What is a good doge? Analyzing the patrician social network of the Republic of Venice

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Abstract

The Venetian republic was one of the most successful trans-modern states, surviving for a millennium through innovation, commercial cunning, exploitation of colonies and legal stability. Part of the success might be due to its government structure, a republic ruled by a doge chosen among a relatively limited set of Venetian patrician families. In this paper we analyze the structure of the social network they formed through marriage, and how government was monopolized by a relatively small set of families, the one that became patrician first.

Introduction

During one thousand years, the Venetian republic managed to raise from a small fiefdom under suzerainty of the Byzantine empire to the biggest empire in the Mediterranean, and then maintain its existence until the Napoleonic storm reconfigured the map of Europe for ever (Horodowich 2013).

One of the main factors that influenced in that stability was the way it chose its presidents, or doges, as well as the constraints put on what they could effectively do, as well as a clear separation of powers that created a plethora of institutions with more or less clearly defined functions (Cecchini and Pezzolo 2012). The mercantile orientation of these institutions certainly helped, since it created a safe and secure environment where people from all over the world could do business. But it was as extremely rare for a doge to be deposed due to corruption, or ousted by a coup d’ètat, as it was extremely common all over the Italian peninsula and elsewhere.

However, Venice was a far cry from a democracy. Nobles (patriziato) and the people (popolani) were totally separate, with the patricians being the only one with a possibility of occupying any job going from simple administrative jobs, to the highest offices such as the Maggior Consiglio (equivalent to a Privy Council), the Senate or the Consiglio dei dieci, that worked as higher instance tribunal as well as home office. This effectively implied that a certain number of families ruled the Republic, from its inception to the end. This rule was, also, increasingly authoritarian, with a tight grip on power, that was, however, distributed among the different institutions.

It is, then, difficult to understand how what caused upheaval and instability in most Medieval and post-Medieval states instead was not a factor leading to the demise of the institution of the Doges. This paper tries to contribute to understand why, by studying the social network formed by these patrician families, and how it is related to the number of doges these families contributed as governors of the republic.

The rest of the paper has been organized as follows: coming up, a brief revision of the state of the art. The extraction and preparation of data is described in the section that comes next. The resulting social network will be analyzed in Section The Venetian patrician families social network. We will finally draw some conclusions and present future work in the last section.

State of the art

Social network analysis has increasingly become a tool in the toolset of historians, but it has not been used comprehensively; it is still relatively rare to find this kind of studies. Most studies focus on trade or mercantile
networks, since these are the ones that have relatively better coverage. The trading networks of Venice were studied in (Apellániz 2013), focusing on how low-ranking or colonial individuals used mercantile networks to penetrate other social circles, or even how the manipulation of these helped mobility, social and otherwise, for them. In this, the power of social network analysis to first analyze, and then, by focusing on the position of specific nodes and mesoanalysis, gather insights on social mechanisms, was revealed. Two quantities were analyzed: betweenness and closeness centrality. The first measure is related to the position of a node (person) in a specific network, and how passing through that node is a necessity to communicate different parts of the network. Closeness centrality, on the other hand, expresses how difficult is, for a specific actor, to reach any other part of the network. These two quantities are essential to have a high-level understanding of emerging properties of the network, such as modularization, division between different groups or cliques, and also how network-correlated attributes, such as wealth, arise. Based on their books, Ryabova (2019) analyses the social networks of a trading family, the Soranzo, which are also one of the case vecchie, please see below for a brief history of the Venetian nobility. This papers explains how mercantile companies were usually temporal partnerships in Venice, which augmented the importance of the social network as such. The study of commercial partnerships for this firm shows how extensive was commerce with German cities (possibly belonging to the Hansa league), which was even bigger than the one with Venice itself. Although there’s no attempt to analyze the ego network beyond the connections between the center and others, it shows many patrician families among the mercantile partners, revealing how ties between nobles occurred at many different levels, political, familiar, and mercantile.

Other approaches to the study of doges, however, are possible. (Smith, Crowley, and Leguizamon 2021) recently publish a paper studying how the age of doges was chosen in such a way that, even if it was a lifelong post, their terms were naturally limited. As a matter of fact, we have computed the median number of years ruling to be $\text{r median(ages$Reigning)}$, with average at 9.3625.

We will analyze in this paper the social network of patrician families revealed by the marriage of doges, as a way to understand the power dynamics among different noble families, and thus have some insights on the causes of the stability and longevity of the Venetian state. But let us first present a brief history of these patrician families, and their attributes.

**A brief history of Venetian patriciate**

The Venetian patriciate has been always attached to the access to power symbolized by the office of the doge. However, it has evolved with the institution and the different instituted laws that constrained it.

The beginning of the republic of Venice (Madden 2012) is (possibly mythically) set in 697, with Paolo Lucio Anafesto converting from a Byzantine governor to the first leader of the independent city of Venice. This tradition does not have any source, but at any rate, it started the institution of doges as elected leaders. Since back then Venice was little more than a settlement, a popular assembly elected them directly. After a brief period when Venice was part of the exarchate of Ravenna and was governed by a military administration, dogarate was restored in 742, with doges, once again, elected popularly. This period was not particularly stable. Many doges were deposed or directly killed. In one of such cases, Pietro IV Candiano and his son were locked in palace by the populace, after which it was set afire. However, the first restricting law was introduced in 1032: the doge was forbidden from appointing a consul, and even more so, a privy council was appointed to take care of enforcing that law; a council of the wise was created in the next century to further control and counter-balance the executive power of the doge.

But one of the key laws in the future governance of the Republic was the Serrata or “closure” that was introduced in the XIII century. This law effectively closed entering the Supreme Council (Maggior Consiglio) to most families, and consecrated the creation of a group of patrician families. Although doges themselves could be chosen from anywhere, it was usually after a life of serving in different institutions, including this Maggior Consiglio, when they became effectively known and eligible, so the highest seat was effectively closed to a group of families. For some time, only 25 families, thereafter called vecchie, were eligible for these jobs; out of those families, 12 were called apostoliche, and were supposed to be among the founding families of the state; another four were denominated evangelisti: Giustinian, Corner, Bragadin and Bembo. These families will, effectively, form the initial pool where the doges were drawn from.
There were other sets of families that eventually became noble in time. The *nuove* or new were incorporated in the XIII and XIV century, after the war against Genoa and the fall of Constantinople. Those incorporated in the XIV century were called *nuovissime*, or “very new”; there were also some families from “abroad” (mainly, the Adriatic colonies placed where Croatia and Montenegro are now, and even other cities in *terraferma*, or the continent, such as Verona or Parma). With the decadence of the Republic in the XVII century, you could simply pay your way into the nobility. More than a hundred families accessed that way, some in the very last years of the Republic.

This history of the nobility implied that it was not, by any extent of the term, an uniform caste. Besides the age of their *case* or dynasties, there was another axis, which was simply wealth. The *barnaboti* (Zennaro 2018) where simply poor noble people, who had nothing going for them except their name. Their appellation alluded to the fact that they resided in a destitute residence for nobles in the area of Saint Barnabas. We will need to see how families belonging to the different layers of accession to nobility are placed within the social network, and how this history has an influence on, or at least correlation, with it.

**Dataset generation**

It is theoretically possible, but out of reach for people that are not scholars, to access the whole marriage registry in the city of Venice. It is relatively simple, however, to find the list of all doges and all the women they were married to. Initially, I thought it was possible to use a simple Wikidata query to do so, but unfortunately those Wikidata predicates have not been populated yet. So the dataset had to be built pretty much by hand. In general, researching Medieval (and later) social networks is an endeavor complicated by the lack of records (Ryabova 2016), or the need to enter manually whatever data is gathered into a spreadsheet for their analysis.

This is why we needed to create a data set specifically for this line of research. The list of all doges, and the list of all *dogaresse*, or doge’s wives, has been extracted from Wikipedia pages, the list of doges from the Spanish page (since it was already formatted in a list) and the list of dogaresse from the Italian Wikipedia. These lists included dates when they were dogaresse; they were matched to their husbands by these dates. Couples were then double-checked, when some possible doubt (due to dates) was found, using primary sources such as (Cicogna and Nani 1863). In some cases, dates had to be fixed in the original list, as is shown in this diff. The fact that Venetian wives did keep their family names, or at least were recorded that way, helps to identify them as members of a specific family.

All in all, there were 129 doges through all history. Out of all of these, 49 did not marry, or their marriage has not been registered. Out of these couples, there were a few doges that married twice; most married only once. Additional filtering and processing was done:

- Couples marrying into the same family were eliminated. Patrician families were quite extensive, and sometimes had different branches. It was not common, but it happened, that some doge was married to a dogaressa belonging to another branch of the family. For instance, Pietro III Candiano as well as Pietro IV Candiano married to women of the Candiano family; Domenico Selvo married in 1075 to Theodora Selvo; Ordelafu Falier married to Matelda Falier, and right after that one, Domenico Michele married to Alicia Michele.

- The patrician family was identified by following a regular expression on the original data. The surname of the doge was registered as the last name before the date of rule, the dogaresse was the last expression in the string. However, the extracted surname did not always correspond to a patrician family. In some cases, mainly in the initial stages of the republic, only first names were known. In some other case, mainly in the case of dogaresse, only their country or land of origin was noted: for instance, Valdrada di Sicilia or Loicia da Prata were married to doges in the late XIII century.

- Family names were canonicalized. Many patrician family names have two forms: the one in Veneto, the language spoken in Venice, and the one in Italian. For instance, Cornaro and Corner, or Michele and Michel. In a case, “Mastropiero”, it was also known as “Malipiero”; Gradenigo could also be written as Gradencio. These were normalized to a single form, in Veneto, which is the one found in most primary sources.

After these filters, there were only 57 left. Out of these, there were only 35 different families that became...
“Serenest princes” or doges, 36 that were dogaresse. Some families had members in both roles: 14 of them, a very small percentage of the total families; on the other hand, a total of 57 participated in any of them.

Out of all the families that contributed to the top most office in the republic, there were 37 that did not marry, or their marriages were not registered. Some relatively important families, like Bembo, Erizzo or Michele, appear in this list. Five of them, including Bembo, do appear as dogaresse. This means that out of the 65 families that became doges, just 26 are not linked by marriage to their families, at least with this small sample of links that is the list of married doges. Most of these non-married families, except five of them, Partecipazio, Candiano, Ziani, Galbaio and Teodato, had a single doge to their account. These are special cases: Partecipazio were the first doges, when office was still kind of inherited (the doge nominated a “consul”, which succeeded him). So they had to be married; same goes for Candiano, except these took office a bit later. Galbaio and Teodato were not even properly doges, but more dukes or military leaders that took office in the first millennium. Ziani was in fact married, except that he was married to one such Cecilia, with no family recorded. So in fact families with more than one doge in them did include at least one marriage link with other patrician families; as a matter of fact, the Bembo family, for instance, included only one doge, Giovanni Bembo, but two dogaresse, Cornelia and Felicità.

Looking at this from another point of view, there were 37 families with unmarried doges, or unregistered marriages, and 39 with married doges. But 12 families have both doges who married and other who did not. These families were: Candiano, Memmo, Dandolo, Ziani, Morosini, Mocenigo, Malipiero, Loredan, Grimani, Donato, Venier, Contarini. This leaves only 25 who, being doges, do not have a registered marriage. This is a minority out of the 64 that did.

We can draw two conclusions from this: being married was the prevalent civil state of the doges, and the marriage registry is a good enough tool to research the social network of the patrician families of which they sprung.

The dataset was also enriched with additional data from the Wikipedia: mainly, the type of family; that is, if a family was vecchie, nuove or one or the other half dozen denominations that families received. This data will eventually prove essential to understand the position in the social network.

All data sets have been released at the GitHub repository under a free license.

**The Venetian patrician families social network**

Let us have a general look at the different families and how they relate to each other.
Figure 1: Patrician families social networks through weddings. Circles indicate that family has both; balls only doges, and squares only dogaressa

This graph (in Figure 1) already reveals one of the features of this social network: there is a connected core of different families, and then small “islands”. In general, these islands are composed of up to four families that only managed to promote a member either to doge or dogaressa; except for the one that includes Badoero, Pisani, Valier and Querini, which includes a family, Pisani, that had both a doge (Alvise Pisani, from 1735 to 1741, married to Elena Badoer) and a dogaressa (Elisabetta Pisana or Pisani, from 1656 to 1658, married to Bertuccio Valier). These are families that did not really make it, and accessed power when the power of the Republic was already on the wane.
In Figure 2 we show only the connected component, with color meaning as follows: “None”=“dark gray”, “Ancient”=“light gray”, “Extinct pre-serrata”=“gray”, “Evangeliche”=“gold”, “Nuove”=“light green”, “Nuovissime”=“red”, “Soldi”=“yellow”, “Vecchie”=“light blue”, “Apostoliche”=“pink”. The light-pink center of the graph, which has five apostoliche families, Contarini, Faliero, Gradenigo, Morosini, and Dandolo, is also seeded with an evangeliche family, Bembo. Other evangelical” and “apostolic” families are in the periphery, but the majority of the graph is occupied by the nuove families (in light green). Just a few of the nuovissime are present here: Condulmiero, Cicogna, and Vendramin; and only one of the families that bought their way into the patriciate, Manin, is included. This was, also, the last doge before the fall of the republic. Other vecchie families, like Soranzo and Zorzi, are also present peripherally.

The chart also reveals a certain grouping. Although factions were not so much a factor in Venice politics, it can still show some insight into the time-wise organization of weddings and how different groups were formed through history; that is, it will tell us more about the temporal organization of the social network than about antagonist groups in the Senate or other institutions.
Figure 3: Social groups in the central component of the patrician social network; colors indicate different groups

Figure 3 shows seven different groups, every one of them with at most 6 elements. A group includes the Soranzo family, studied in their commercial aspect in (Ryabova 2016). It is, as it can be seen, a peripheral family only connected to the main component through the Barbarigo family. But it is interesting to note that, despite that family not showing up in the tables published by Ryabova above, we can see the Pesaro (or Pexaro) family there, so it is plausible that familial ties (with Barbarigo) led to commercial ties (with Pesaro) or the other way round. As a matter of fact, it’s entirely possible that those ties exist too, only not at the doge level.

Another “linear” group includes the Orseolo, Candiano, Memmo and Malipiero families; they are mostly ancient families, that did not really survive beyond the era of elected doges. But it is also interesting to note, in red, those links that bind families from different groups, and how there is a specific family that includes them. The Morosini and Contarini families, for instances, are two of those; these are at the same time some of the oldest, apostoliche families, and they include lots of doges in them. Of course, that is the reason why they have so many links, which are essentially weddings; but the Corner or the Barbarigo family also do, and they don’t have their links places so strategically.

This visually observed reality can also be measured; some families seem to be in the middle of things. But how centered are they? So far we have been only visualizing the social network, let’s analyze the standing of the families in that social network numerically. In general, betweenness centrality is one of the tools that measures that, being a numerical representation of how needed a node is to communicate information between
two separate areas of the network. This is why it is one of the most widely used measurements in this area. For patricians, being able to achieve commercial or political goals depended on these family connections. A wedding, due to the fact that the bride’s family provided a dowry for her and that this dowry included in many cases participation in business, was a link at many different levels. In order to be induced into some entry level position (Chojnacki 1985) indicates that sponsorship by your family and/or your bride’s family were essential for success. Since marriages were arranged, marrying strategically, not only tactically, allowed families to achieve and then keep their positions of powers in the Republic.

Figure 4 shows node size proportional to the family’s betweenness, and keeping the same coloring as Figure 2. It clearly shows that the Dandolo family is the one with the highest betweenness, also highlighted by the fact that it’s at the center of the graph, since the layout algorithm used (optimized by the igraph library (Csardi, Nepusz, et al. 2006)) takes that fact into account. Surrounding it, the Morosini, Contarini and, surprisingly, Priuli family, the only one of the four that is not an apostoliche, but a nuova family. This is a curious case indeed, and shows the power of familiar ties in the Venetian power structures. Priuli, except for the hereditary cases, is the only family that spawned two consecutive doges: Lorenzo and Girolamo Priuli. But more important than that is the marriages of the family, a real who is who of the patrician families: Corner, Barbarigo... And Dandolo.

Table 1: Ranking of families according to betweenness

| Family   | Betweenness  |
|----------|--------------|
| Dandolo  | 308.06667    |
| Morosini | 190.00000    |
| Priuli   | 185.33333    |
| Contarini| 171.63333    |
| Gradenigo| 105.53333    |
| Barbarigo| 99.00000     |
| Malipiero| 96.00000     |
| Mocenigo | 92.40000     |
| Loredan  | 90.40000     |
| Corner   | 66.33333     |
| Orseolo  | 66.00000     |
| Grimani  | 52.00000     |
| Candiano | 34.00000     |
| Giustinian| 34.00000    |
| Faliero  | 33.60000     |
This table shows the ranking of families according to betweenness, with the Dandolo family on top. This family (Savoy 2015), known mainly after Enrico Dandolo (Madden 2006), who personally led the IV crusade against Constantinople, did not yield so many doges, and was rather at the end of its tenure by the end of the Middle Ages. However, figure 3 reveals how it became the link among different “clans” or cliques: the “ancient” one, through a marriage with the Malipiero family, the “nuove” through a marriage with the Priuli family, and the “apostoliche” through marriages into the Morosini and Contarini families. In fact, these three families come next in the ranking; of course the aforementioned families, in turn, leverage the connection with the Dandolo family to uphold their positions of power. Since the Dandolo family, one of the most famous throughout the history of Venice, vanished when it started to decline, we can rather say that it was used as instrument by the other families, rather than the other way round, since the family had their heyday in the XIII century. The last Dandolo to appear in the golden list was Zilia Dandolo, who married the Priuli doge in the XVI century. At the same time, since the family is connected to the “ancient” cluster, but only through a late marriage; the first recorded marriage is the one between Enrico Dandolo and Felicità Bembo that belonged to an “evangelical” family.

It should be noted, also, that these “apostolic” families occupy the top posts in the betweenness ranking, accompanied by the “new” (after the XIII century) families. Some of these families, like the Mocenigo family, only appear in this connected graph as doges. At any rate, it seems that the strategy of the families was for the evangelical families to marry each other, as well as apostolic families, and for the new families, to marry into the apostolic. This brought something like a “dynastic” succession, with new families taking over positions of power after the XV century. However, new families acceding after those did not really make it. It is likely that this lack of renewal in the government, as well as the general decline in trade, technology and production, contributed to the eventual demise of the republic.

**Conclusions**

The complicated way in which the doges were elected, and how individuals were chosen to enter a career as officers of the Republic, guaranteed that extremely wide, and variable, alliances had to be put in play. These alliances were solidified through marriages, which integrated politically as well as commercially the families of the two (romantic and commercial) partners.

In this paper we have drawn two conclusions from the study of the social network. One, that old (vecchie) families initially had a firm grasp on power, mainly through the ones called apostoliche, with evangeline and non-denominated old families coming next; this power was conserved through familial and commercial alliances that were kept in places for centuries. Some kind of dynastic renovation took place with these being progressively substituted by the nuove families, but they arrived at power positions only when they created alliances first with the vecchie, mainly apostoliche, families. The fact that this take over took place only after centuries, with no violent changes, and that they were always pushed by ample majorities, guaranteed the stability of the government, that was a constant until the very end of the republic.

Two, that the position in the social network was highly correlated with their position in an hypothetical ranking of the number of offices held by that family through the centuries. More than individual contributions (which were anyway important to be able to marry into one of the best families), how links between families had been forged and kept were the ones that made families raise to the top job in the Republic over and over again over the centuries.

This, again, shows that quantitative studies over samples of social networks are an excellent tool for understanding political history of different countries, and contribute to the explanation of the stability of the Republic’s government: by raising to power only persons in families that were able to forge the widest alliances, popular will was satisfied (as a matter of fact, patrician will, since they were the ones that effectively
had the power to vote), and this was one of the factors that contributed to the stability way beyond the zenith of the Venetian empire.

There are two possible lines of works that can be pursued from this report, among many. One of them will try to expand the social network by including other kind of ties that have been registered, mainly commercial. For the time being, this social network includes only a fraction of all the families that became nobles in Venice. The second will look at a more causal analysis, and specific strategies that the families would follow, and how successful they were.

All data and code used in this paper is available under a free license at its GitHub repository. It includes R and Raku code, as well as the different files. This paper has been written in RMarkdown, and its source includes all code used to generate charts and tables.

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