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Introduction

- 1 Most of the history of humanity is populated by dark nights, due to the fact that public lighting is a fairly recent conquest but also because, marked by the cycles of nature, human activities have for a long time been concentrated during the daytime hours. As is well known it was with the urban industrial societies, developed in Europe at the end of the 18th century, that nights started to be illuminated. The factory lights led to the first night shifts, anticipating what, over the next century, would happen to recreational activities, in places of entertainment, and to travel, in those of mobility. Conquering the night, as this process has often been called, however did not happen everywhere and there are many places where nights continue to be dark, even in modern countries. It is undeniable however that, compared to the past, night-time hours in people's agendas are increasingly taken up with activities (Grazian 2009) and that the borders between day and night are less and less well-defined.
- 2 Indeed, in densely populated places, like today's cities, nights are rarely without activity (Smith and Hall 2013) and it is increasingly more difficult to establish borders for the night. Empirical studies dedicated to this topic share a choice of setting these borders at those points where most of the population stops or restarts activities before and after sleeping. This paper shares this choice and gives the results of a secondary analysis carried out on the latest survey on the use of time (2008-2009) by the Italian National Institute of Statistics (ISTAT). In particular, this study aims to analyse the rhythms of the night in Italy devoting attention to the duration, the density and the temporal sequence of night activities.

The night as an emerging time-space framework

- 3 The topic of the use of time became an object of interest, not just scientific, following the spread of the problems related to its management. A well-established tradition in sociological and geographical studies has emphasised the changing of practices within a 24-hour day, above all between broad activities of personal care, leisure, paid and/unpaid work and domestic labour (Southerton 2006). According to findings of surveys focused on the use of time, both in Italy and in the major Western Countries, people spend less and less time doing physiological activities such as sleeping and eating (Fisher and Robinson 2011). Most studies observe a tendency to a time-space compression and fragmentation of the daily activities, in contrast with the distribution of those practices in the past (Gershuny 2000, Gershuny 2009). The reduction and the increasing flexibility of time spent in physiological activities are considered practices that affect people well-being: it is now widely recognised that well-being depends not only on income and personal satisfaction but also on the quality of the social and environmental context and on how people engage their activities in relation to their time (Southerton 2003, Gershuny 2011).
- 4 Change in time-use and in the distribution of activities within a 24-hour day affect people's quality of life. The entry of women into the workforce and, more generally, the inclination of people to carry out an increasing number of activities, posed for the first time the problem of lack of time and the issue of balancing paid and domestic work (Gershuny 2009). About this issue Luhmann wrote his well-known article on the scarcity of time and the urgency of deadlines (1971) opening the field to studies into the complexity of everyday time in subsequent decades. Studies first by Vanek (1974) and then by Hochschild (1997) started to speak of time density, the tendency to do more activities in units of time that, as they are fixed, end up as being seen as scarce. As Southerton (2006: 451) observes, the day is the context for the allocation of composite practices distributed in different periods of time (morning, afternoon, evening and night) and week (weekdays, Saturday, Sunday). The temporal organization of the day can be characterized as being constituted by practices that have a fixed position during a 24-hour day and these are surrounded by interrelated practices that have a more malleable position within sequences, leaving a stock of practices contingent on filling empty slots within the day. The reduction of time spent in physiological activities as well as the temporal compression and segmentation of daily activities bring to an emerging role of the night as new time-space framework. The experience of night time is conditioned by the different organization of social practices of people. Through the analysis of night's activities it is possible to furthering our understanding of the ways in which not only night assumes an important and different role for people, but also to find out the plurality of facets/identities that define the night for different categories of people.

Analytical approach

- 5 This study is carried out on the data collected by the Italian National Institute of Statistics (ISTAT) in the third national survey on the use of time (2008-09). A probabilistic sample of 44,606 cases and 18,250 families was asked to complete a daily and weekly time-budget diary related to a weekday, a Saturday and a Sunday (in two different periods of the year, spring-summer and autumn-winter), specifying the time allocation and duration of all

daily and night activities. This paper presents the results of a secondary analysis aimed at examining the rhythms of night - notably the duration, the density and the sequence of activities accomplished by people during the night - in order to verify the hypothesis on the reduction of time spent in physiological activities (sleeping) and on the increasing number and density of night's activities in particular in urban environment.

- 6 After a preliminary descriptive analysis of the time spent sleeping, aimed also at finding out the start and the end of the night, the study explores the temporal rhythms of night activities by the analysis of the cumulative frequencies of participation on a weekday and on a Saturday, paying particular attention to the night's hours. A cluster analysis (carried out by the k-means procedure) is the multivariate statistical method used to identify groups of people characterized by a similar use of night (time activities). Finally, the aims to better understand the temporal sequence of activities accomplished during the night is investigated through the statistical method of the social network analysis (applied just to the sub-sample of young people).

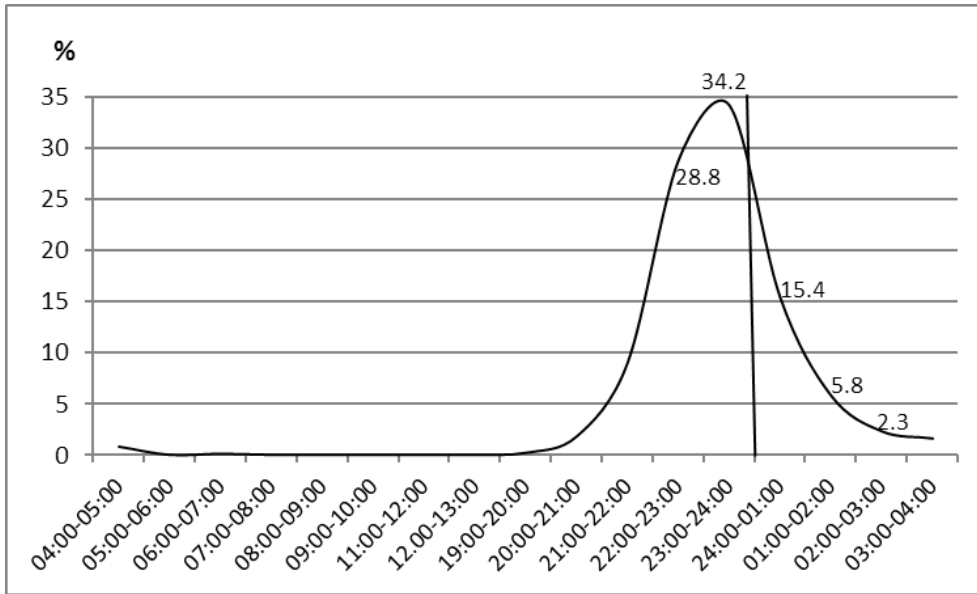
The start of the night

- 7 The borders of the night are normally allocated as those moments during the day when most people stop or start doing the activities that precede or follow sleeping. The reference to sleep is justified by the fact that, although shorter than in the past (Fisher and Robinson 2011), this continues to be the main night-time activity. Considering only the population aged fourteen and over, in 2008-2009 8 hours and 17 minutes are dedicated to sleep (8 hours and 8 minutes on an average day of the week, 8 hours and 10 minutes on Saturday and 9 hours and 7 minutes on Sunday, see table 1). Apart from the (expected) differences in duration between the different days of the week, this is still a large amount of time. Compared to past decades, time spent sleeping has slightly decreased, as has that spent on all the other physiological activities (eating and personal care, Colleoni 2014, Istat 2007, 2011, 2012).
- 8 In detail, comparing data from the 1988-1989 survey with those from the 2008-2009 survey, time spent on physiological activities has decreased, for working males from 11 hours and 24 minutes to 10 hours and 48 minutes; for working females from 10 hours and 56 minutes to 10 hours and 45 minutes; for male students from 11 hours and 39 minutes to 11 hours and 19 minutes and for female students from 11 hours and 41 minutes to 11 hours and 29 minutes; for elderly males from 13 hours and 26 minutes to 12 hours and 31 minutes and for elderly females from 12 hours and 54 minutes to 12 hours and 20 minutes.
- 9 Whereas comparing time spent sleeping with that of populations in other countries, we discover that Italian sleep slightly less than the European average (8 hours 25 minutes MTUS 2014).
- 10 Comparing data from the latest time use surveys in over 25 countries, archived by the MTUS (Multinational Time Use Study, an association founded in the mid-seventies by Jonathan Gershuny at the Centre for Time Use Research at Oxford University in the United Kingdom, with a view to promoting time use studies and research), it can be observed that Italian are one of the populations that sleep less (together with Norway, Sweden, Germany and Slovenia). In the top places for time spent sleeping we find the French, Latvians, Hungarians, Spanish and Finnish. Interesting international comparisons

of time use data are also provided in texts by Gershuny (2000) and Fisher and Robinson (2011).

- 11 Although these are only slight differences, the datum deserves attention, if only because it counters the trend of commonly shared opinions regarding the presumed longer time spent sleeping by Latin peoples (and, vice versa, the equally presumed shorter time of Nordic peoples).

Table 1 – Time spent sleeping by people aged 15 and over, by occupation - Weekly daily averages



- 12 Time spent sleeping decreases as age increase, down to a minimum of 7 hours and 55 minutes for the 46-55 age group and increases in successive age groups (with a minimum of 9 hours and 16 minutes for the over 75s). This is, once again, fairly predictable data, in the same way as the significantly higher than average times for children, the widowed elderly and women who live on the Italian islands. While living in larger cities decreases, albeit slightly, time spent sleeping, it is the regions in the South of Italy (but not on the islands) that register the shortest times (Puglia in particular, see table 2).

Table 2a – Time spent sleeping by people aged 15 and over, by region - Weekly daily averages

Region		Region	
Piedmont - Valle d'Aosta	8:15	Lazio	8:15
Lombardy	8:18	Abruzzo	8:21
Trentino Alto-Adige	8:29	Molise	8:22
Veneto	8:13	Campania	8:11
Friuli Venezia Giulia	8:17	Puglia	8:02
Liguria	8:19	Basilicata	8:19

Emilia Romagna	8:18	Calabria	8:22
Tuscany	8:21	Sicily	8:24
Umbria	8:33	Sardinia	8:15
Marche	8:21		

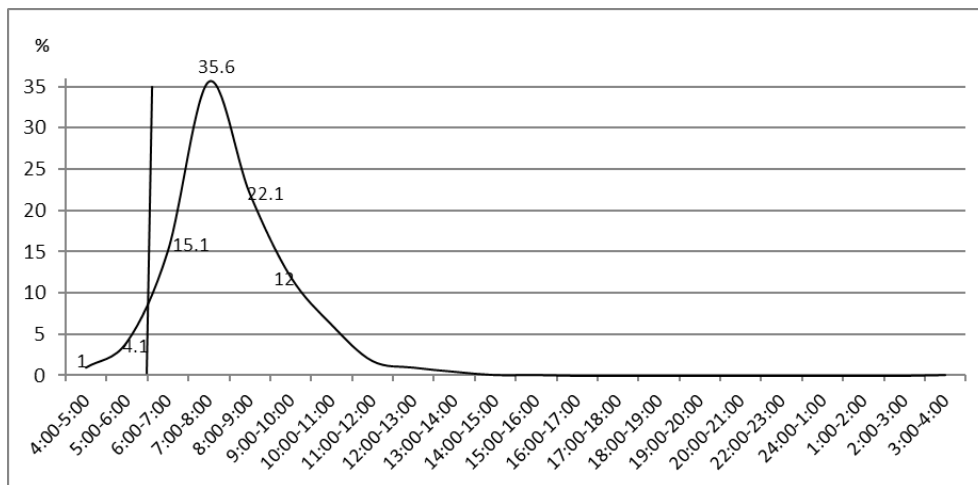
Table 2b – Time spent sleeping by people aged 15 and over, by geographic distribution and size town/city - Weekly daily averages

Geographic distribution	
Northwest	8:17
Northeast	8:17
Central	8:19
Southeast	8:11
Islands	8:22
Size of town/city	
Central metropolitan zones	8:12
Peripheral metropolitan zones	8:16
> 2,000	8:20
2,001 – 10,000	8:17
10,001 – 50,000	8:18
> 50,000	8:16

- 13 If the night starts when most people go to sleep, in Italy it starts at 10:54 pm on weekdays, at 11:06 pm on Saturdays and 10:59 on Sundays, without significant differences for males and females. The image of families with fathers awake while mothers and children sleep seems, therefore, to belong more to the past than the present. At 11:00 pm around 41% of the population is asleep, a figure that increases to 75% at midnight (see chart 1).
- 14 As sleeping, in the same way as other physiological activities, interests almost all the population, it is interesting to see how many people go to sleep after midnight. This figure is 25% of the population, 20% on an average weekday, 32.1% on Saturday and 23 on Sunday (see table 3). While expected, the Saturday figure deserves attention, empirically supporting the perception of the high density of activity, at least, in the early part of the night and the need to promote relative management policies.

15 This is true especially in metropolises and in cities with more than 50,000 inhabitants, where the percentage of people going to sleep after midnight is significantly higher than the average (without any sizable differences between the Italian regions). Some populations are more interested by the phenomenon of later sleep time, youngsters between 15-25 years of age, as expected, 59% of whom go to sleep after midnight on Saturdays, but also workers in the catering, finance and school sectors and, in general, people with a higher education. The decrease in leisure time of people with higher-level qualifications and professions, observed in many international surveys (Gershuny 2000, 2011), seems therefore to also affect sleeping. Vice versa, those with lower-level qualifications, the elderly and also inhabitants of small towns in Veneto and Trentino Alto Adige, register percentages of lower than 15% for people going to sleep after midnight.

Chart 1 – Sleep start time (Percentages, Average day)



NOTE: THE CHART SHOWS PERCENTAGE FREQUENCIES OF PEOPLE WHO GO TO SLEEP AT EACH HOUR. THE FIGURES ONLY REFER TO TIMES DURING THE NIGHT, 22:00-23:00 (28.8%), 23:00-24:00 (34.2%), 24:00-1:00 (15.4%), 1:00-2:00 (5.8%), 2:00-3:00 (2.3%) AND 3:00-4:00 (1.6%). AS IN ALL INTERNATIONAL TIME USE SURVEYS, INCLUDING THE ITALIAN ONE, THE DAY IS CONSIDERED AS STARTING AT 4.00 AM AND ENDING AT THE SAME TIME ON THE FOLLOWING DAY (EUROSTAT 1999).

Table 3 – Sleep start time (selected from 8.00 pm to 4.00 am), by type of day

Percentages

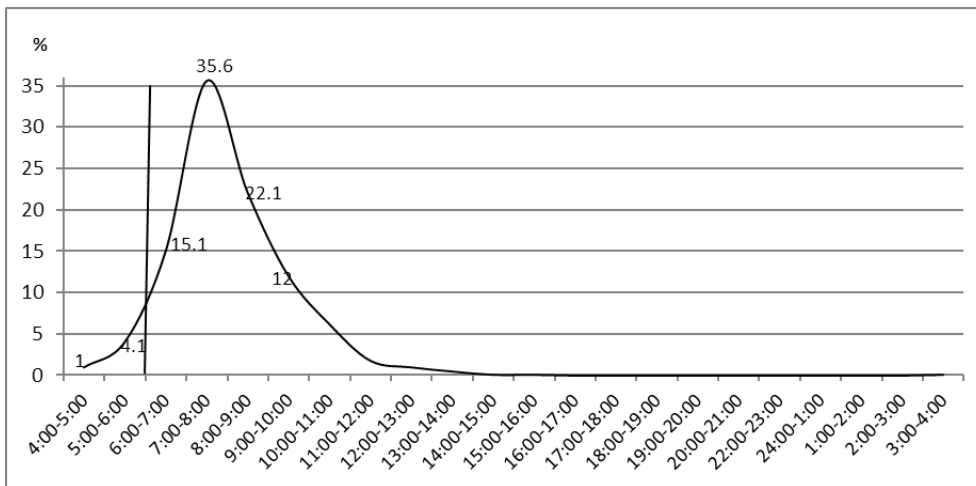
Time	Monday-Friday	Saturday	Sunday
20:00-21:00	1.9%	1.4%	2.1%
21:00-22:00	10.0%	7.7%	9.3%
22:00-23:00	31.9%	24.6%	29.6%
23:00-24:00	0%	32.4%	35.0%
24:00-01:00	13,3%	17.5%	1,6%

01:00-02:00	4,7%	7.8%	4.9%
02:00-03:00	1,4%	4.0%	1.5%
03:00-04:00	0.9%	2.8%	1.0%
Total after 24:00	20.3%	32.1%	23.0%

The end of the night

- 16 If the night starts when most people go to sleep, it finishes when the same number of people wakes up. On a weekday, this happens between seven and eight o'clock in the morning, to be precise at 7:25 am, on Saturday at 7:54 am and on Sunday at 8:27 am. The greatest frequency of people waking up is between 7:00 and 8:00 am, 35%, 8:00-9:00 am, 22.1% and 6:00-7:00 am, 15.1% (see chart 2).
- 17 In the same way as for the start of sleep, again for its end we are interested in knowing about marginal subjects, those who wake at a significantly earlier time to the average. Around 5% of the Italian population wakes before six in the morning, 7.1% on an average weekday, 4.7% on Saturday and 3.2% on Sunday.

Chart 2 – Sleep end time (Percentages, Average Day)



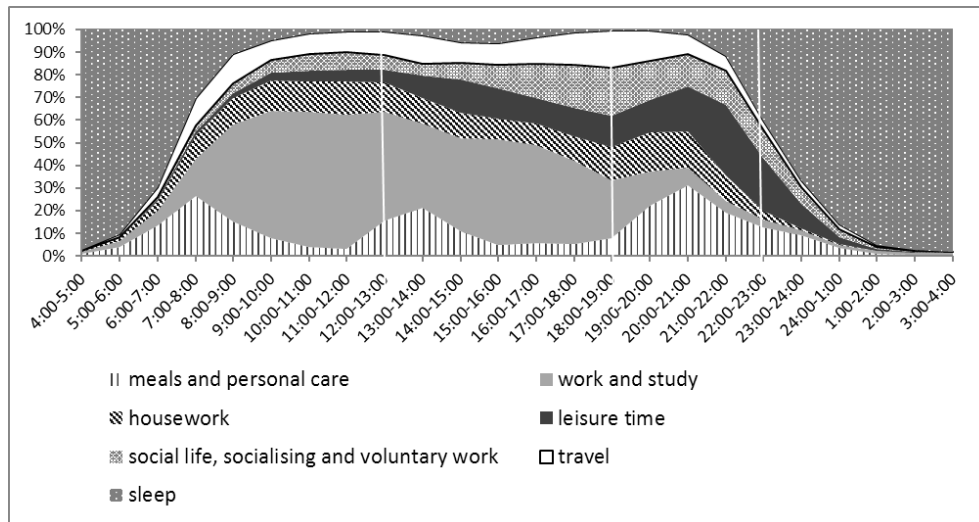
- 18 In the past it was mainly farmers and, later, in the industrial era, factory workers who got up early in the morning. Farmers, and more in general workers in the primary sector, still today show much higher percentages of “lark” people, a good 19%, accompanied however by new categories of people who have replaced the factory workers. These are foreigners who presumably do manual labour and have early start times, and also those who work in the construction, transport and communications sectors and inhabitants in the peripheral zones of big cities (who, in regions like Lazio, Lombardy and Veneto, register early morning percentages of 18%).
- 19 While in the past this latter figure could be explained by the fact that it was mainly factory workers who lived in peripheral zones, today, however, it leads to different explanations, in particular the need for those living in the suburbs to wake early in order

to get to their workplace on time. Results from national mobility surveys, for their part, seem to corroborate this explanation, showing that the distances covered by systematic travel, above all by those who live in sub- and peri-urban zones, are increasingly greater (Scheiner 2010, Isfort 2013, Colleoni 2013).

Night-time activities

- 20 As we have seen, the night continues to be a time for sleeping for most of the population, despite the hours dedicated to this activity having decreased compared to the past and – for some kinds of days, cities and populations – there being significant percentages of people going to sleep after midnight and waking up before six in the morning. Activities undertaken by those not sleeping have always aroused the curiosity of novelists and film directors and fuelled the imagination and, often, the superstitions of popular beliefs. Our analysis of what Italians do at night tells us that, as we might expect in a national study, none of the daytime activities is missing at night, despite the people doing them varying a lot depending on the time and the kind of action. Chart 3 below shows the participation profiles for all daytime and night-time activities, with a minimum temporal detail of ten minutes. The activity categories are those adopted by all-time use surveys in countries belonging to the MTUS (Multinational Time Use Study) consortium, of which, as we have already mentioned, Italy is a member.
- 21 The categories are the following: meals and personal care (including hygiene and medical care), work and study (including professional training), housework (including purchasing goods and services and caring for and helping family members), leisure time (which includes the mass media, the arts, pastimes and games, sport and open-air activities, entertainment, cultural activities and rest), social life (in other words conversations, visits, participation, voluntary work, free help to other families, social clubs) and travel.
- 22 The outlines of the profiles of the individual activities show the daytime and night-time dynamics of frequency of participation while the thickness indicates their density. As we might have expected, the Italians' weekly daily average (from Monday to Friday) is dominated by paid work and study, especially in the mornings. Moving towards late afternoon and evening the time balance of activities improves, reaching a maximum level of variability between 7:00 pm and 10:00 pm. After 11:00 pm, sleep gradually gains growing participation quotas, despite all the activities continuing to be present to varying degrees.

Chart 3 – Frequency of activity participation, by time of day (Percentages, Average weekday Monday-Friday)



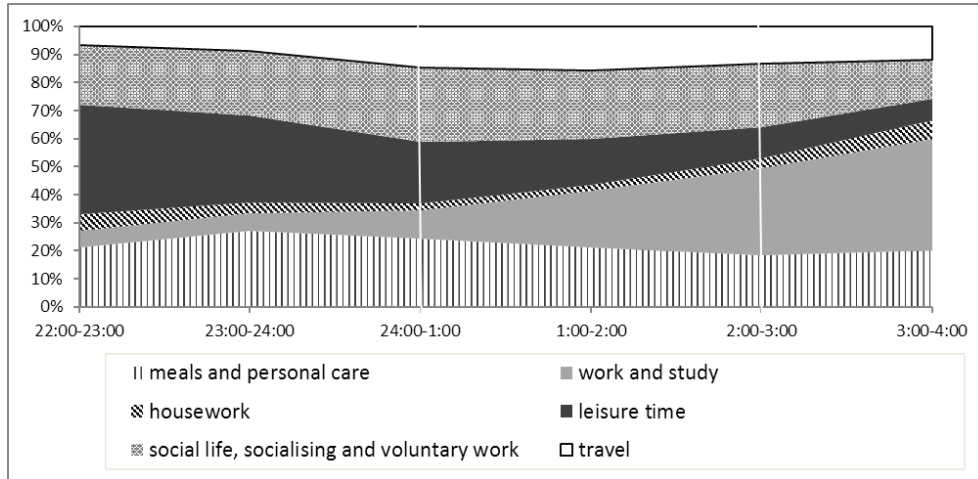
- 23 In the same way that daytime activities have different participation profiles, denser in some time bands and in others less so, again at night they are not always present to the same extent. The night of an average weekday for Italians sees three different time bands of activity (see table 4). In the first, from 10:00 pm to midnight, there is a prevalence of leisure time activities, in the second, from midnight to 2:00 am, simultaneously meals and personal care with socialising and social participation and in the last, from 2:00 am to 4:00 am, work. It can clearly be seen on chart 4, which shows frequencies of activity participation during night-time hours, discounting those dedicated to sleeping. While the density of the night-time leisure-time profile tends to lessen with the passing hours, that of work increases, reaching its greatest relative weight after 2:00 am. It would therefore not seem incorrect to speak of nights in the plural as these too, just like days, are not indifferent temporal containers of activity, but social formations that participate in the activity identification process. An identity that, as we know, varies depending on the people doing the activities, their location and the time of night they occur (Sorokin and Merton 1937, Sorokin 1964, Zerubavel 1982). Different duration and rhythms of activities that help to define the character of nights, the knowledge of which is a cornerstone for the activation of effective urban policies for administration of night times.

Table 4 – Frequencies of participation (selection from 10:00 pm to 4:00 am) (Percentages, Average weekday Monday-Friday)

Time	Meals and personal care	Work and study	Housework	Leisure time	Social life, participation and voluntary work	Travel	Sleep	Total
22:00-23:00	14.2	4.1	3.9	26.3	14.4	4.5	45.2	67.4
23:00-24:00	10.9	2.6	1.4	12.6	9.2	3.5	80.4	40.2
24:00-1:00	3.6	1.5	0.4	3.3	3.9	2.2	93.4	14.9
1:00-2:00	1.1	1.0	0.1	0.8	1.2	0.8	97.7	5.0

2:00-3:00	0.5	0.9	0.1	0.3	0.6	0.4	98.8	2.8
3:00-4:00	0.4	0.8	0.1	0.1	0.3	0.2	99.2	2.0

Chart 4 – Frequencies of activity participation (excluding sleeping), by time of night (Percentages, Average weekday Monday-Friday)



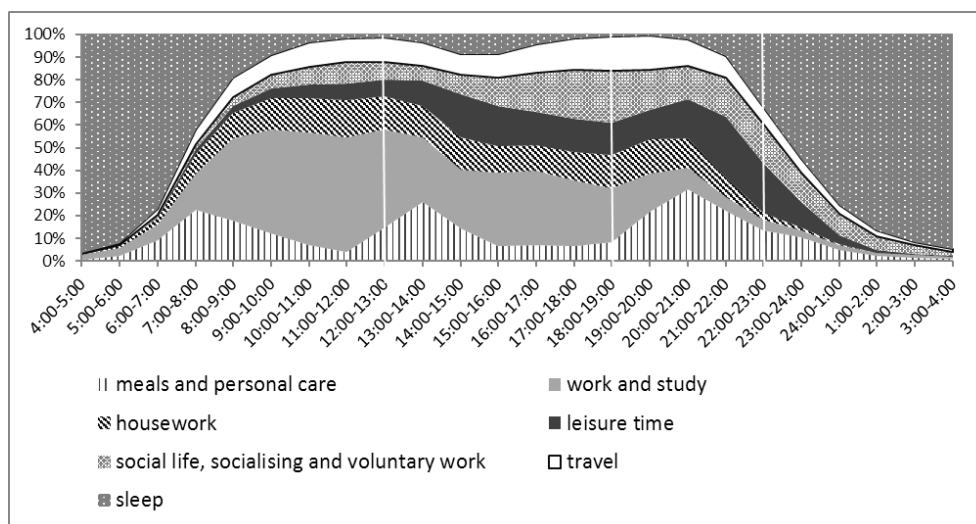
24 Considering the entire male and female population in the sample, rather than specific populations of age, family structure and occupation, it is clear that there is no great difference between general temporal profiles. However, some interesting differences can be seen when comparing frequencies of activity participation of males and females in the three above-mentioned time bands at night. In the first part, as in the general sample, there is a prevalence of leisure time activities accompanied, however, for males by socialisation and for females by meal preparation and personal care (see table 5). Social life occupies the central time band at night (midnight – 2:00 pm) of both genders (helped by meals and personal care). It is during the final part of the night that gender differences become relatively bigger, showing a greater concentration for males towards work activity and a greater dispersal for females between different activities (work, but also social life and, also, preparation of meals and personal care).

Table 5 – Frequency of participation (selection from 10:00 pm to 4:00 pm) by gender (Percentages, Average weekday Monday-Friday)

		22:00-23:00	23:00-24:00	24:00-1:00	1:00-2:00	2:00-3:00	3:00-4:00
Meals and personal care	Males	13.5	11	3.9	1.3	0.6	0.4
	Females	14.9	10.7	3.3	0.8	0.4	0.4
Work and study	Males	4.6	2.7	2	1.4	1.2	1
	Females	3.4	2.4	0.8	0.5	0.5	0.4
Housework	Males	3.2	1.3	0.5	0.1	0.1	0.1

	Females	4.3	1.5	0.4	0.1	0.1	0.1
Leisure time	Males	2.,3	12.8	3.6	0.9	0.4	0.1
	Females	27.3	12.4	3	0.7	0.2	0.2
Social life, participation and voluntary work	Males	17.7	11.1	4.7	1.6	0.8	0.3
	Females	11.7	7.7	3.4	1	0.5	0.2
Travel	Males	5.4	4.3	2.8	1	0.4	0.3
	Females	3.5	2.6	1.5	0.6	0.3	0.2
Sleep	Males	43	77.9	91.9	96.9	98.4	98.9
	Females	47.3	82.8	94.9	98.5	99.2	99.4

- 25 The profiles for daytime and night-time rhythms for activities on Saturday are close to those of the average weekday, with fairly predictable differences for work (whose weight tends to decrease especially on Saturday afternoon) and for leisure time activities and social life (which take on increasing importance during the course of the day, see chart 5). It is interesting to observe that daily profiles for activities on weekdays and Saturdays start to be significantly different only from the afternoon hours. This reminds us that time differences often weigh more heavily on the choice of activities than the type of day.
- 26 As was to be expected, Saturday night has more frequencies of activity participation other than sleeping than those for weekdays (see table 6). Throughout all the time bands at night, these are more than those for Saturday, from a minimum of 3.3% at 3:00-4:00 pm to a maximum of +15% at 11:00 pm-midnight. However, compared to an average weekday, Saturday nights are less variable, showing a greater concentration of leisure time activities from 10:00-11:00 pm and social life, after 11:00 pm. This is justified by the fact that it is the day before Sunday, when not only do people not work, but they also take a break from preparing meals and personal care. On Saturday night, the different time bands when the activities occur, observed on weekdays, make room for more even time management that rotates around socialising.

Chart 5 – Frequencies of activity participation, by time of day (Percentages, Saturday)**Table 6 – Frequencies of participation (selection from 10:00 pm to 4:00 am) (Percentages, Saturday)**

Time	Meals and personal care	Work and study	Housework	Leisure time	Social life, participation and voluntary work	Travel	Sleep	Total
22:00-23:00	14.8	5.0	3.3	23.9	18.8	8.2	34.9	73.9
23:00-24:00	12.8	3.7	1.5	13.6	16.2	7.3	67.3	55.1
24:00-1:00	5.6	2.0	0.6	4.4	10.9	4.7	85.0	28.2
1:00-2:00	2.3	1.4	0.2	1.3	6.4	2.7	92.5	14.4
2:00-3:00	1.4	1.2	0.1	0.6	3.9	1.6	96.0	8.8
3:00-4:00	0.9	0.9	0.1	0.2	1.9	1.3	98.1	5.3

27 Table 7 shows the findings of the cluster analysis aimed at identifying groups of people characterized by a similar use of time activities during a weekdays night and a Saturday night. Three are the clusters of categories of users on the weekday night: the largest (which includes the majority of people) is composed by adults and especially old-old people who spend the night sleeping, especially in medium and large cities and in suburban areas. The second cluster (35% of total) comprises people who spend the night sleeping but also watching TV, particularly, in metropolitan cities. The last one is characterized by the presence of young people engaged in a broader range of activities, sleeping, social life, personal care and leisure. Saturday night, traditionally devoted to leisure and social life, shows four clusters: the largest one accounts for 56% of people and includes old-old people who spend the night sleeping and, less, watching TV. A peculiar interest in watching TV characterizes the second cluster that contains young adults and seniors (19.7% of total). Follows the most heterogeneous cluster, from the point of view of

the range of activities, that includes people engaged in several social and cultural activities. Finally, the smaller cluster (6%) is mainly composed by males living in peri-urban areas involved in activities related to social life (eating, mobility...).

Table 7 – Cluster by size, type of day and night activities

Cluster number	Size cluster (% of population)	Main night activities
Weekday night		
1	52	Sleeping
2	35	Sleeping; Watching TV
3	13	Sleeping; Social life; Mobility for social life; Personal care; Leisure
Saturday night		
1	55.8	Sleeping; few time Watching TV
2	19.7	Sleeping; much time Watching TV
3	18.4	Sleeping; Social life; Eating; Mobility for social life; Personal care; Leisure; Sport
4	6	Social life; Sleeping; Mobility for social life; Eating

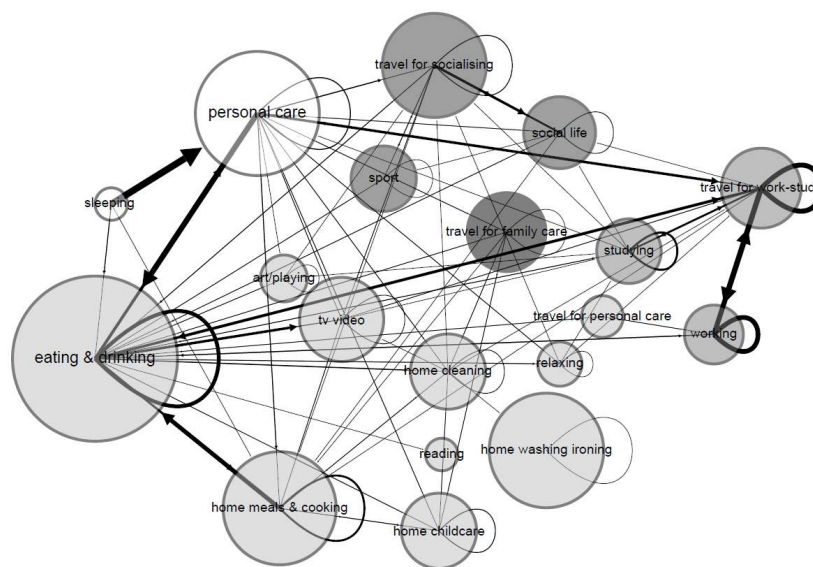
Density of daytime and night-time activities

- 28 The results of the first surveys into time use by ISTAT showed that even Italy was not immune as, during the period between 1988-89 and 2002-2003 (the reference years for the first two surveys), both the number of daily activities and their temporal overlapping increased. During the two-year reference period for the survey analysed in this paper, the temporal density of activities was measured differently, calculating cumulative frequencies of activity participation and observing their daily profile. The highest frequency values are to be found for the daily units characterised by the greatest density of different activities. Vice versa, there where almost all the people carry out the same activity, as in the case of sleep in certain hours of night, the indicator will have values close to 100. As chart 6 shows, cumulative frequencies of participation have a minimum value of 100.9 at 3:00-4:00 am for the female population and a maximum of 172.3 at 8:00-9:00 am again for females. The male day reaches its maximum activity density level one hour earlier, from 7:00 to 8:00 am, with a frequency of participation of 170.7. Gender profiles are fundamentally synchronic, even though females show denser temporal activity than males in the morning (from 8:00 am to 1:00 pm) and early afternoon (from 1:00 pm to 3:00 pm). From 5:00 pm to 8:00 am (in particular until 9.00 pm) male time

shows significantly denser activity than that of females, while at night the two genders do not present any notable differences in density.

- 29 In conclusion, the high density of daily activities, is a phenomenon that involves both males and females, albeit at different times of the day. It is, however, a phenomenon that remains essentially a daytime one, and this could not be otherwise in societies where sleep continues to take up most of the night-time hours. If confirmed by results from upcoming surveys into time use, the growing presence of night-time activities will lead to an increase in their density. The result, predicted above all by non-scientific papers, of having soon to deal with the problem of scarcity of night-time does however seem unrealistic to us. Nevertheless, the trend of nights being increasingly more similar to days is a negative result that should, at least, be cause for debate on measures to combat it.

Chart 6 – Cumulative frequencies of activity participation, by time of day and gender (Percentages, Average weekday)



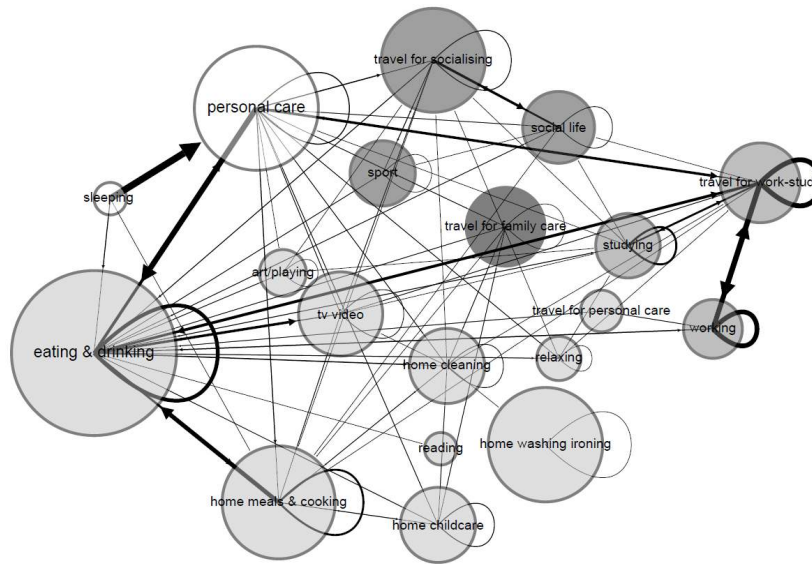
Relations between night-time activities

- 30 A final perspective of analysis that helps to reveal the night-time social calendar is analysis of temporal activity sequences. While it is true that time is a social construction that reflects the rhythm of collective life, analysis of temporal activities sequences, in particular of young people, can reveal an emergence and confirmation of new models in social time use.
- 31 The night is in fact becoming, above all for young people, the main time for constructing interpersonal relations and for modelling the largest part of social life; suffice to consider one figure that estimates that 53% of young people spend a variable part of their Saturday night on social activities, either directly, mainly meeting friends in public places or participating in collective events or indirectly, travelling to reach some or other location for socialising. The night of young people could therefore be thought to represent an emerging model of collective life in contemporary society, both as a time for socialising,

but also as an infrastructure of the contemporary city or as an innovative economic and cultural environment.

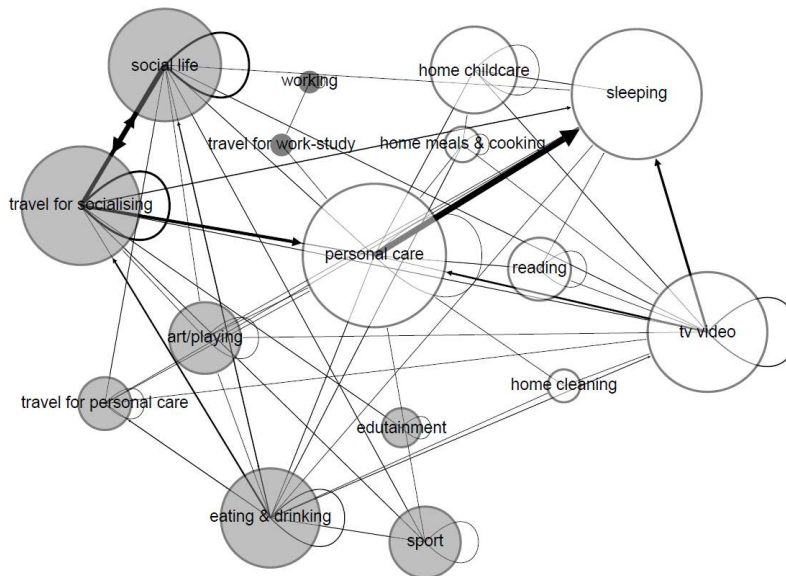
- 32 Below are given the main results from analysis of the temporal sequences of young people, comparing the structure of time use by young people over an entire weekday, from Monday to Friday, with behaviour on Saturday night, which is when maximum concentration occurs for the innovative night socialising model.
- 33 This analysis was carried out by using the activity sequences of the population sample between 15 and 34 years of age, approximately 3,000 respondents, interviewed about their activities over an entire day from Monday to Friday and the same regarding activities on Saturday night. Couples of activities carried out in sequence were reconstructed for each person, for example, meals-study, mobility-social life, personal care-sport. The activity sequences for young people during the two temporal bands indicated were elaborated using GEPHI software - an interactive visualization and exploration platform for all kinds of networks (<https://gephi.github.io>) - which enables analysis of activities from a structural point of view, measuring different aspects of the activity sequence network. In detail, charts 7 and 8 used four indicators for activity calendar structure: a centrality index (Average Weighted Degree), a measure of the importance of a specific activity inside the overall network (size of the circles); Modularity Index, which identifies belonging to a cluster of structurally linked activities (scale of greys of the circles); the intensity of the link between activities (thickness of the connecting lines); direction and importance of the temporal sequence (direction of the connecting arrow and its size).
- 34 Chart 7 relates to the calendar of young people's activities during the week, from Monday to Friday; chart 8 regards young people's behaviour on Saturday night, as a privileged and extreme manifestation of an innovative and emerging use of the night, above all when compared to *normal* use of the night. During the week, young people's activities are organised around five poles: in first place for centrality is domestic life, which rotates around meals with the corollary of food preparation, housework and, where present, children and communication and information (TV, PC, radio, etc.). On a second level of centrality there are then three clusters of activity: work and study, sport and socialising, services for the family; the three clusters are characterised by significant spatial mobility, particularly the cluster of sport and socialising. Finally, a central role of primary importance is represented by personal care, which represents the medium that links home activities with those outside the home.
- 35 The calendar model for young people during the night at the weekend is markedly different, characterised by two populations, one socialising on Saturday night and the other spending the weekend on personal care, rest, home entertainment, alternated with childcare. The most innovative part of the model is here represented by the part of the chart where mobility for socialising dominates, with the corollary of eating and drinking, and to a lesser extent, sporting activities, games and entertainment. Mobility, socialising and food are therefore the three keywords that best describe Saturday night, that part on the social calendar of young people used by at least half the young population as a time for constructing their personal social identity.

Chart 7 – Calendar of young people’s activities during the week



NOTE: 1) THE SIZE OF CIRCLES INDICATES A CENTRALITY INDEX OF ACTIVITIES; 2) THE GREY OF CIRCLES REPRESENTS THE ACTIVITY CLUSTERS; 3) THE THICKNESS OF THE LINES INDICATES THE INTENSITY OF THE LINK; 4) ARROW HEADS DEMONSTRATE THE MAIN DIRECTION OF TEMPORAL SEQUENCES OF ACTIVITIES

Chart 8 – Calendar of young people’s activities on Saturday night



Conclusions

- 36 Lighting has lit up the Italians’ nights, which however, tend to remain dark for most of the population. Firstly, because most of the night-time hours are still dedicated to sleep.

However, Italians sleep less than the average of the populations in other European countries and, compared to the past, have seen a decrease in time dedicated to sleep. A significant share of people goes to sleep after midnight and wakes before six in the morning, with the result that the night-time hours are filled with activities other than sleep. These activities are not distributed randomly throughout the night, but following criteria that vary depending on the time and the type of day. Night work, both paid and for the family, makes way for activities that are usually inserted into the daytime, recreational activities, during the early part of the night (until midnight), socialising and personal care (until 2:00 am), in the second part. But work reappears during the final part of the night, a residual activity from a past that used to see people who were not sleeping mainly engaged in work and which continues to be the main reason, at least, in the later hours of the night.

- 37 Nights are plural because they are not the same on the different days of the week and because during each night, activities follow one another according to regular rhythms that are never random, which change according to the time. In an age when leisure time has reached increasingly high levels of social regulation on a par with those of work, the night, which used to be a time for leisure activities, has lost those traits of informality that defined its identity in the past. However, the “dead of night”, from midnight to 2:00 am, is still a time for meeting, for relationships and socialising, those activities that are hardest to regulate and which make the night a time for the unexpected that continues to confirm its appeal. At night, activity density is lower and time is still perceived as slow. There is much talk of the quality of life in contemporary cities, but it is often forgotten that this also depends on the quality of time of their inhabitants. The quality of daytime, obviously, which is when most activities occur, but also of night-time, as unknown as its activities. This study did not look at the quality of night-time, describing instead its activities, rhythm and borders. It shows that in Italy, night in terms of a different time, still exists, which is a positive result because the quality of time, as for other things, is given by the value of diversity. A diversity that should not however be a synonym of marginality and which, in addition to stimulating studies that highlight its distinctive trait, should suggest the start-up of policies to protect its uniqueness.

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ABSTRACTS

This paper presents the results of a secondary data analysis carried out on the latest survey on the use of time (2008-2009) by the Italian National Institute of Statistics (ISTAT). It aims to analyse how night hours are used by the Italian population, with attention to the duration and the temporal sequence of activities. In detail, it intends to answer questions regarding the beginning and the end of the night and to analyse the density and the temporal sequence of night activities, in order to verify the hypothesis on the reduction of time spent in physiological activities and on the increasing number and density of night's activities in particular in urban environment. The attention to the temporal behaviour of the Italians who live in different regions and cities, places this paper not only in the field of time studies, but also in that of the relations between territorial characteristics and population behaviour.

INDEX

Keywords: Night, temporal analysis, time-budget analysis, temporal-sequences, activity, density, young people

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