

## **REGIONAL LANGUAGES ON WIKIPEDIA**

*Venetian Wikipedia's user interaction over time*

ASTA ZELENKAUSKAITE  
*Fondazione Bruno Kessler*  
*Via Sommarive 18, Trento, Italy*  
*astaze@gmail.com*

AND

PAOLO MASSA  
*Fondazione Bruno Kessler*  
*Via Sommarive 18, Trento, Italy*  
*paolo@gnuband.org*

**Abstract.** Given that little is known about regional language user interaction practices on Wikipedia, this study analyzed content creation process, user social interaction and exchanged content over the course of the existence of Venetian Wikipedia. Content of and user interactions over time on Venetian Wikipedia exhibit practices shared within larger Wikipedia communities and display behaviors that are pertinent to this specific community. Shared practices with other Wikipedias (eg. English Wikipedia) included coordination content as a dominant category of exchanged content, user-role based structure where and most active communicators are administrators was another shared feature, as well as socialization tactics to involve users in online projects. While Venetian Wikipedia stood out for its geographically-linked users who emphasized their regional identity. User exchanges over time spilled over from online to offline domains. This analysis provides a different side of Wikipedia collaboration which is based on creation, maintenance, and negotiation of the content but also shows engagement into interpersonal communication. Thus, this study exemplifies how regional language Wikipedias provide ways to their users not only to preserve their cultural heritage through the language use on regional language Wikipedia space and connect through shared contents of interest, but also, how it could serve as a community maintenance platform that unifies users with shared goals and extends communication to offline realm.

### **1. Multilingual Wikipedia**

Internet plays a complex role in representing linguistic communities. On one hand, Internet potentially discourages the use of smaller languages, due to the global spread

of the Internet and the predominant use of English to communicate online. On the other hand, due to accessibility, convenience the Internet proposes new opportunities for the speakers of smaller languages (Danet & Herring, 2003). Wikipedia is no exception in this trend. Despite Wikipedia it is featured in 265 languages, larger Wikipedias—such as the Wikipedia in English language, have received mostly scholarly attention (see Bryant et al., 2005; Choi et al., 2007, Kittur et al., 2007; Viegas et al. 2004, 2007). Other larger Wikipedias (by the number of speakers) that attracted researcher attention include Chinese version of Wikipedia where conflict management in content edition was analyzed (Liao, 2009), differences in content of Polish and English Wikipedia were found by Callahan and Herring (2011). Cross-cultural, cross-linguistic studies include measurement of power dimension between French, German, Japanese and Dutch Wikipedias (Pfeil et al., 2006). Hara and colleagues (Hara et al., 2010) studied cross-cultural behaviors on talk (TP), user talk (UTP) in four languages that differ in size and culture English, Hebrew, Japanese, and Malay. Arabic, English, and Korean Wikipedias were compared by Stivilia and colleagues (2007).

Among 265 language varieties present on Wikipedia, in the European context alone, there are at least 31 Wikipedias in regional linguistic varieties that are featured on Wikipedia. Given that little is known about content creation in regional-language Wikipedia user interaction and development, the question of that arises is what are the communicative practices that drive regional language communities and how these communities evolved over time? What are the goals of such user interactions? Are there any particular practices that evolve in a regional language context?

Based on the number of articles (that go beyond 5000) and number of speakers that count more than 1 million, the following table summarizes the top 6 list:<sup>1</sup>

*Table 1.* Languages spoken in European context with more than 1 M speakers and more than 5000 articles.

abbreviated Wikipedia's name	Language	Speakers in million (M)	editors per speaker	views per hour	article count
als	Alemannic	10 M	2	1,738	10,998
bar	Bavarian	12 M	2	1,248	5,176
vec	Venetian	2 M	3	952	9,302
lmo	Lombard	3 M	3	1,482	23,733
pms	Piedmontese	2 M	4	975	50,061
sco	Scots	2 M	5	799	8,151

As it is exemplified in Table 1, among the largest by number of users and produced articles, are regional languages in European context are present in Italy and Germany. Italian northern regional linguistic varieties – Venetian, Lombard and Piedmontese constitute the majority of top 5 categories. As Table 1 shows, regional languages on Wikipedia are denoted with a three-letter abbreviation (eg. Ven for Venetian), compared to standard languages that are denoted by a two-letter abbreviations (eg. en for English).

<sup>1</sup> <http://stats.wikimedia.org/EN/Sitemap.htm>

Thus, to study user interaction and development regional language communities of the time, this study is based on the analysis on Venetian language, which is spoken in the Northeast of Italy and is spoken by around 2 million of people and consists of around nine thousand produced articles. Among other Wikipedia in linguistic varieties, Venetian Wikipedia is positioned among the top 12 Wikipedias that contain more than 5000 written article contents.<sup>2</sup> Therefore, Venetian Wikipedia represents a regional language variety of Wikipedia in the European context with a quite larger amount of article content produced in this language and an average number of editors per speaker. It was established in 2005, five years after English Wikipedia--the first Wikipedia--was first edited.

The goal of this study is better understand interactional exchanges between community members by studying the social aspects of the exchanges in user talk pages of Venetian Wikipedia. To do so, this study further analyzed the contents that have been especially pertinent to the interpersonal exchanges which were not directly related to Wikipedia content.

### 1.1. USER CONTRIBUTIONS TO WIKIPEDIA

Wikipedia is a large, task-focused community whose goal is to produce a free online encyclopedia. Thus, it is highly dependent on a constant user contribution and ability to attract new members. However, it is the users who are the ones who enable to produce vast amount of contents. As such, Wikipedia has been considered as an exemplar case of online collaboration since there are millions of volunteer users who contribute to the content creation as well as maintenance, monitoring and cleaning this knowledge depository (Kittur et al., 2007; Viegas et al., 2007). The uniqueness of Wikipedia lies in the twofold data of this online technology. It is known as a large knowledge depository where millions of volunteers daily contribute by creating and managing the content which is comparable to print-based genre of encyclopedia (Emigh & Herring, 2005).

Based on the idea that Wikipedia users engage into practices of editing which in itself is not self-explanatory, users face the challenge to learn how to better contribute to the project. In offline working environments, there has been observed a great disparity between espoused practice and actual practice which is implemented that despite specified manuals and guidelines that delimit the work (Brown & Duguid, 1991). Therefore, there is a great need for users to learn how to effectively implement the rules and thus increment the level of satisfaction to receive the best results in a shorter amount of time. It has been argued that there are three central features that are determinant in working environments that truly provide the space of experience sharing. Those are there overlapping categories that occur through narration, collaboration and social construction (Brown & Duguid, 1991). Thus, in parallel, it would be possible to hypothesize that user interaction through narration in Wikipedia contexts could be of a considerable importance for its community development. User talk pages have been considered as spaces where users can exchange information as well as engage into the narration process described by Brown and Duguid in other working settings (Brown & Duguid, 1991). Thus, socialization through interpersonal context would be a potentially important aspect to Wikipedia contributors. Similarly,

---

<sup>2</sup> <http://stats.wikimedia.org/EN/Sitemap.htm>

given the need to maintain the community efforts for quality contributions, it has been argued that especially for newcomers, it is important to provide appropriate socialization tactics such as welcoming, personal content, requests to encourage members to stay within a community (Choi et al., 2008). Thus, the first question was formulated:

RQ1: What were the meanings that were constructed through exchanged content?

RQ1a: What are social construction strategies formed through positive content?

Content in Wikipedia is produced by the user consensus; Wikipedia also provides access to the interaction that accompanies content production consensus part--which occurs in article talk pages, as well as interpersonal interaction between users which occurs in user talk pages (UTPs). Previous studies on English Wikipedia revealed that UTPs majority of the content exchange evolved around coordination (Viegas et. al., 2007). Given that little is know about the nature of user interaction in Wikipedia, previous research of Wikipedia talk pages pointed out the need for further more fine grained investigations of user exchanges in user talk pages (Viegas et al., 2007). Thus, this study primarily focused on the user interaction in user-talk pages. User talk pages (UTPs) –defined as spaces which have been created to facilitate coordination process by allowing direct user-to-user communication. Wikipedia contrasts UTPs with other name spaces such as discussion pages where communication evolves around specific content. Every registered user automatically is assigned a user talk page. From the functional point of view, UTPs can be compared to other interfaces of interpersonal asynchronous communication such as email with the difference that all the records of exchanges are publically available and accessible.

### *1.1.1. Nature of user exchanges and community evolution over time*

Wikipedia's collaboration is a well-structured space where users can contribute in various roles ranging from anonymous contributions (users identified by IP address through which their computer gets connected), as registered users (contributing with a created account and specific user name that a user chooses), administrators (elected by the peer members). Given that Wikipedia users represent different roles, collaboration dynamics might change, the goal of this study was to observe the development of the community over time. Based on this interest the following research questions were formulated:

RQ2: How the interaction of Venetian Wikipedia community evolved over time?

RQ2a: Which user types become central in user talk page exchanges?

RQ2b: What are the meanings that users draw from the interaction via UTPs in this specific community and how they evolve over time?

## **2. Data and Methods**

Data for this study have been collected from Venetian Wikipedia by manually collecting messages from the user talk page of all users who received at least one message. Signatures of the users have been considered as delimiting units of a given message. This coding allowed to allocate the sender name and role as well as the

receivers' name and role. This extraction technique has been tested for its internal consistency (Massa, 2011).

Message exchange was gathered from user talk pages from the inception of Venetian Wikipedia in 2005 up to 31 December 2009. Total corpus that was considered in the study contained N=1786 messages and comprised all interactions between the users in user talk pages. The total number of messages included template messages – which were produced in a semi-automated way – most of which were welcome templates as well as warning templates (against vandalism acts). Messages that were not templates constituted N=800 of sample. Messages that included interpersonal exchanges constituted N=81 messages or 10.1% of the messages. To further analyze the types of messages, grounded theory approach was used to code the messages (Glasser & Strauss, 2009).

To answer the research question that aimed at analyzing the nature of the interpersonal interactions, quantitative computer-mediated discourse analysis content message analysis was conducted (Herring, 2004). All exchanged messages were coded by two coders following coding scheme that was used for English Wikipedia talk pages conducted by Viegas and colleagues that include categories such as coordination, request information, ask authorization, warning, personal content, other content (Viegas et al., 2007) and plotted longitudinally through the course of the years. Content analysis coding was manually conducted by two independent coders reaching an acceptable interrater reliability ranging from 75% to 90% of Krippendorff's alpha for each coded category (Krippendorff, 2004). To answer Research question 1a, word frequency of positive content exchange words – thank you and welcome – were plotted over time.

To answer the research questions about the community development over time and the interactions between user types, the study was based on two methods. To observe interactions between users of different roles over time, social network analysis over time was applied by using network visualization graphs using Gephi software based on previous research on Wikipedia contribution representation (Lim et al., 2007). To answer research questions 2a and 2b, descriptive statistics of the number of users and the period of time they were actively present in UTPs was calculated.

### **3. Results**

#### **3.1. EXCHANGED CONTENT BETWEEN USERS**

Content analysis of the messages showed that majority of the messages 79% fell into coordination category (N=1209) and maintained its prominence over the years (2005=49; 2006=255; 2007=364; 2008=242; 2009=299) with especial increase in 2007. Aside from the most prominent category – coordination, the remaining content categories show the following content distribution over time shown in Figure 1.

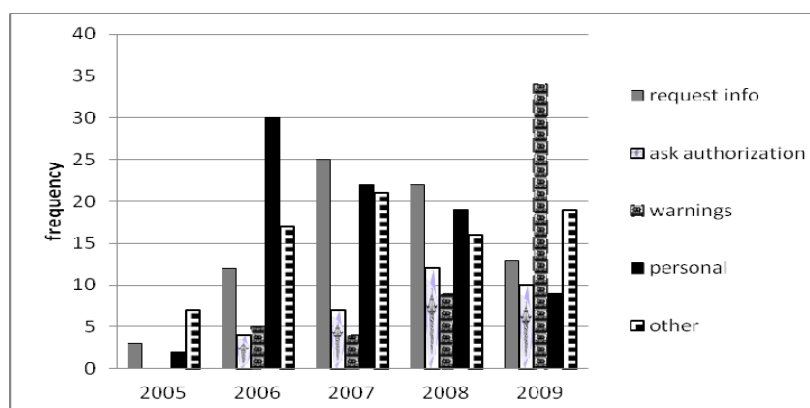


Figure 1. Frequency of content type exchange by the users over five years.

Figure 1 shows that in 2005 request info, personal messages and others were only present, while ask authorization and warnings were not exchanged among the users. Thus, Figure 1 shows an overall trend where personal messages and request information categories are prominent in the first years of Venetian Wikipedia existence. Personal messages were the highest category in 2006. While in 2009 personal messages decreased, warning and ask authorization categories became dominant. Warning messages have been particularly pronounced in this category showing a steep increase in the years 2008 and 2009.

### 3.2. NATURE OF THE EXCHANGED INTERPERSONAL CONTENT

Personal messages were further analyzed based on grounded theory approach (Glaser & Strauss, 2009), to assess the social value associated with interpersonal exchanges between the user interpersonal communication exchange that occurred on UTPs. Such content constituted N=81 messages, that is 10.1% of all messages excluding template messages. The following broad themes emerged from the data: references to offline meetings, location-based identity, other.

#### 3.2.1. References to offline meetings

The interpersonal exchanges between the users contained references to the offline activities of the users of Venetian Wikipedia. There was a message thread that discussed the offline meeting that had to be arranged.

(1) Anca mi saria felizse de veder finalmente che conbinemo quàlcosa. Par l'ora, par mi saria ben la sera, co che semo tuti senza inpegni. Va ben a le 8.00-8.30?

[Me too, I will be happy to see that we eventually make something. About the time, I prefer the evening, so that everyone is free. Would 8-8.30 pm be good?]

(2) Cusi no se semo catàì...xe difizie in efeti. Altro appuntamento? Maximillion Pegasus 18:37, 11 set 2006 (UTC)

[At the end, we didn't meet ... actually it is quite difficult. Another meeting?]

(3) Benon par stasera alora! Catemose a le 8, 8.30 masimo. Maximillion Pegasus 11:41, 12 set 2006 (UTC)

[Tonight is fine! Let's meet at 8,8.30 pm at max.]

(4) Caro Semolo,

son come al solito de corsa. Te saludo e torno a laorar. Speraria de andar a Castel del Piano, magari se vedemo lì. Ciao. Scriveme par iméil se te vol, o su Wikisource. - εΔω 15:23, 25 gen 2008 (UTC)

[Dear Semolo,

As usual I'm busy. I send you my greetings and then go back to work. I hope to go a Castel del Piano [place], and maybe I will meet you there. Ciao. Send me and email if you want, or on Wikisource.]

Examples one through four shows that users coming from the same geographic region tried to arrange offline meeting which extended their online activities to offline realm.

### 3.2.2. Location-based identity

Given that this Wikipedia is regional, moreover, it covers a quite small geographic location, thus users were trying to reach out the other members through personal identification:

(5) Ciao, me ga dito Nick1915 che te si de Fontaniva anca ti! Ciao paesan! ;-) Sémolo (scrivame) 19:40, 20 gen 2008 (UTC)

[Hi, Nick1915 told me that you are from Fontaniva too! Hi paesan! ;-)]

(6) Beh, varda ti, so' anca mi da Fontaniveta! Sto al Belgio par dirla tuta. :-D Sémolo (scrivame) 20:19, 20 gen 2008 (UTC)

[Well, I'm from Fontaniveta too! But I'm in Belgium actually. :-D]

(7) To naltro Fontanivaro!! Te ga dito ben Nick1915 so un Fontanivaro doc! Pa l'exatezza so da Fontaniveta... Co gavarò un poco de tempo sistemarò un peo a voxe del nostro comune. Ciao --GatoSelvadego 19:58, 20 gen 2008 (UTC)

[Wow, another one from Fontanariva!! Nick1015 was right, I'm an authentic guy from Fontanariva! To be exact, I'm from Fontaniveta... When I'll have some time, I'll fix some pages about our municipality.]

(8) Grasiè, Semolo75, par el benvegno. Go deciso de dar un picolo contributo anca mi a tirar su sta wiki in veneto. Bisogna ke femo come le formighe e ke iutemo sta lingua a star viva e vegeta. Mi me contento de far le robe ke serve par tuti e pal Veneto (in sto caso) e dopo star kieto. Tasi e tira. Sarà parkè son 'n Alpin anca mi. Te saludo, ciao. Vajo

[Thanks, Semolo75, for the welcome greeting. I've decided to provide a small contribution too in order to raise this wiki in Venetian. We should act like ants and keep this language alive and used. I'm happy to do what is needed by everyone and by Veneto (in this case) and then feel that I have done what I could. Be silent and keep working. Maybe it's because I'm an Alpin too. Greetings.]

Examples 5 through 8 show how the regional identity was the unifying leitmotiv of the users. Regional referencing also indicates to the motivation which drives them to contributing to the Wikipedia in this regional language.

### 3.2.3. Other

Other contents combined various themes that included positive feedback such as in the example 9.

(9) 6 forte --dario ^\_^ (cossa ghe se?) 14:52, 13 giu 2007 (UTC)

[You are cool]

This message also contained non standard typography “6” which is read as ‘sei’ in Italian which means – number six and ‘you are’. The other messages were of humorous nature such as example 10:

(10) Laora!! che avon da pagarghe la pension a me nono!! Ciaooo --Jacobus 09:47, 23 luj 2008 (UTC).

[Go back to work!! That we have to pay the pension to my grandfather!! Hi]

The others were greeting messages:

(11) Bentornà, Vajotwo! Tuto ben li esami? Bona serada :) !--Marco 27 20:26, 31 Ago 2009 (UTC)

[Welcome back, Vajotwo! Is everything ok with the exams? Enjoy the evening :) !]

3.1.4. Social construction strategies formed through positive content

To identify social construction strategies formed through positive content that were related with community formation and development, the corpus of the total messages was analyzed by the word frequency of mentioning of positive emotional content – specifically focusing on the use of ‘thanks’ and ‘welcome’ – the content that is relevant to the corpus of Wikipedia.<sup>3</sup> The results are summarized in Figures 2, 3.

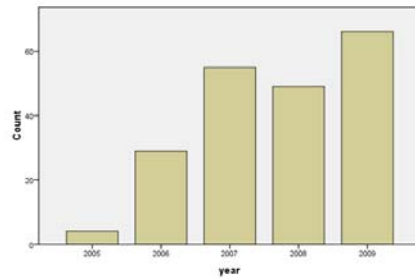


Figure 2. Thanks over time.

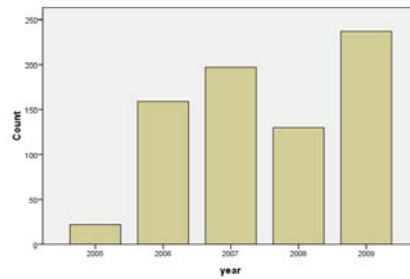


Figure 3. Welcome over time.

Figures 2 and 3 show that overall, as the community grew over time and more frequent exchanged occurred between the users, the references to thanking and welcoming increased. This finding indicates the friendly nature of the exchanges between the users.

3.2. USER INTERACTION OVER TIME

In order to assess the user prominence in communication over time, user interaction was plotted using social network analysis. The summary of the descriptive statistics of user interrelations over time is provided in Table 2.

Table 2. Users (nodes) and the number of messages (edges) over time.

Year	2005	2006	2007	2008	2009
Users (nodes)	39	227	299	214	340
Messages (edges)	30	176	213	154	301
message frequency (weighted edges)	62	323	445	321	386

<sup>3</sup> Wikipedia users engage into a practice where they greet new users, thus the content of “welcome” was treated as a relevant content.



Table 2 summarizes the nodes – the number of users per year as well as messages exchanged between users over time. Table 2 comprises the users who received or sent at least one message. Also, the unidentifiable users (who did not leave the signature with their name) were not included in this study since it was not possible to identify their roles. Therefore, the users who did not engage in message exchange in user talk pages as well as the unidentifiable ones were not included in this table – because the scope of this study which focused on the message exchange process between users. The results show that the community started out with relatively small number of users who exchanged approximately two messages while, the number of users increased ten times by 2009. The year 2007 shows a large increase in number of users as well as content exchanged among them.

### 3.2.1. User type centrality over time

To assess the user centrality over time by roles, user interaction was plotted over time using social network analysis. Users have been colored by roles where dark purple represents administrators, red represents registered users, while green was used for anonymous users, and black represents bots. The size of the nodes is based on indegree centrality measurement: the bigger is the node, the larger is the number of messages received by the users. Social network construction by the users has been constructed based on the techniques described by Massa (2011).

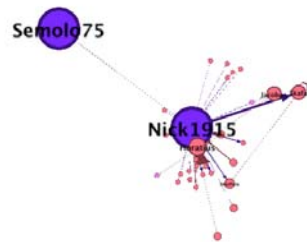


Figure 4. Directed graph of UTPs of message exchange in 2005.

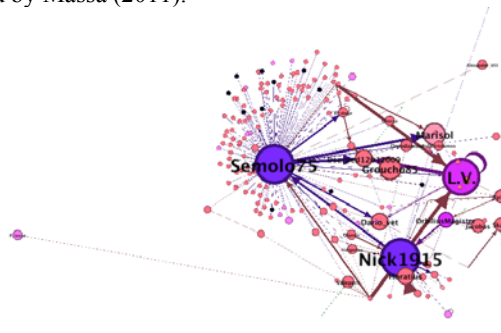
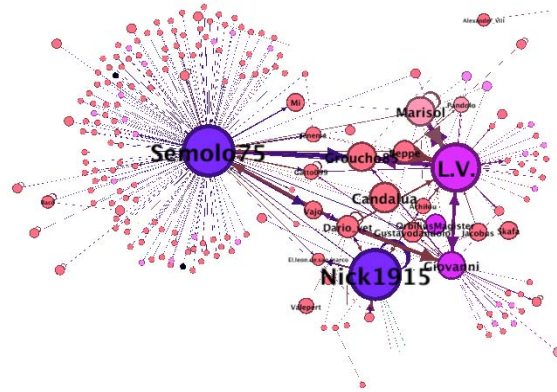


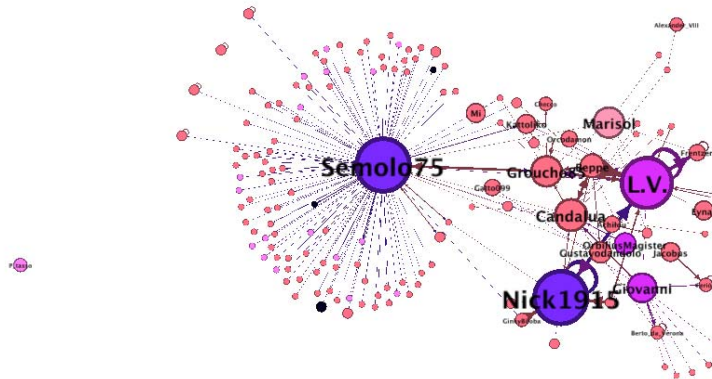
Figure 5. Directed graph of UTPs of message exchange in 2006.

Figure 4 represents the user interaction in user talk pages in the first year 2005. There were two administrators who had central roles in communication and they were the ones who were most actively engaged in messages exchange with the registered users. Majority of the messages were the welcome messages greeting new users who joined the network. In 2006 (see Figure 5) the network evolved when new members of the community joined Venetian Wikipedia. The same two administrators remained central, with a new one L.V. who became more central. Some registered users also got more central by engaging in conversations more actively.



*Figure 6.* Directed graph of UTPs of message exchange in 2007.

Figure 6 represents 2007 where the communication between the users got more active with less centered position of the first two users and with larger number of users who engaged in message exchange process.



*Figure 7.* Directed graph of UTPs of message exchange in 2008.

The year 2008 is similar to 2007 with slightly diminished activity by the users.

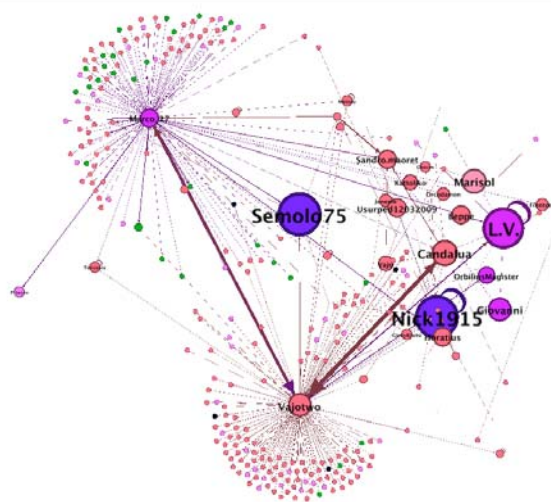


Figure 8. Directed graph of UTPs of message exchange in 2009.

In the year 2009 two new members got central positions – Vajotwo (top left of the graph) and Marco27 (top left of the graph). Those two users - who were not administrators - formed a star network around them and engaged in more active conversations, possibly by sending out multiple welcome messages to the new users thus gaining the central role and marginalizing previously central administrators - Semolo75 and Nick1915.

It is worth noting, that in none of the graphs anonymous users, nor bots become central or prominent members. This might be explained due to the fact that anonymous users were identified only with IP address which becomes each time unique when registered – therefore it is very unlikely that the users engage into multiple conversations with an anonymous user besides the few vandalism warning messages directed to these users. To assess the average number of years that users contributed in Wikipedia’s user talk pages, Table 3 was constructed.

Table 3. Number of users who contributed to UTPs from one to five years in Venetian Wikipedia.

#active users	753	28	10	4	2
#years	1	2	3	4	5

Table 3 shows that vast majority of the users contributed something only during one year. And it was only two users who stayed for all the five years since the beginnings of this Wikipedia. Therefore, the community of Wikipedia consists of volunteers who are constantly changing with a very small number of core users who contribute for an extensive period of time. User activity has been also observed by the number of messages produced by a single member. The results are summarized in Table 4.

*Table 4.* Proportion of messages received by users of Venetian Wikipedia.

# of messages received	1	2	3	4	5	6 - 10	11- 20	21-40	41-100	101-250	~500
# of users	670	40	25	14	10	12	10	4	6	4	1
% of users	84.1	5.0	3.1	1.8	1.3	1.5	1.3	0.5	0.8	0.5	0.1

Table 4 shows that majority of users received only one message and that it was only one user who received more than 500 messages. This analysis is cumulative, however, leads to consider that it is the small proportion of users who emerge as active ones – consistently with the graphs over time. In order to analyze the nature of interpersonal exchanges, further thematic analysis was performed.

In addition to an overall representation of the users in Venetian, the study revealed how many unique users would exchange contents on User talk pages of Venetian Wikipedia. Table 5 summarizes the user flows of the users over the five years of the existence of this Wikipedia. Table 5 summarizes only active users who sent at least one messages.

*Table 5.* User flows over five years.

	2005	2006	2007	2008	2009
Actual users	7	35	47	41	37
remained		3	8	12	9
left		4	24	30	31
new users		32	39	29	28

Table 5 shows that the number of actual users remained quite constant since 2006, however, the community is formed by the core users who constituted a smaller portion of the users with the highest numbers of users who change over time.

#### 4. Discussion

The study was based on the analysis of Venetian user interaction on Wikipedia UTPs as ways to observe community interaction which goes beyond the content creation. The analysis, regarding user content exchange revealed communicative this regional language community's specificity as well as exchange traits present in other larger Wikipedias.

Venetian Wikipedia was engaged into exchanges that referred to offline activities thus extending existing community bonds to offline environments, in addition to coordination of content that was attested in English Wikipedia (Viegas et al., 2007). A more fine grained analysis of at the other categories revealed that personal messages and request for information were more likely to be used in the first years of Venetian Wikipedia – 2006 and 2007 suggesting the emphasis on the interpersonal communicative value that emerged between its users in the first stages of this Wikipedia editing.

Thus, this analysis shows quite a strong reference to the identity of the users related to the territory – Venetian region which was used as a stimulus and motivating point for the users to contribute to this specific Wikipedia in Venetian language. Interest in this regional locations of the users could be explained through the fact that Venetian Wikipedia is tightly restricted to the users located in a specific geographic area – in contrast to other larger Wikipedias – such as English Wikipedia where the unifying communality of the users is based on the knowledge of English language and less to the specific geographic location. In addition, Venetian region is small enough that users would potentially know each other and there is quite a small number of people who speak this language – therefore it is only because of the enthusiasm of this small community that this Wikipedia was created and to serve a relatively small population of users, thus, this study shows that Venetian Wikipedia editors could be considered as a community of practice with shared tasks and well-defined roles and who share knowledge and resources (Feenberg, 1993; Preece & Maloney-Krichmar, 2003; Wenger, 1998).

Similarly to larger Wikipedias such as English Wikipedia, social network analysis revealed that the central users in coordination process were administrators. However, while administrators were particularly important in initial phases of a community, yet in two years a larger number of registered users got involved into central positions of message exchange. Given that user talk pages allow for a direct communication with a specific user, most of the times these were the administrators who got involved into direct communication. This finding suggests that the administrators were the more experienced and/or had more executive power to address concerns of the other users. Also, it is worth noting, that majority of interactions were based on a standard-semi automatic greeting message (in a form of welcome template) suggesting that administrators had a chance to be first to get engaged into interpersonal exchange with all the users who joined Venetian Wikipedia. Therefore, it is more likely that then users would refer to them in case they had questions.

This study shows that much effort has been placed by the community members to welcome and maintain new users to the platform by using techniques that have been identified in previous research in English Wikipedia – such as welcoming and personal content exchange (Choi et al., 2008). Consistent with previous research of English Wikipedia, the findings of the study situate members of Venetian Wikipedia as a community of practice that is based on professional exchange and contains personal components, however, exhibiting traits of regional community of practice.

## **5. Conclusion**

Broader implications of this study are the following. Given that regional language Wikipedia–Venetian Wikipedia–provides ways to their users not only to preserve their cultural heritage through the language use on regional language Wikipedia space and connect through shared contents of interest, but also, how it could serve as a community maintenance platform that unifies users with shared goals and extends communication to offline realm. By the virtue of collaboration process, and especially shared geographic location–Veneto region–this specific community of Wikipedia users

engaged into communication that goes beyond the content related to Wikipedia – users used UTPs to coordinate offline meetings, express their emotions and discuss issues related to their offline lives – such as holidays. Through these shared experiences, the community of practice goes beyond anonymous online contributions – it acts as a group with shared experiences. Through analysis of interpersonal content, the community of practice with shared goals looks more similar to an online community that emphasizes not only information and discussion but also and they offer professionals emotional support consistent findings reported in previous studies (Moon & Sproull, 2000; Sproull & Faraj, 1997; Williams & Cothrel, 2000a).

This study shows that Wikipedia provides spaces for interpersonal communication that occur directly between the users. In contrast to common uses of Wikipedia as knowledge depository, users engage in interpersonal exchanges that go beyond content creation and edit wars. Users of smaller Wikipedias such as the one in Venetian language engage into interpersonal communication that makes it similar to online communities with the interpersonal exchange and trying to get to know the other contributors who share common interest and the need to contribute to this specific environment.

While, the study of Venetian Wikipedia contributes to the general understanding of Wikipedia as online collaborative space by revealing dynamics of the users in Wikipedia, users role analysis show similar patterns to previous findings such as users who stayed for different periods of time were involved in different levels of activities (see (Bryant et al., 2005) for examination of socialization tactics (eg. Choi et al., 2008); and interaction between novice and experienced users (see Zelenkauskaitė & Massa, 2011 for the users of English Wikipedia), at the same time, Venetian Wikipedia sheds light on potential specificity of user exchange in this Wikipedia—where Venetian Wikipedia users got involved into interpersonal exchange that was tightly related to the geographic identity of the users. Future cross-language studies of Wikipedia should further investigate the question of cultural, geographical specificity of regional languages on Wikipedia to identify its common practices and potential benefits to regional language communities.

## References

- Brown, J. & Duguid, P. (1991). Organizational learning and communities of practice: toward a unified view of working, learning, and innovation. *Organizational Science*, 2(1), 40-57.
- Bryant, S., Forte, A., & Bruckman, A. (2005). Becoming Wikipedian: transformation of participation in a collaborative online encyclopedia. In Proceedings of ACM GROUP: International Conference on Supporting Group Work, (Sanibel Island, FL, 1-10).
- Callahan, E. S., & Herring, S. C. (2011). Cultural bias in Wikipedia content on famous persons. *Journal of the American Society for Information Science and Technology*, 62: 1899–1915.
- Choi, B., Alexander, K., Kraut, R. E., & Levine, J. M. (2010). Socialization tactics in Wikipedia and their effects. In *Proceedings of the 2010 ACM conference on Computer supported cooperative work (CSCW '10)*. ACM, New York, NY, USA, 107-116.
- Danet B., & Herring, S. C. (2003). Introduction: The Multilingual Internet, *Journal of Computer-Mediated Communication*, JCMC 9 (1).
- Emigh, W. & Herring, S. (2005). Collaborative authoring on the web: A genre analysis of online encyclopedias. *Hawai'ian International Conference on System Sciences* (Hawaii, Jan 2-6, 2005).

- Feenberg, A. (1993). Building a Global Network: The WBSI Experience. In L. M. Harrisim (Ed.), *Global Networks: Computers and International Communication* (pp. 185-220). Cambridge: MA: MIT Press.
- Glasser, B. G. & Strauss, A. L. (2009). *The discovery of grounded theory: strategies for qualitative research*, Aldine Transaction: New Jersey.
- Hara, N., Shachaf, P., & Hew, K.F. (2010). Cross-cultural analysis of the Wikipedia community. *Journal of the American Society for Information Science and Technology*, 61(10), 2097–2108.
- Herring, S. C. (2004). Computer-mediated discourse analysis: An approach to researching online behavior. In: S. A. Barab, R. Kling, and J. H. Gray (Eds.), *Designing for Virtual Communities in the Service of Learning* (pp. 338-376). New York: Cambridge University Press, 2004.
- Kittur, A., Suh, B., Pendleton, A., & Chi, E. H. (2007). He says, she says: conflict and coordination in Wikipedia. In CHI '07: *SIGCHI conference on Human factors in computing systems*, pp. 453–462, New York, NY, USA, 2007. ACM Press.
- Liao, H. (2009). Conflict and consensus in the Chinese version of Wikipedia. *IEEE Technology and Society Magazine*. Retrieved February 20, 2012, from [http://www.ieeeessit.org/technology\\_and\\_society/default.asp](http://www.ieeeessit.org/technology_and_society/default.asp)
- Lim, E.-P., Kwee, A. T., Ibrahim, N. L., Sun, A., Datta, A., Chang, K., and Maureen. (2010). Visualizing and exploring evolving information networks in Wikipedia. In G. Chowdhury, C. Khoo, and J. Hunter (Eds.). *ICADL 2010*, LNCS, (pp. 50-60). Springer-Verlag: Berlin Heidelberg.
- Massa, P. (2011). Social networks of Wikipedia. *ACM Hypertext 2011: 22nd ACM Conference on Hypertext and Hypermedia* (Eindhoven, The Netherlands, June 6-9, 2011).
- Moon, J. Y. & Sproull, L. (2000). Essence of distributed work: The case of the Linus kernel. *First Monday*, 5(11).
- Pfeil, U., Zaphiris, P., & Ang, C. S. (2006). Cultural differences in collaborative authoring of Wikipedia. *Journal of Computer-Mediated Communication*, 12, 88–113.
- Preece, J. & Maloney-Krichmar, D. (2003). Online Communities. In J. Jacko and A. Sears, A. (Eds.) *Handbook of Human-Computer Interaction*, (pp. 596-620). Lawrence Erlbaum Associates Inc. Publishers. Mahwah: NJ.
- Sproull, L. & Faraj, S. (1997). The Network as social technology. In S. Kiesler (Ed). *Culture of the Internet* (pp.35-51). Mahwah, NJ: Lawrence Earlbaum.
- Stvilia, B., Al-Faraj, A., and Yi, Y. (2009). Issues of cross-contextual information quality evaluation—The case of Arabic, English, and Korean Wikipedias. *Library & Information Science Research*, 31(4), 232-239.
- Viegas, F. B., Wattenberg, M., Kriss, J., & van Ham, F. (2007). Talk before you type: Coordination in Wikipedia. In *Proceedings of 40th Annual Hawaii International Conference on System Sciences (HICSS'07)*.
- Viegas, F., Wattenberg, M., & Dave, K. (2004). Studying cooperation and conflict between authors with history flow visualizations. *CHI 2004*, Vienna, Austria, 575-582.
- Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. Cambridge University Press: Cambridge, MA.
- Williams, R. L. & Cothrel, J. (2000a). Four smart ways to run online communities. *Sloan Management Review*, Spring, 81-91.
- Zelenkauskaite, A. & Massa, P. (2011). Digital libraries and social web: Insights from Wikipedia users' activities. In *Proceedings of IADIS Multiconference on Computer Science and Information Systems (MCCSIS)*, July 20-26, Rome, Italy.