

Urban mobility in the Principality of Monaco. Adaptation and behaviour change as a response to the climate crisis.

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Introduction

Urban mobility is one of the central issues pertaining to climate change as it directly affects public health and quality of air. In 2013, the European Commission proposed Guidelines (Wefering et al. 2013) on Sustainable Urban Mobility Plans (SUMPs). Most of the measures outlined have been implemented in European cities (Pisoni et al. 2019), cases of which have been analysed throughout the world highlighting the possibilities, benefits and limitations of the guidelines. For instance, the review of SUMPs developed in Portugal (Arsenio, Martens et Di Ciommo 2016) found that SUMPs mostly concentrate on meeting people's immediate mobility needs and overlook climate targets. In most public policies, societal concerns such as accessibility, overall public adoptability, and economic sustainability are the predominant focus areas (Vecchio, Porreca et Jácome Rivera 2020).

In the framework of our PhD research on Monegasque culture and sense of belonging, we present an overview on existing practices of urban mobility in Monaco through the lens of urban anthropology. Adaptation and changes in mobility practices in Monaco are therefore not only sociological factors (of the consumer's behaviour), but anthropological features of a specific strategy of social behaviour.

The methodological approach combines the review of governmental actions, immersive participant observation, as well as qualitative analysis of stakeholder communication. The central question we aim to answer is "To what extent can a given population's behavioural culture contribute to the successful implementation of a mobility plan?"

Social behaviour of Monaco inhabitants: theoretical pitfalls and literature review

This analysis is inspired by the theory of symbolic interaction (Goffman 1959). The dramaturgical approach suggests that social action depends on how people present themselves on the social stage. Moreover, Goffman's work appears relevant as his theory has been applied successfully in studies of «closed» communities in the context of broad modern societies. The empirical data we have received so far indicates that residents of the border areas view Monaco as a rather closed community.

The difficulty herein lies in assigning a unique behavioural culture to the multi-national principality of Monaco. Culture itself can possess an arbitrarily broad meaning. Were we to try and condense

and isolate cultural patterns -– at this stage –we would limit ourselves to the concept of "common sense" – meanings that various layers of society agree with. One such "common sense" that unites the majority of inhabitants, is the practice of publicly endorsing the Prince (despite the fact that in private conversations people may have diverse opinions). One of the deepest concerns of Prince Albert II is climate change.

As one of our respondents, Monegasque, 59 years old says:

«Monegasques are loyal to the Prince. We trust the Prince and if the Prince asks for something, we work on it. In addition, we are making ourselves stupid because the subject (climate change) is really very legitimate, huh. Maybe individually, we might would not have done so much. But the fact that the Prince asks, we are obliged. It's not something as if the inhabitants are tyrannized, not at all! It's common sense. The will of the Sovereign is carried out by the Monegasques. It's something natural, not an effort.»

General overview of governmental plan on public urban mobility

The display of an approved social behaviour in Monaco (collective determination) is facilitated by the broad range of opportunities provided by state structures (individual choice facilitation) (Thevenot 1991), which implement programs inspired by the Prince's concerns.

The urban parking network offers several solutions: since 2010, users have been given 10% discount on the parking monthly subscription, if a given parking space is used less than 15 times in a calendar month; then the subscriber's magnetic parking card can also serve as an unlimited free bus pass. Eight out of 10 respondents stated that this measure allows them to almost completely avoid using a car within the city.

The decision to take a bus is facilitated by the fact that an updated fleet (22 hybrid buses plus 10 modern electric buses added in 2022) covers various high-intensity routes on seven main lines, including the night bus. The waiting time rarely exceeds 5 minutes. Buses represent an opportunity to nourish one's feelings of belonging: the rules of social interaction in buses are visibly more particular than those around the Principality.

In October and November 2022, Monaco is testing free bus travel for all. The purpose of the test is to see how much the automobile traffic is reduced. This measure could generate a direct impact on the pollution level. The service users are targeted by an extensive marketing campaign: "practical and responsible solution" for the active people category; "ecological and economic" for young people; "in serenity" for the older generation.

To encourage switching to electric automobiles, the Principality offers 53 electric car charging stations free of charge. For the hybrid engines, one recharge guarantees a range of 40-50 km, equivalent in fuel to 10 euros saved. For the electric cars, a range of 200-300 km saves around 50-60 euros. The parking rate goes down by 20 euros a month for those drivers with electric vehicles who subscribe to Monaco Parkings. The national Monaco statistics bureau, IMSEE, reports that in 2017 the number of electric cars corresponded to 842. This figure has risen to 2572 for the year 2021; as for hybrid engines, they have increased from 867 (2017) to 2606 (in 2021).

Mobee is an electric vehicle car-sharing service. The vehicle is geolocatable via a smartphone application and can be picked up or released anywhere in the Principality (Twizy), and in certain closed- loop car parks (e208). The number of cars at the population's disposal has doubled from 2017 to 2021; the number of service users has increased from 375 to 1,595; as has the number of km – from 60,784 to 233,713 respectively.

The government finances more than 2,000 carpool journeys (15,000 people per week) for those workers hailing from either across the Italian border or from neighbouring French towns and who use the Klaxit mobile application. Nearly one million kilometres have been travelled and 160 tonnes of CO2 saved thanks to this scheme.
To optimise delivery services, the government has set up a mobile application to check availability in the connected delivery areas.

A new public parking lot is set to open in 2023 at the west entrance into Monaco. With a capacity of welcoming 1820 vehicles, the expectation is that tourists and workers alike will park there and use complimentary public transport to travel into Monaco. According to our survey of Parking subscribers (for whom buses are already free of charge), this measure shows considerable change in urban mobility behaviour.
The Principality has set up 35 "Monabike" stations with 350 electric bicycles available to all for an hourly fee. Figures show the population has embraced this alternative means of transport. In September 2022 a "Monabike" station was set up in the border-town of Beausoleil. By the end of 2022 there should be an additional three such stations.
Municipal elevators and escalators strongly incentivize walking in Monaco on foot, as one can avoid both stairs or slopes. This is an illustration of a limited territory paradoxically turning into an advantage. In 2021, Monaco counted 87 elevators working around the clock, an increase of 9 on the previous year. Additionally, eight outdoor escalators have been extended to downtown Beausoleil (with the principality financing just under half of the costs), thus providing an alternative means of transport, green and free of charge.

Measurement of results and further challenges

H.S.H Prince Albert II is a strong generator of sustainable actions, which are then implemented to the maximum extent within the framework of various governmental programs. These initiatives are vigorously supported by the inhabitants: a growing number of people are switching to buses, choosing to reach their destination on foot, by bike or using car-sharing solutions. People are switching to electric, or abandoning their own cars altogether as more practical, economical and environmentally friendly measures are available. Such conscious actions remain a behavioural norm and common sense in Monaco. Showing visible markers of endorsement and respect for the Prince's initiatives enables fulfilling one's social function when meeting others, allowing one to define oneself as a responsible person who cares about the environment as a legitimate subject. International residents of the Principality are frequently participating in this common sense – which represents an opportunity to acquire the feelings of belonging, as shown in the results of our interviews.
According to the National Inventory Report, between 1990 and 2020, the Principality of Monaco's greenhouse gas decreased by 31.8%, the transport sectors seeing declines of 17%. But despite these intermediate results, most of the respondents are inclined to believe the problem of reducing vehicles in the Principality is still relevant. In addition to having around 40,000 daily commuters into Monaco, traffic management and green mobility initiatives and efforts are constantly reduced by tourist flows. The population is somewhat heterogenous, with Monegasque citizens a minority (22.5% or 9,611 people) against 77.5% (39,150 people) international residents, although these two social strata show some intersection. However the majority of Monaco inhabitants and visitors

to the Principality represent two spheres of society with rather limited intersection. This raises the following question: can the wider involvement of tourist masses in this "common sense" contribute to further progress? In order to answer this question, we suggest further research. One of the solutions might be a strong promotion of the "Monegasque way of life". By buying into this sentiment, any given person will have the opportunity to better represent him/herself on the social stage and, therefore, to acquire a sense of belonging. We understand that the issue of choosing the mode of mobility is much broader one which deserves exploring. In this article we have chosen to present one of the non-obvious possible drivers of choice.

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