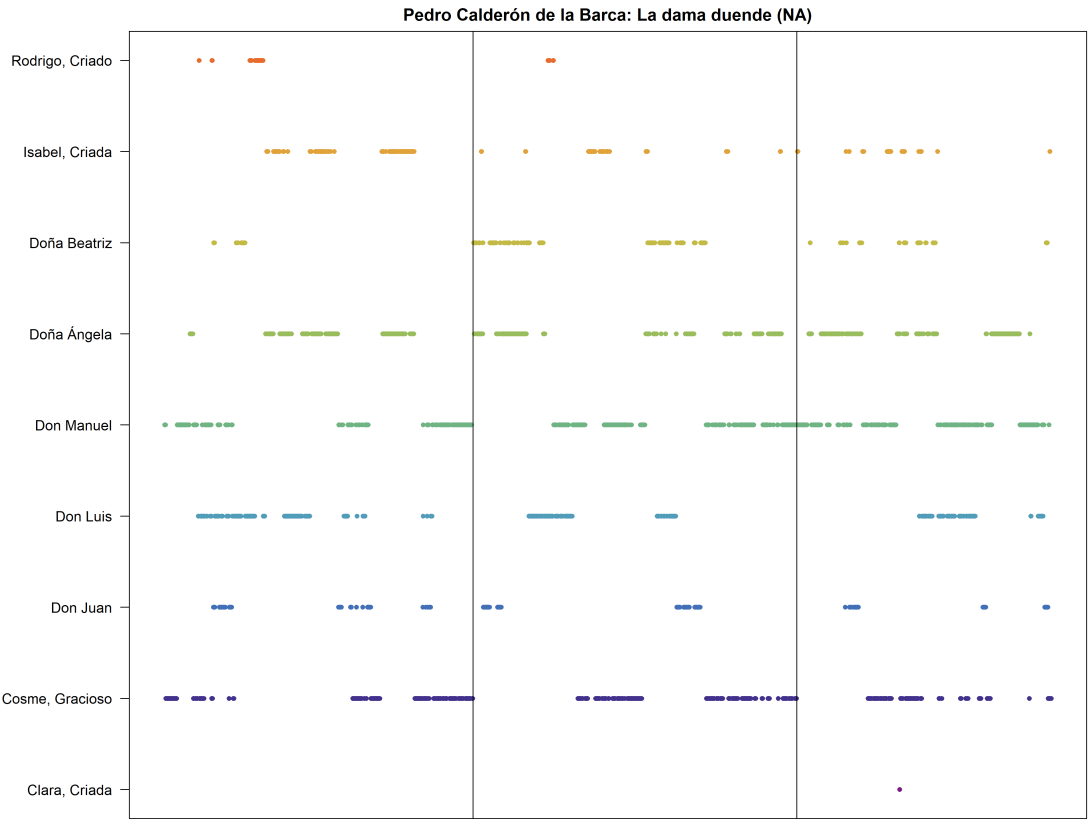Figure 2.2: Number of spoken tokens in *La dama duende*

Figure 2.3: Character discourse in *La dama duende* in the course of the dramatic text

This chart shows us that eight of the nine characters appearing in *La dama duende* are present in the first act; merely the servant Clara supplies a single speech in the third act. In *Amor, honor y poder*, we see this type of distribution, too: There are seven characters with the most tokens (807 minimum), as well as two characters with a small share in utterances (El conde, 377 tokens, and Un cazador, 145 tokens). Contrary to *La dama duende* however, all nine characters appear in the first act of *Amor, honor y poder*.

To discover patterns, all 13 plays were worked through in this manner, separating main from minor characters on the basis of the tokens of their utterances. The lowest number of tokens spoken by each main character was noted down, and the mean value of this number was computed; it is a little less than 1,100 tokens or 5.3% of the total number of tokens of all 13 plays. Two plays are notable here: In *La devoción de la Cruz*, there are only four main characters; the one with the lowest share in utterances speaks 1,716 tokens (or 10.9% of all tokens), the minor character with the highest share speaks only 660 tokens. In *Casa con dos puertas mala es de guardar*, the main character with the lowest share speaks 1,777 Tokens (or 9.3% of all tokens), the minor character with the highest share speaks only 780 tokens, another clear distinction. In all 13 plays, the characters identified as main characters were present in the first act, with only one exception: In *La aurora en Copacabana*, the play with the largest cast of characters, there are six characters that have the highest share in utterances (the main character with the lowest share speaks 2,026 tokens), while all other characters have significantly lower shares (the minor character with the highest share speaks 1,015 tokens). It becomes apparent here that Calderón dispenses with the rule that says not to introduce new main characters after the first act, because one of the six main characters, the governor Don Jerónimo Marañón, appears only at the start of the third act, just like his companion, Don Lorenzo De Mendoza, who has a much lower share in utterances with 698 tokens however. Summing up, we can therefore note that Calderón adheres to the rule that stipulates no introducing of new characters after the first act, with only one exception. In addition, as a preliminary result, we can say that 5.35% of all tokens of a play is the threshold value that helps us distinguish main from minor characters.[25]

The rule that says there must be a chain of characters on stage (*liaison des scènes*) affirmed by Lope de Vega can be measured rather easily by comparing characters in two adjacent scenes. Following a suggestion made by Peer Trilcke et al.,[26] the "DramaAnalysis" package offers a function that allows

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[25]Reiter & Willand 2018 sketch a different approach, selecting from a significantly larger corpus of plays the five characters with the highest share in utterances in each play and determining the act these characters first appeared in.

[26]Trilcke, Peer, Frank Fischer, Mathias Göbel, Dario Kampkaspar, Christopher Kittel (2017). Netzwerkdy-namik, Plotanalyse – Zur Visualisierung und Berechnung der ›progressiven Strukturierung‹ literarischer
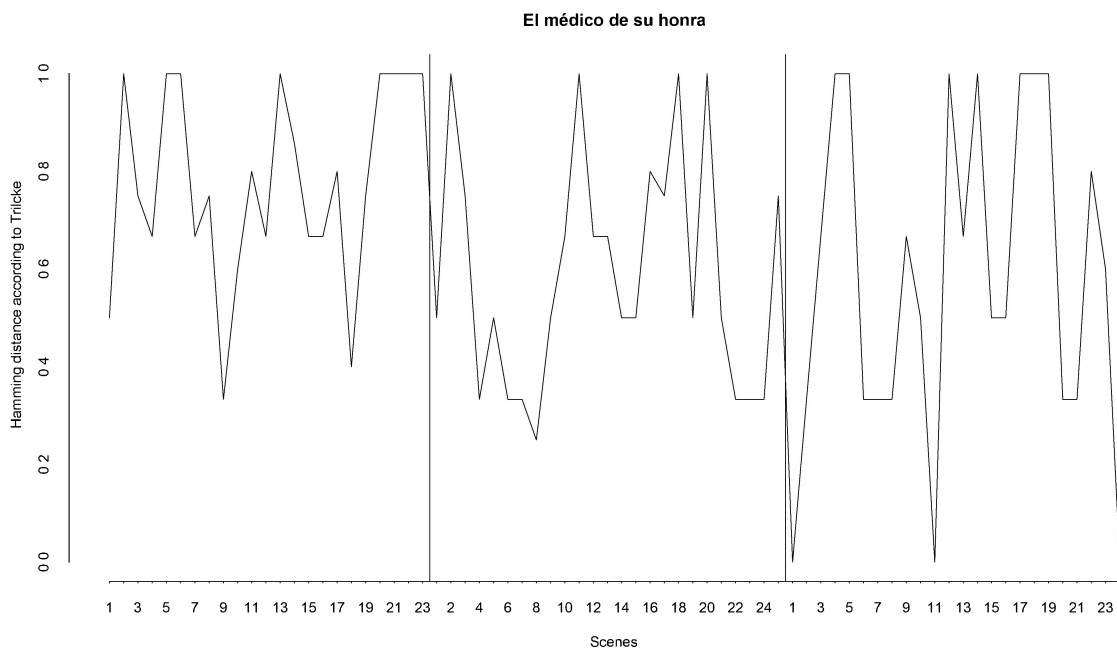
Figure 2.4: Character changes between individual scenes in *El médico de su honra*.

for the calculation of the share of characters that change from one scene to another. If all characters leave the stage, and new characters enter it, this maximum share reaches the value of 1. In the plays of Calderón however, we do not find a division into scenes. To analyze the *liaison des scènes* regardless, we added this division in the TEI markup. For this, we drew on the concept of configuration presented by Manfred Pfister: "By configuration we mean the section of the dramatis personae that is present on stage at any particular point in the course of the play. A change in the configuration leads to the constitution of a new scene." [27] In other words: Every time a character leaves the stage or a character appears, we entered a scene break into the TEI markup. This way, we are able to machine-analyze the *liaison des scènes*. The R-package "DramaAnalysis" offers a visualization for this as well. Here, the share of characters changing from scene to scene is visualized, read from left to right. The vertical lines mark the act breaks. The chart (figure 2.4) shows the example of *El médico de su honra*.

What becomes clear here is that *El médico de su honra* contains no less than 16 scenes in which the cast of characters present on stage is completely switched out. This break with the *liaison des scènes* can be corroborated by the stage directions: In act 1 after line 45 for example, we find the direction: "Llevan al Infante, y salen Doña Mencía y Jacinta, esclava herrada" ("They take the Infante away, and Doña Mencía and Jacinta, a humble slave, enter."), while in act 2 after line 1050, we find: "Escóndese, y salen Doña Mencía y criadas" ("He hides, and Doña Mencía and her servants/maids

Texte. In *Book of Abstracts of Dhd* 2017. Bern, 175–180.

[27] Manfred Pfister, The theory and analysis of drama, Cambridge: *Cambridge University Press*, 1988, p.171

enter."). Again in act 2, after line 1402, we have the direction: "Vanse cada uno por su puerta. Salen el Rey y Don Diego con rodelas y capa de color y, como representa, se muda de negro" ("Everyone exits through a door. The king and Don Diego enter with shields and a cloak in some color, which the king exchanges for black garments in the next scene."), while in act 3 after line 2329, we find: "Vase [Don Gutierre]. Salen Mencía y Jacinta." ("He [Don Gutierre] leaves. Mencía and Jacinta enter."). These findings are not surprising, insofar as we described *El médico de su honra* above as a play that is characterized by frequent changes of place and thus, as would seem natural, also of characters; the breaks in the chain of characters correspond with these passages. In other words: Altogether, it is clear that Calderón disregards the rule of the *liaison des scènes*. None of the 13 *comedias* analyzed features an uninterrupted chain-linking of characters.

These findings are relevant most of all because they bring Calderón's *comedias* in opposition to the works of French classicism. As Manfred Pfister noted, the breach with the *liaison des scènes* does not merely indicate a violation of the rule of the character chain, but also motivates the division into acts: "On the next level upon the scale, the units of segmentation are marked by a total change of configuration. [...] This total change in the configuration between acts is a characteristic feature not only of *Phèdre* but also of most of the dramas of French classicism."[28] Generally, the poetics of rules brought forth by French classicism prescribes that the character who closed an act should not open the following act. Act boundaries should therefore go hand in hand with a complete configuration exchange. Calderón does not adhere to this rule in *El médico de su honra*, which can be seen when you look at the course of the speeches in this play (figure 2.5).

The chart illustrates what can easily be looked up in the dramatic text: The second act is ended by Doña Mencía de Acuña and Don Gutierre; Don Gutierre in turn opens the third act together with the king Don Pedro. Instead of marking the act boundaries with an interruption of the *liaison des scènes*, Calderón here continues linking scenes. This approach is found in eleven of the 13 *comedias* analyzed. The plays *La aurora en Copacabana* and *El jardín de Falerina* constitute the two exceptions.

We need to qualify however that likely there are no studies which empirically establish that act boundary equals total configuration exchange. Jacques Scherer, probably the authority on French classicism, discusses this point in detail and ends up with a softer statement than Pfister, namely: "[...] le même acteur qui ferme un acte ne doit pas ouvrir celui qui suit, à moins qu'on ne sache qu'il a agi ailleurs dans l'intervalle ou à moins que ses interlocuteurs n'aient changé au cours de l'entr'acte"[29]

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[28]Pfister 1988, p. 171.
[29]Scherer, Jacques (1959). *La dramaturgie classique en France*. Paris: Librairie Nizet, p. 213.
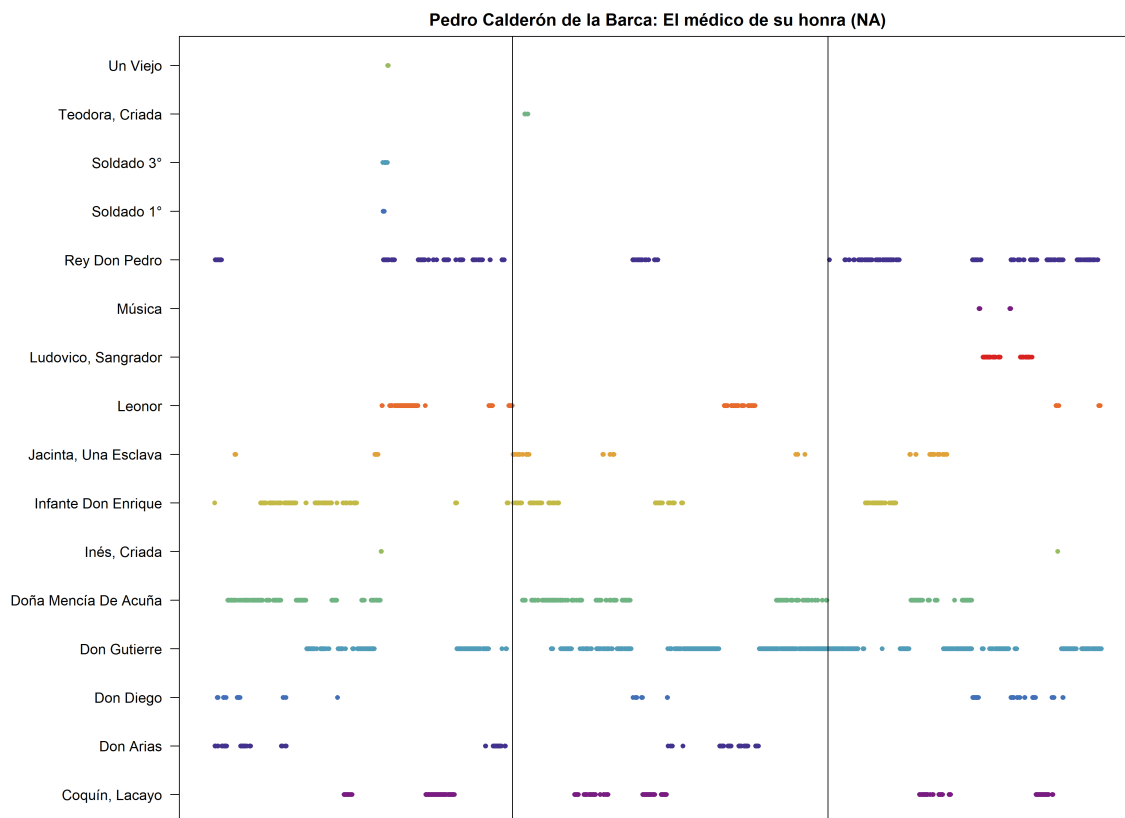
Figure 2.5: Character discourse in *El médico de su honra* in the course of the dramatic text

("The same actor who closes an act must not open the next one, except when we know that he or she has acted elsewhere in the meantime, or when his dialog partners have changed in the interval"). For the eleven plays where we don't see a configuration exchange at the act boundaries, the latter qualification formulated by Scherer applies: The dialog partners of the character who creates a *liaison des scènes* across act boundaries change.

Regarding the *Ständeklausel*, which stipulates that tragedy show higher estates and comedy show lower estates, we need to point out an inherent contradiction in Lope de Vega's *Arte nuevo*: Though he affirms it in principle, he also characterizes the *comedia nueva* as a blend of tragedy and comedy. It therefore shouldn't surprise that with Calderón, plays that may be seen as comedies contain characters from high estates. This fact has led to significant uncertainty within the Calderón research community which plays should be categorized as comedy and which as tragicomedy or tragedy.[30] In his comprehensive study on the tragedy in the Spanish Golden Age, Henry W. Sullivan lists 14 plays by Calderón and describes them as tragedies. These include *El médico de su honra, La vida es sueño*, and *La devoción de la Cruz* from our corpus. When we study the list of *dramatis personae*, we see that

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[30]For a detailed discussion of this debate, see Couderc 2012 and Sullivan 2018.

in fact, the higher estates are present in *El médico de su honra* (Don Gutierre; Rey Don Pedro; Infante Don Enrique; Don Arias; Don Diego; Doña Mencía de Acuña) and in *La vida es sueño* (Rosaura, dama; Segismundo, príncipe; Estrella, infanta; Basilio, rey; Astolfo, príncipe).

In *La devoción de la Cruz* on the other hand, the characters bear only first names, such as Eusebio, Lisardo, Curcio, Octavio, Celio, etc. The high birth of the protagonists may at most be gleaned indirectly from the reference on the myth of Oedipus on the plot level of the play, for Eusebio slays his older brother Lisardo and desires his sister Julia; he is later killed by his father Curcio.[31]

While the rule that tragedy should deal with the high estates is affirmed here, a series of other plays by Calderón show that nobility is also presented in comedies. In *Casa con dos puertas mala es de guardar*, we have Lisardo, *galán*; Don Félix, *galán*; Marcela, *dama*; and Laura, *dama*, while in *La dama duende*, we have Don Manuel, Doña Ángela, Don Luis, Doña Beatriz, and Don Juan, and in *El galán fantasma*, we have Astolfo, *primer galán*; Julia, *primera dama*; El Duque, and Laura, *dama*. In mythological plays, such as *La fiera, el rayo y la piedra* or *El Faetonte*,[32] the high birth of the protagonists is not immediately obvious, but these examples suffice to show that Calderón is inspired rather by the blending of tragedy and comedy described by Lope than by the *Ständeklausel*.

With regard to the homogeneity of the oratorical style, we can declare that the style does not vary much, not least because all of Calderón's plays were written in verse and employ an artificial register. From a quantitative perspective in turn, we can show that the average length of utterances correlates broadly with the speaker's social status. The mean utterance length of the four main characters belonging to nobility in *Casa con dos puertas mala es de guardar* amounts to 27.54 tokens, while that of the six servants or minor characters amounts to 16.16 tokens. In *La dama duende*, the mean utterance length for the five representatives of nobility amounts to 26.18 tokens, that of the servants to 17.7 tokens. The mean utterance length of the four noble characters in *El galán fantasma* amounts to 30.92 tokens, that of the eight minor characters to 19.03 tokens. This result is not strictly surprising, but it proves the validity of an empirical-quantitative approach.

Finally, French classicism's demand for a symmetrical composition of plays can easily be checked off. Following the subdivision into three parts described by Lope de Vega, twelve of the plays we analyzed have three acts. *El jardín de Falerina* is the only one that comprises two acts; it is accordingly – if we go by the number of tokens, which amounts to a total of 13,490 – the shortest of the 13 *comedias*. Here, we could follow up with a quantity comparison – on the basis of a larger corpus of texts – that

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[31] For an extensive account of this, see Sullivan 2018, pp. 273–274.
[32] Pimentel classifies these two plays as "*comedias* mitologicas"; see Pimentel 2011, p. 187.

focuses on act length in spoken tokens and number of replies per act. The two graphs for the course of character utterances in *La dama duende* and *El médico de su honra* revealed a striking symmetry in act length, which suggests that a quantitative comparison promises to be fruitful.

3 Structural characteristics of Calderón's *autos sacramentales*

Calderón penned 84 autos sacramentales altogether.[33] Two overview publications on these are available,[34] but apart from the aforementioned study by de la Rosa et al. (2018), this corpus of plays has not been researched using quantitative methods. On a thematic level, the autos sacramentales always deal with the feast of the Eucharist. The topic of the *auto sacramental* is not simply some religious issue or other, but much more specifically the sacrament of the Eucharist, which is at the center of the entire holiday of Corpus Christi. According to Romance scholar Gerhard Poppenberg, this also accounts for the one-act structure of these plays: "Just as the sacred history centers on that one moment of the sacrifice on the cross, the auto sacramental comprises the entire sacred history in one act."[35] On top of that, the context of the performances – as part of the feast of Corpus Christi, outside, presented on the *carro* stage without the interruption of an interlude – makes a case for the one-act form.

That does not mean however, that the *auto sacramental* is necessarily always a short performance. Rather, it constitutes another dramatic long form in early modern Spain next to the *comedias*. This is evidenced in a quantitative view, when the length of the *autos sacramentales* – measured by the number of tokens – is compared to the *comedias*: While the 13 *comedias* contain a mean of 20,474 tokens (and 6,953 types), the mean for those 33 *autos sacramentales* that are available in the TEI format is 12,112 tokens (at 4,751 types). The mostly three-act *comedias* are thus only about a third longer than the always one-act *autos sacramentales*. The longest *auto sacramental* (*La viña del Señor*) comprises 17,358 tokens, the shortest (*El divino Jasón*) 6,767 tokens. The number of characters yields a similar result: The average of 16.5 characters appearing in the *comedias* stands opposite a mean of

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[33]These were all critically edited by the Grupo de Investigación Calderón de la Barca (GRISO) under the direction of Ignacio Arellano. Most of these *autos sacramentales* were made available in PDF format on the group's website: `http://www.unav.edu/web/griso/publicaciones/autos-sacramentales-completos-de-calderon`.

[34]Both were presented under the direction of Ignacio Arellano, head of the GRISO group in Pamplona: Arellano, Ignacio (2001). *Estructuras dramáticas y alegóricas en los autos de Calderón* (= Autos sacramentales completos de Calderón vol. 31). Pamplona: Universidad de Navarra/Kassel: Edition Reichenberger; Arellano, Ignacio (2000). *Diccionario de los autos sacramentales de Calderón* (= Autos sacramentales completos de Calderón, 28), Pamplona: Universidad de Navarra/Kassel: Edition Reichenberger.

[35]Poppenberg, Gerhard (2003). *Psyche und Allegorie. Studien zum spanischen auto sacramental von den Anfängen bis zu Calderón.* Munich: Wilhelm Fink Verlag, p. 23.

15.3 characters in the *autos sacramentales*. Similar to what we saw in the *comedias*, the number ranges from eight in *El divino Jasón* to 27 characters in *Suenos hay que verdad son*. This made the *autos sacramentales* well-suited for performance by professional *comedia* actors' troupes, at least considering the number of characters that appear in them. This practical aspect of production complies with the fact that the large majority of characters constitute allegories, which could be represented regardless of the sex of the actors; biblical characters range second in frequency.[36]

The focus on the feast of the Eucharist stands in contrast to the range and variety of the subject matter Calderón worked with. It could be drawn from the bible or mythology, or frame material from antiquity in Christian terms. The plays' orientation towards "the one and only crucial point of sacred history, passion and redemption"[37] corresponds to a closeness of form, which will be presented below using one of the best-known *autos* as an example, namely *El gran teatro del mundo* ("The Great Theater of the World"). Altogether, this play has eleven characters appear, which represent allegories (El Mundo, La Hermosura) or characters typecast for certain estates (El Labrador, El Pobre, El Rey). In the beginning, El Autor appears and tasks the world (El Mundo) with staging human life as a play. Each character is then tasked with representing a specific aspect of human life. The world remains the central actor throughout, albeit instructed by the Creator of Worlds; accordingly, this character has the biggest share of spoken tokens (figure 3.6).

In the course of the play, the world as directing authority interacts with the other characters nearly constantly throughout. The chart depicting the course of the character speeches shows this (figure 3.7). In addition, this chart makes clear that almost all characters get another chance to speak in the final scene; as a final message, they announce the basic concept of this *auto sacramental* again, namely that life on this earth is a drama enacted on the great stage of the world. Moreover, in *El gran teatro del mundo*, the strikingly equal distribution of the copresences of the different characters in the individual scenes stands out. A copresence matrix collates the number of scenes with two characters present on stage at the same time. Contrary to what the biggest share in utterances may suggest, in *El gran teatro del mundo* it is not the world/*El Mundo* who is dominant, but *La Discreción*, who is co-present with another character in all of 60 scenes. This high value – and also the difference between *El Mundo* and *La Discreción* – results because the copresences for two characters each are counted in pairs, and the same scene may thus be taken into account more than once. Meanwhile, almost all of

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[36]Cf. de la Rosa et al. 2018, p. 115.

[37]Küpper, Joachim (1990). *Diskurs-Renovatio bei Lope de Vega und Calderón. Untersuchungen zum spanischen Barockdrama. Mit einer Skizze zur Evolution der Diskurse in Mittelalter, Renaissance und Manierismus* (= Romanica Monacensia, Bd.32). Tübingen: Gunter Narr Verlag, p. 126.
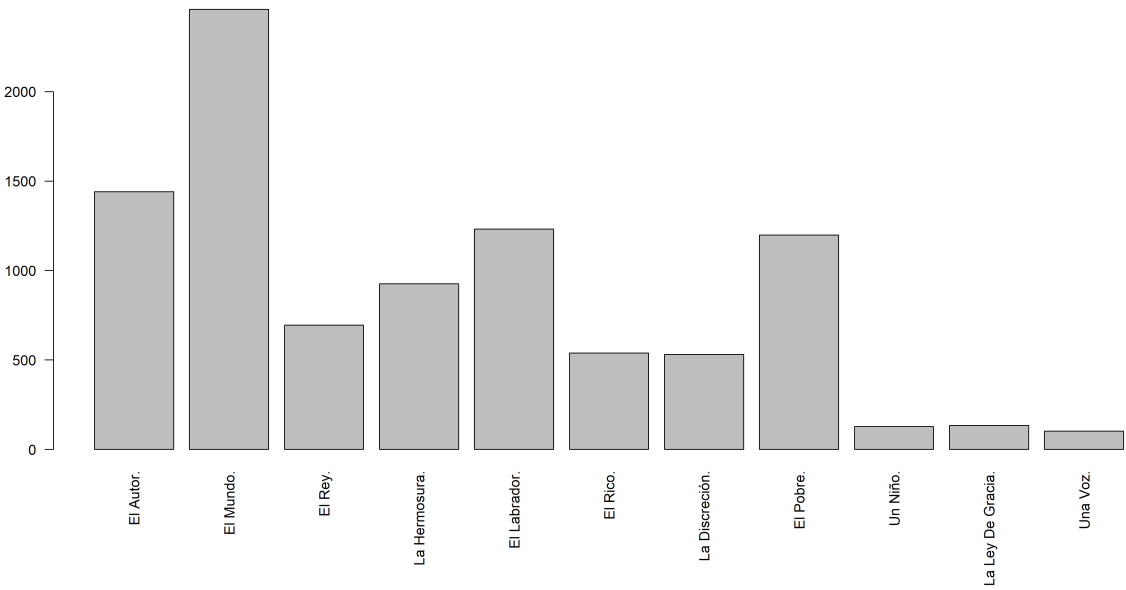
Figure 3.6: Number of spoken tokens in *El gran teatro del mundo*
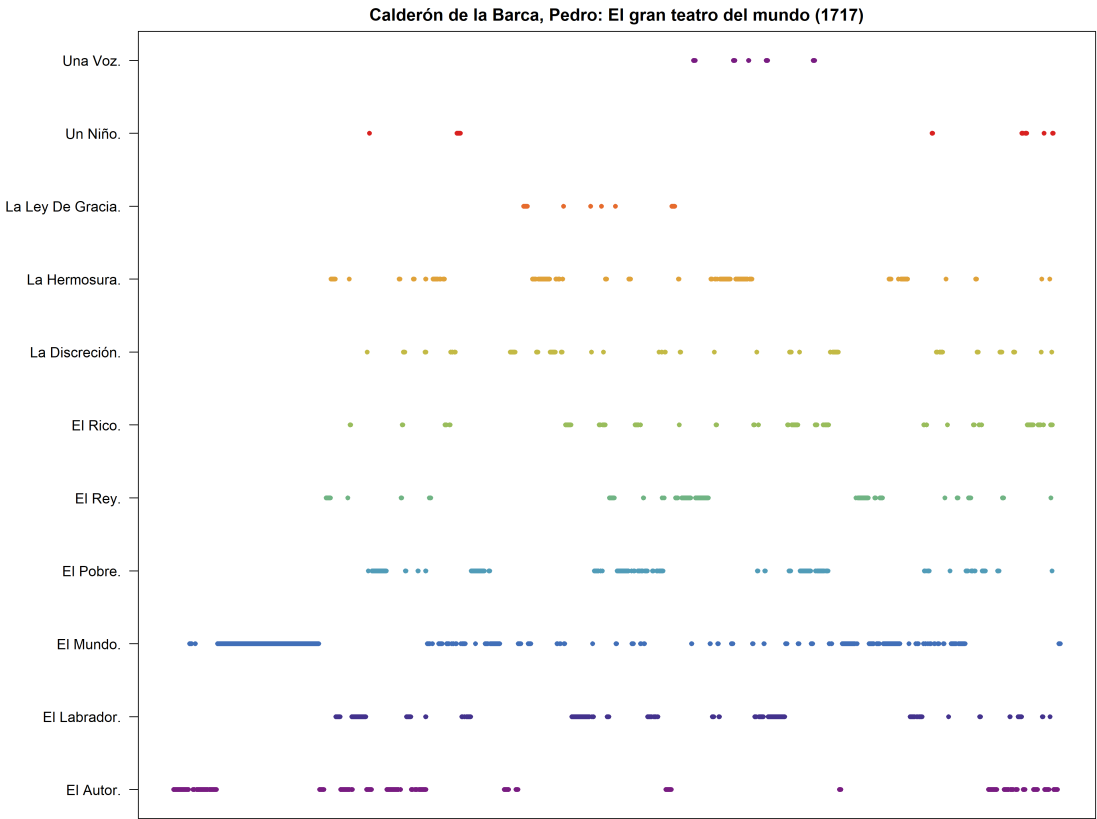

Figure 3.7: Character discourse in *El gran teatro del mundo* in the course of the dramatic text

the seven other characters who speak most exhibit a high copresence with the other characters in the play. This becomes clear in a configuration *heatmap*: The more saturated the space of the intersection between two characters is colored in (e.g. between *La Discreción* and *El Labrador*), the higher the copresence value of both characters. The number of copresences of a character is computed by adding up all copresence values of this character with all other characters (figure 3.8).

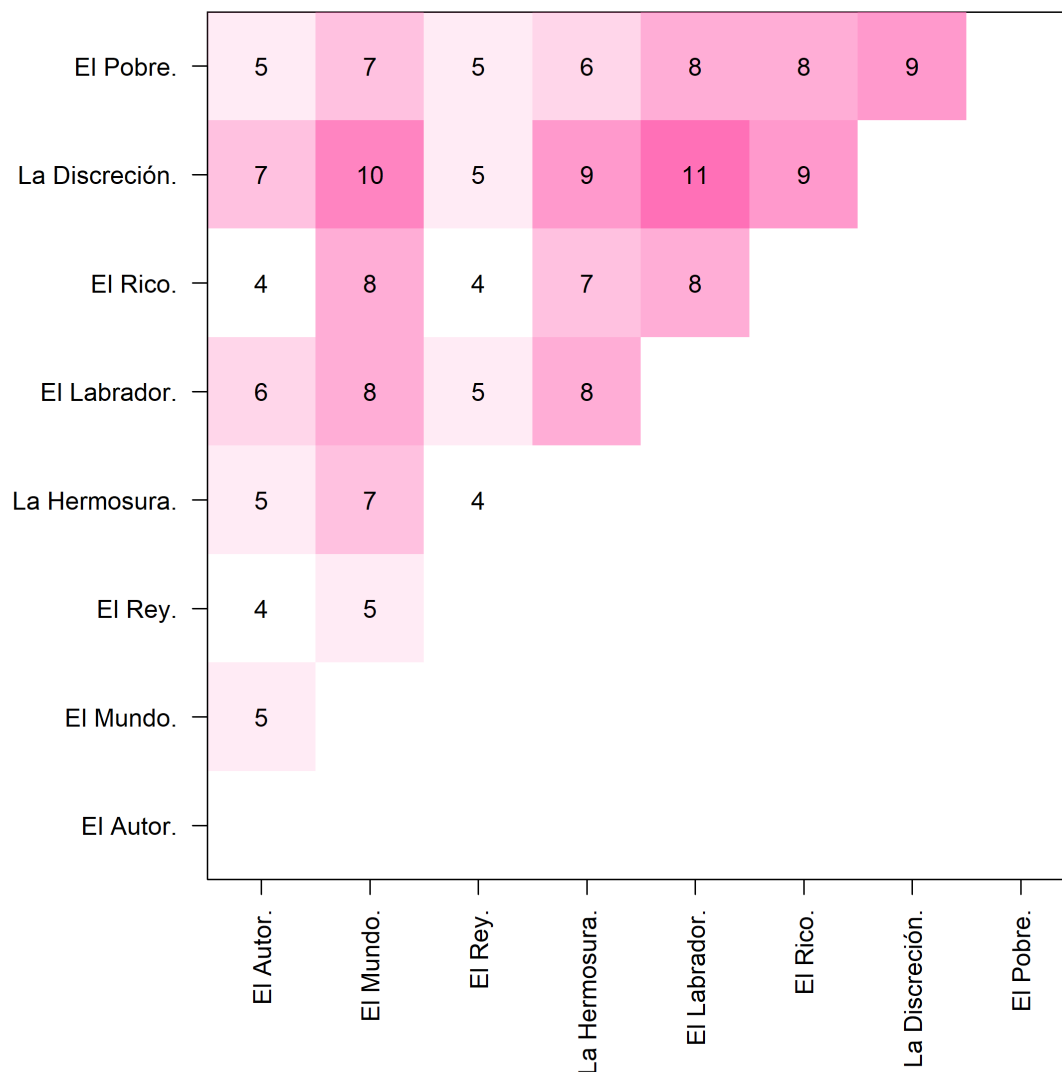|	El Autor.	El Mundo.	El Rey.	La Hermosura.	El Labrador.	El Rico.	La Discreción.	El Pobre.
El Pobre.	5	7	5	6	8	8	9	
La Discreción.	7	10	5	9	11	9		
El Rico.	4	8	4	7	8			
El Labrador.	6	8	5	8				
La Hermosura.	5	7	4					
El Rey.	4	5						
El Mundo.	5							
El Autor.								

Figure 3.8: Co-presence matrix of *El gran teatro del mundo* as a heatmap

Here, the play's structure becomes even more evident than in the chart that depicts the course of character discourse – each character shares several scenes with each remaining character, in varying constellations. On the content level, all characters are equipped with props and share the world stage, on which they must play their respective parts, wherein the interaction with the poor man (*El Pobre*) becomes the decisive measure of the test in which the Creator of Worlds judges the actions of the

characters.

The tight structure of this composition, in which the characters encounter each other in different configurations, is also expressed in a network measure, namely *density*; this density is defined as the ratio of the existing relationships between nodes to the maximum number of possible relationships. The maximum number of possible relationships is dependent on the number of nodes in the network. In the "great theater of the world," this density reaches the value of 0.9090909, whilst a value of 1 describes the highest possible number of relationships. The high density can be seen as characteristic not only for *El gran teatro del mundo*, but for the structure of the *autos sacramentales* as a whole. The mean value across all 33 available *autos sacramentales* is 0.8989134424, while the minimum value is 0.5777778 (*La Hidalga del Valle*), and the maximum value is 1 (*Triunfar muriendo* and others, see below).[38]

The tendency of the 33 *autos sacramentales* to contain an ensemble configuration[39] in the final scene is a second characteristic feature of the Corpus Christi plays, since they come down to the vanishing point of a central gospel that is imparted by all characters, similar to what we saw in *El gran teatro del mundo*. This can be illustrated on the basis of four examples[40] from further *autos sacramentales*: Read from left to right, the density of character discourse in these autos sacramentales increases up to the final message delivered by all characters present in the final scene (figures 3.9 to 3.12).

Pfister does not supply a reason for the ensemble configuration in French classicism that concerns either content or form. The reasons here were probably more pragmatic, for through the ensemble configuration in the final scene, all characters (and thus, all actors) are already on stage for the final applause.

With Calderón on the other hand, there is a correspondence on the content level for this formal feature: The sacrament of the Eucharist is at the center of the *autos sacramentales*, so the affirmation of the central message, the doctrine of salvation, is enacted in the final scene. This is either expressed

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[38] This value was computed in R using the function edge_density() from the package igraph; igraph ignores the weighting of the individual nodes in the network. To compare: In the 13 comedias, the mean lies at 0.6896497462, with a minimum value of 0.3676471 (*El médico de su honra*) and a maximum value of 0.8791209 (*Afectos de odio e amor*).

[39] Pfister notes in this context: "The ensemble configuration appears relatively often in texts with a small cast – for example in two- or three-character plays – and isn't explicitly labeled there; in texts with a more extensive cast however, it represents a rare exception, which became a fixed convention for the final scene in classical French theater as well as in the Elizabethan comedy." Pfister 1988, p. 171/172.

[40] If all, or at least almost all characters appear on stage together at the end, the *density* value obviously tends toward 1. The values for the four pictured *autos sacramentales* lie at 1 (*Triunfar muriendo; La devoción de la misa*), at 0.9666667 (*La inmunidad del Sagrado*), and 0.754386 (*Las órdenes militares*) respectively.
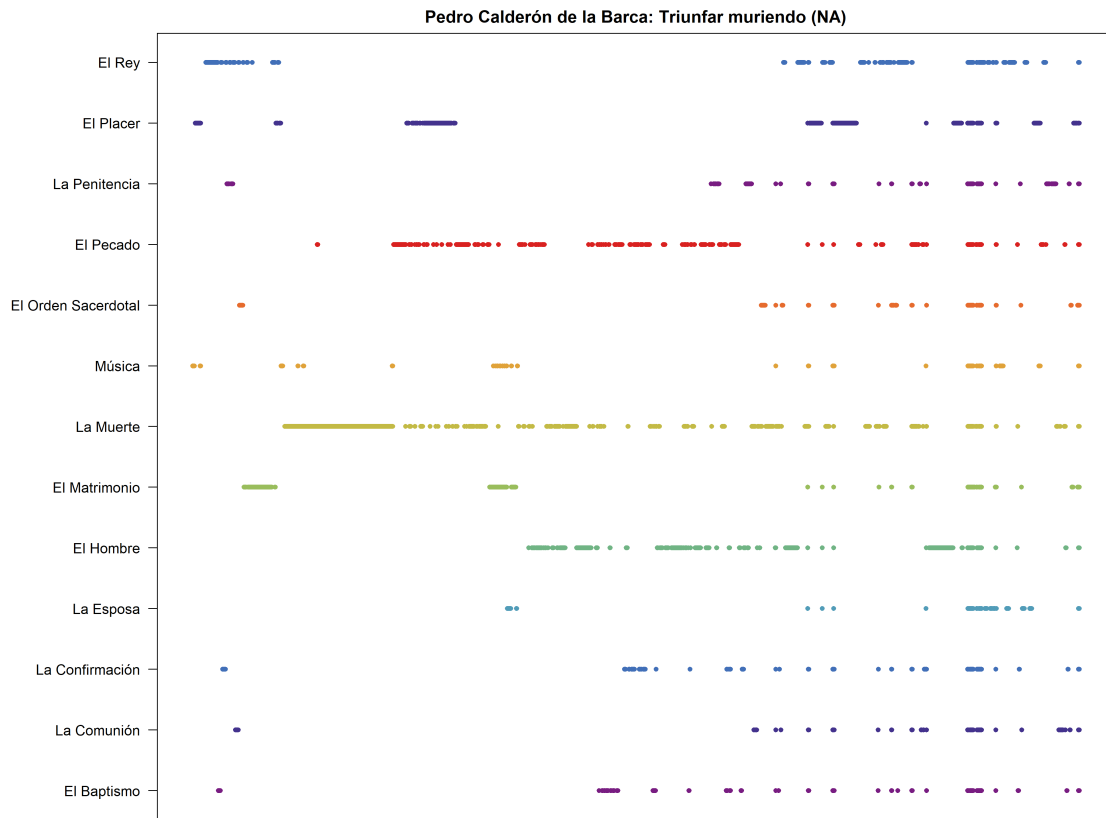
Figure 3.9: Character discourse in *Triunfar muriendo* in the course of the dramatic text

Figure 3.10: Character discourse in *Las órdenes militares* in the course of the dramatic text
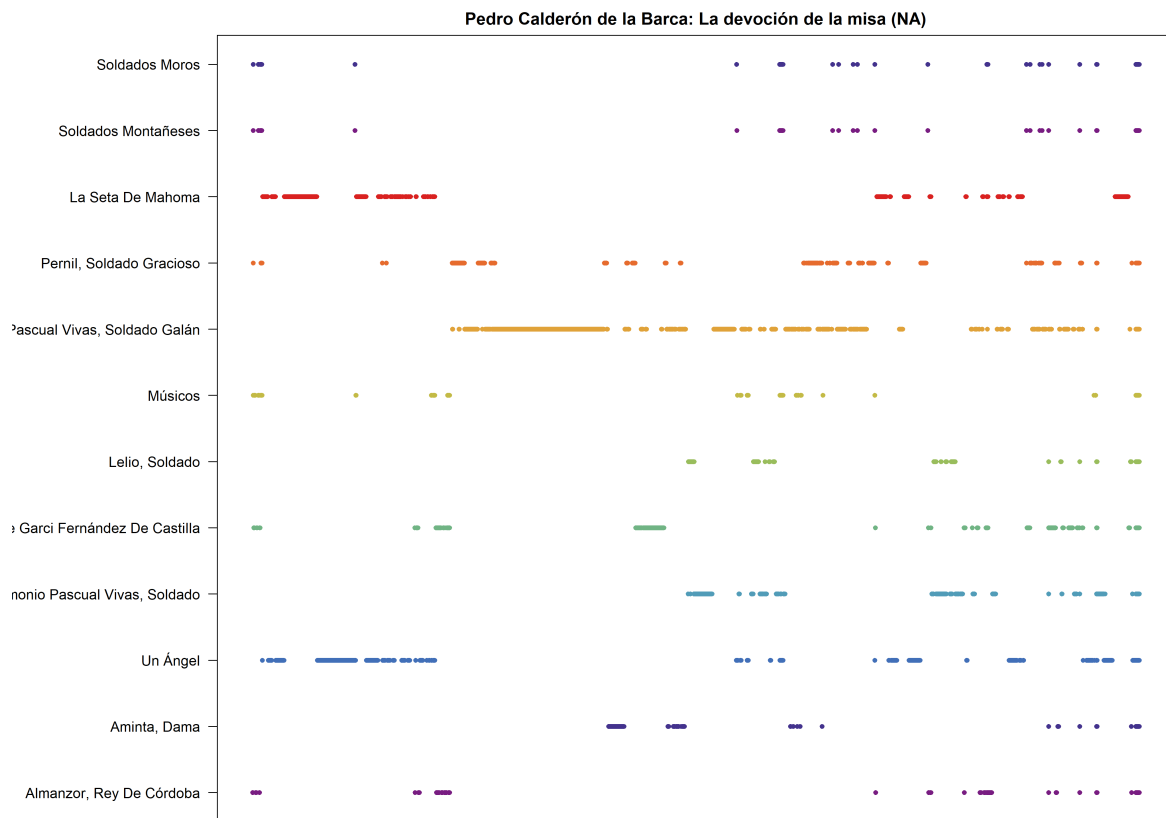
Figure 3.11: Character discourse in *La devoción de la misa* in the course of the dramatic text
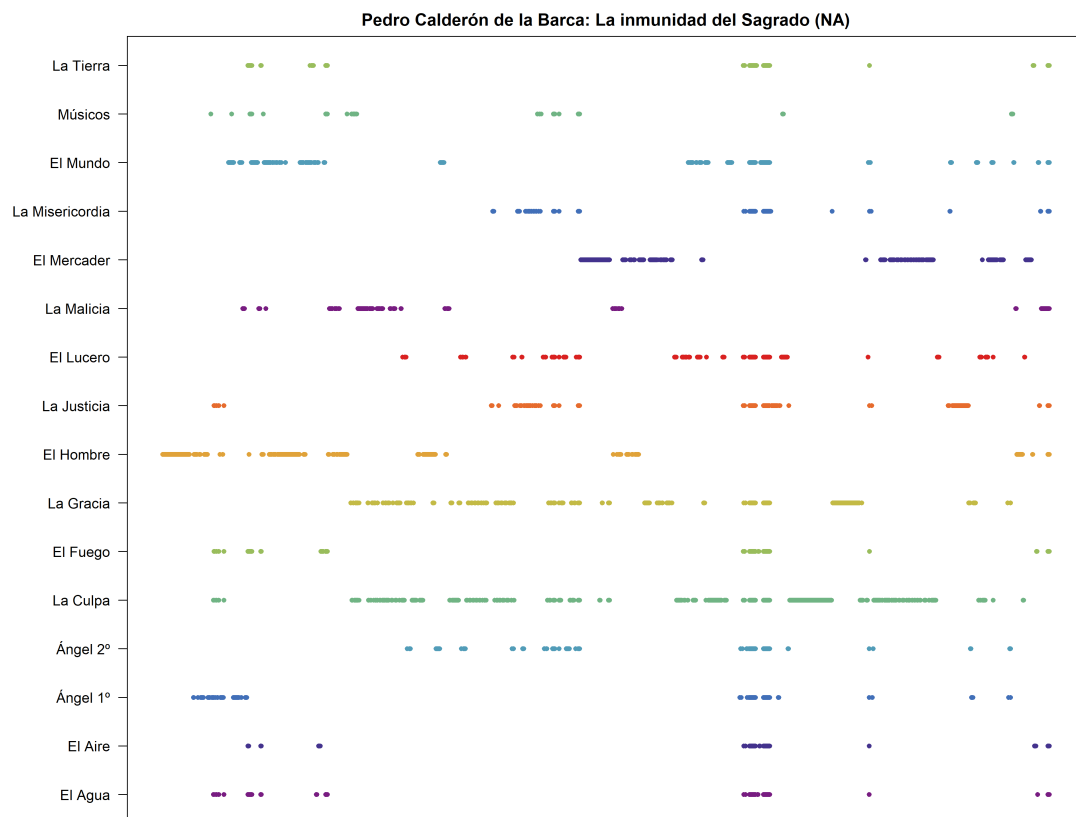

Figure 3.12: Character discourse in *La inmunidad del Sagrado* in the course of the dramatic text

by all characters present, as in *La inmunidad del Sagrado*,[41] *La devoción de la misa*,[42] and *Triunfar muriendo*[43] ("todos y música"), or as a choir of sorts with alternating speakers (*Las órdenes militares*[44]). The meshing of formal and content composition in the *autos sacramentales* serves as an impressive reminder that the Corpus Christi plays were an instrument the Catholic church used to stage a sense of community in opposition to Protestantism, even if they failed as means of indoctrination.

4 Conclusion

The analyses of Calderón's *comedias* presented in this pamphlet have impressively shown the autonomy of his *comedia nueva* vis-à-vis French classicism and the Aristotelian theory of the tragedy, at least on the basis of the 13 dramatic texts transferred into the TEI markup so far. On top of that, they illustrate both the complex structures of the *comedias* and the pragmatization of the classical poetics of rules, which means that poetological prescriptions are here subordinated to the needs of the plays. Surely the performance of the *comedias* thus required a cultured and educated audience capable of grasping the complex structures, follow the diverse plots, and generally appreciate these plays. At the same time, the analyses, which are merely explorative, make clear the necessity of discovering patterns and structures, in case the remaining 95 *comedias* Calderón penned will be transferred into the TEI format in the future. As mentioned above, what could for instance be taken into account is the symmetry of act lengths and the number of replies per act. Where the poetics of rules of French classicism turns out to be an unfit grid for the analysis of genre-poetic features, as is the case with Spanish Baroque theater, it becomes clear that we need to identify those generative patterns that allowed Calderón to produce

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[41] Todos: "¡Albricias, albricias, y viva mostrando, que en los términos mismos, los mismos pasos, el remedio vino que vino el daño!" (All: "Rejoice, rejoice and celebrate, for it has been shown that salvation comes with the same terms and in the same steps with damnation.")

[42] Todos y música: "¿Cómo puede en dos partes estar un cuerpo? Solo Dios en la Hostia del sacramento. ¿Pues cómo hoy en dos partes Pascual se ha visto? Como uno era su imagen que no era él mismo,porque el cielo quiso premiar su valor con vislumbres y rasgos de su devoción." (All and the music: "How can a body be in two places at once? Only God in the host of the sacrament. How did he dress as Pascual in two places at once today? Because his image, which isn't even himself, was one, and Heaven wanted to praise his worth with the reflected splendor and the signs of his devotion.")

[43] Todos y música: "...que aquí está la Vida, puesto que está aquí quien a Muerte y Pecado pudo destruir." (All and the music: ". . . and here is Life, because here is he who was capable of destroying Death and Sin.")

[44] Música: "Cobre lenguas y plumas la gracia bella, pues perdió la Culpa plumas y lenguas." / Segundo Adán: "Y pues queda ufana la Naturaleza." / Gracia: "Con la información a memoria perpetua." / Naturaleza: "El perdón pidiendo de faltas nuestras." / Inocencia: "En nombre de quien serviros desea." / Mundo: "Repitamos todos, en voces diversas." / Todos y música: „Cobre lenguas y plumas la Gracia bella, pues perdió la Culpa plumas y lenguas." (Music: "The beautiful grace wins the tongues and the feathers which guilt lost." / The second Adam: "And nature is filled with contentment." / Mercy: "Through information to perpetual memory." / Nature: "Begging for deliverance from our sins." / Innocence: "I the name of him who wants to serve you." / World: "Let us all repeat it in different voices." All and the music: "The beautiful grace wins the tongues and the feathers which guilt lost.")

such a comprehensive oeuvre in the first place, and illustrate them with a bigger corpus of plays to draw on. Here, the following desiderata would take priority: the operationalization of the examination of the unity of action as well as procedures/algorithms for the identification of characteristic features of tragedies and comedies, which are rather obviously mixed in Calderón's work, and in the *comedia nueva* in general.[45]

The theses presented here on Calderón's *autos sacramentales* – high network density and the meshing of gospel and ensemble configuration in the final scene – also call for an examination of the entire corpus of the 84 *autos sacramentales*. Further characteristic features could possibly be identified and described, for example regarding the allegorical and typecast characters in the *autos sacramentales*. These two features in particular – typecasting of characters and repetition of the gospel already familiar from Corpus Christi mass – were probably what led to a relief of the audience's perception, and allowed for the reception of the content of the Corpus Christi plays by a wide audience that spanned the estates but mostly was not literate. Here, interrogating the changing configurations of the character types and their development over time should yield new insight. The uniform logic in particular, in which Calderón creates an analogy between the earthly world and the world of the theater in order to constantly refer to the saving event of the Eucharist and thus, to the world hereafter, should yield rich results in an analysis that brings together semantic content and formal configurations.[46]

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[45] Willand and Reiter presented an example of the successful use of word vectors for the identification of genre in 2017; cf. Willand, Marcus & Reiter, Nils (2017). Geschlecht und Gattung. Digitale Analysen von Kleists ›Familie Schroffenstein‹. In *Kleist-Jahrbuch 2017*, eds. Andrea Allerkamp, Günter Blamberger, Ingo Breuer, Barbara Gribnitz, Hannah Lotte Lund, Martin Roussel. Stuttgart: J.B. Metzler Verlag, 177–195, here pp. 190–194.

[46] See (forthcoming) Willand, Marcus & Krautter, Benjamin (2017). Vermessene Figuren – Karl und Franz Moor im quantitativen Vergleich. In *Schillers Feste der Rhetorik*, eds. Peter-André Alt & Stefanie Hundehege. Berlin, Boston: De Gruyter 2021.

5 Bibliography

Arellano, Ignacio. 2000. *Diccionario de los autos sacramentales de Calderón* (= Autos sacramentales comple-tos de Calderón, 28), Pamplona: Universidad de Navarra / Kassel: Edition Reichenberger.

Arellano, Ignacio. 2001. *Estructuras dramáticas y alegóricas en los autos de Calderón* (= Autos sacramentales completos de Calderón vol. 31). Pamplona: Universidad de Navarra / Kassel: Edition Reichenberger.

Asmuth, Bernhard. 1984. Einführung in die Dramenanalyse, 2nd revised edition, Stuttgart: Metzler.

Calderón de la Barca, Pedro. 1640. *Primera parte de comedias de don Pedro Calderón de la Barca.* Madrid: Sanchez.

Calderón de la Barca, Pedro. 1848. *Comedias de don Don Pedro Calderón de la Barca.* Vol. I. Published by Juan Eugenio Hartzenbusch. Madrid: M. Rivadeneyra.

Calderón de la Barca, Pedro. 1951–1956. *Obras completas. Textos íntegros según las primeras edicionesy los manuscritos autógrafos.* Published by Ángel Valbuena Prat und Luis Astrana Marín, Madrid: Aguilar.

Calderón de la Barca, Pedro. 1989. *Teatro cómico breve.* Published by María-Luisa Lobato. Kassel: Edition Reichenberger.

Couderc, Christophe. 2012. *Le théâtre classique au Siècle d'Or. Cristóbal de Virués, Lope de Vega, Calderón de la Barca.* Paris: Presses Universitaires de France.

de la Rosa, Javier, Adriana Soto-Corominas, Juan Luis Suárez. 2018. „The Role of Emotions in the Characters of Pedro Calderón de la Barca's autos sacramentales". In: *Emotion and the Seduction of the Senses, Baroque to Neo-Baroque.* Published by Lisa Beaven and Angela Ndalianis. Kalamazoo: Medieval Institute Publications, Western Michigan University: pp. 99–125.

Eglseder, Andreas. 1998. *Der „Arte nuevo" von Lope de Vega. Theaterwissenschaftliche Erschließung eines „der am häufigsten mißverstandenen Texte der spanischen Literatur".* Frankfurt/Main: Peter Lang.

Ehrlicher, Hanno. 2012. *Einführung in die spanische Literatur und Kultur des Siglo de Oro.* Berlin: Erich-Schmidt-Verlag.

Fischer, Frank, Ingo Börner, Mathias Göbel, Angelika Hechtl, Christopher Kittel, Carsten Milling, Peer Trilcke. 2019. „Programmable Corpora. Die digitale Literaturwissenschaft zwischen Forschung und Infrastruktur am Beispiel von DraCor". In: *DHd 2019. Conference abstracts.* Frankfurt/Main and Mainz: pp. 194–197. https://doi.org/10.5281/zenodo.2596094.

Küpper, Joachim. 1990. *Diskurs-Renovatio bei Lope de Vega und Calderón. Untersuchungen zum spanischen Barockdrama. Mit einer Skizze zur Evolution der Diskurse in Mittelalter, Renaissance und Manierismus* (= Romanica Monacensia, Bd.32). Tübingen: Gunter Narr Verlag.

Lope de Vega, Félix. 1921. *Arte nuevo de hacer comedias en este tiempo.* Dirigido a la Academia de Madrid. Madrid: Alonso Martin [first published in 1609].

Lope de Vega, Félix. 1914. *The New Art of Writing Plays.* Translated by William T. Brewster, New York: Dramatic Museum of Columbia University. Available online at `http://www.archive.org/details/newartofwritingp00vegauoft`.

Newels, Margarete. 1959. *Die dramatischen Gattungen in den Poetiken des Siglo de Oro. Eine einleitende Stu-die zum Thema der Dramentheorie im Goldenen Zeitalter* (= Untersuchungen zur Sprach- und Literaturge-schichte der Romanischen Völker, Bd. II). Wiesbaden: Franz Steiner Verlag.

Peña-Pimentel, Miriam A. 2011. *El Gracioso en el Teatro de Calderón: Un Análisis desde las Humanidades Digitales.* Electronic Thesis and Dissertation Repository. `https://ir.lib.uwo.ca/etd/307`.

Peña-Pimentel, Miriam A. 2012. „Aplicación de mapas de tópicos al análisis semántico de algunas comediad de Calderón". In: *Anuario calderoniano*, 5: pp. 115–130.

Pfister, Manfred. 1988. *The theory and analysis of drama.* Cambridge: Cambridge University Press.

Pfister, Manfred. 2001. *Das Drama. Theorie und Analyse.* 11th edition, extended. Upgraded reprint of the revised and expanded edition of 1988, Munich: Wilhelm Fink Verlag.

Piper, Andrew. 2018. *Enumerations. Data and Literary Study.* Chicago: The University of Chicago Press.

Poppenberg, Gerhard. 2003. *Psyche und Allegorie. Studien zum spanischen auto sacramental von den Anfän-gen bis zu Calderón.* Munich: Wilhelm Fink Verlag.

Reiter, Nils, Jonas Kuhn and Marcus Willand. 2017. „To GUI or not to GUI?" In: *INFORMATIK 2017.* Published by Maximilian Eibl and Martin Gaedke. Bonn: Gesellschaft für Informatik: pp. 1179-1184. `https://doi.org/10.18420/in2017_119`.

Reiter, Nils and Marcus Willand. 2018. „Poetologischer Anspruch und dramatische Wirklichkeit: Indirekte Operationalisierung in der digitalen Dramenanalyse." In: *Quantitative Ansätze in den Literatur- und Geistes-wissenschaften: Systematische und historische Perspektiven.* Published by Toni Bernhart, Marcus Willand, Sandra Richter and Andrea Albrecht. Berlin: de Gruyter: pp. 45–76. `https://doi.org/10.1515/9783110523300-003`.

Reiter, Nils. 2020. DramaAnalysis: Analysis of Dramatic Texts. R package version 3.0.1. `https://CRAN.R-project.org/package=DramaAnalysis`.

Scherer, Jacques. 1959. *La dramaturgie classique en France*. Paris: Librairie Nizet.

Sullivan, Henry W. 2018. *Tragic Drama in the Golden Age of Spain: Seven Essays on the Definition of a Genre* (= Teatro del Siglo de Oro. Estudios de Literatura 133). Kassel: Edition Reichenberger.

Tietz, Manfred. 2019. „Das *auto sacramental*: Ansätze zur Gesamtdeutung einer literarischen Gattung des spanischen Theaters im Spannungsfeld zwischen profaner und religiöser Kultur des 16. Und 17. Jahrhun-derts." In: *Auto sacramental: Aktuelle Forschungsbeiträge zum Fronleichnamsspiel in Spanien und Hispano-amerika*. Published by Marina Ortrud M. Hertrampf. HeLix 12(1): pp. 14–38.

Trilcke, Peer, Frank Fischer, Mathias Göbel, Dario Kampkaspar, and Christopher Kittel. 2017. „Netzwerkdy-namik, Plotanalyse – Zur Visualisierung und Berechnung der ›progressiven Strukturierung‹ literarischer Tex-te". In: *Book of Abstracts of Dhd 2017*. Bern: pp. 175–180.

Vitse, Marc. 1990. *Éléments pour une théorie du théâtre espagnol du XVIIe siècle*. Toulouse: Presses Universi-taires du Mirail.

Willand, Marcus, and Benjamin Krautter. 2017. „Vermessene Figuren – Karl und Franz Moor im quantitati-ven Vergleich." In: *Schillers Feste der Rhetorik*. Published by Peter-André Alt and Stefanie Hundehege. Berlin, Boston: De Gruyter 2020 [forthcoming].

Willand, Marcus, and Nils Reiter. 2017. „Geschlecht und Gattung. Digitale Analysen von Kleists ›Familie Schroffenstein‹." In: *Kleist-Jahrbuch 2017*. Published by Andrea Allerkamp, Günter Blamberger, Ingo Breuer, Barbara Gribnitz, Hannah Lotte Lund and Martin Roussel. Stuttgart: J.B. Metzler Verlag: pp. 177–195.