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Measuring and quantifying lifestyles and their impact on public choices

The case of professional football in Munich

Gabriel M. Ahlfeldt^{a,*}, Wolfgang Maennig^b, Michaela Ölschläger^c

Lifestyle data are rarely used in multivariate economic and social studies because the data describe the probability of having a categorical attribute. We propose a novel conversion of lifestyle data into metric scale values. Examining the 2001 referendum on the Allianz-Arena in Munich, our analysis demonstrates that refined indicators of value and strata orientation outperform the typical oriented indicators of economic wealth, in terms of capturing the spatial distribution of support and opposition to the project.

Keywords: Measurement of Lifestyle, Milieu, Referendum, Stadium, Football

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Measuring and quantifying Lifestyles and their Impact on Public Choices

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1. Introduction

Typically, economists address heterogeneity in different population groups with socio-economic indicators, such as income per capita, the unemployment rate or education levels. Nevertheless, it could be argued that, in modern societies with increasing levels of individualisation and broad consumption possibilities, this focus on strata affiliation does not sufficiently account for societal complexity. As stated by Salomon and Ben-Akiva [37] almost 30 years ago, “the concept of life-style is becoming a major differentiating trait between population groups substituting for economic and social classes“(p. 623). With this concept individuals are classified into different lifestyle categories on a broader basis of values, attitudes or leisure patterns (Veal [46]). However, due to their multidimensionality, these concepts are less empirically straightforward.

The current study contributes to the debate of empirical measurement of the heterogeneity of lifestyles by proposing a conversion of milieu data into metric scale values. We test the new variable by investigating its ability to explain the public choice for professional football, a good for which we expect preferences to vary substantially between lifestyle groups. Thus, we test the variable within a spatial analysis of the public referendum for the Allianz-Arena in Munich. Specifically residents were questioned about the public provision of infrastructure and a site for the football arena.

Although such a facility may be socially desirable overall, local opposition may impose serious barriers to construction. This attitude is often referred to as the NIMBY (“Not In My BackYard”) phenomenon. Typical NIMBY facilities with positive effects for a wider

population, but (perceived) negative effects at the local level, are airports, train stations and major sports facilities. Given the NIMBY phenomenon, an informed location choice for a stadium or any other facility with local externalities, will also seek to minimise local opposition to a project to avoid the emergence of citizens' initiatives and to limit the number of legal appeals. Hence, it is important to investigate the (social) characteristics of residents and how these characteristics influence their attitudes to the project.

The lifestyle groups that derive the largest net utilities are expected to exhibit the highest sympathy for the commitment of public funds and, hence, the largest probability of voting in favour of the referendum. If our hypothesis is true, there should be a significant relationship between the local rates of approval and the residents' lifestyles.

In our empirical investigation, we capture the multidimensionality of lifestyles with two indices – strata affiliation and value orientation – based on the definition of Sinus milieus, as discussed in section 2.2. By doing so, we refine earlier studies which examine milieu effects on a descriptive basis (Ahlfeldt et al. [8]). Furthermore, we contrast our results with an analysis based on more established socio-economic variables, such as age and economic wealth, which have proved relevant in studies of referendums on stadia¹ (Agostini, Quigley and Smolensky [1], Coates and Humphreys [16]). Finally, we control for perceived proximity effects of the stadium and for spatial dependency (Ahlfeldt and Maennig [7]). We also address endogeneity concerns with an instrumental variable design. We find the hypothesised significant relationship between lifestyle indices and the share of 'yes' votes. Furthermore, the lifestyle indices perform better than the more 'standard' set of control variables and they add substantially to the explanatory power of the models.

¹ Salomon and Ben-Akiva [37] identify five lifestyle groups and compare these groups with more classical segmentation schemes (e.g. based on income) for explaining travel demand.

2. Background and Data

2.1 The Stadium Project and its referendum

In early 2001, FC Bayern München and TSV 1860 München agreed to construct a new arena, which would be designed exclusively for football and have about 66,000 seats, as soon as the city provided a suitable location. In July 2001, the Munich city council finally opted for the Fröttmaning district in the north-eastern suburbs. This decision opened the architectural competition to design the new stadium, which, as a stated objective, should constitute a new landmark for the city of Munich. A referendum entitled ‘Stadium construction in Fröttmaning – World Cup 2006 football in Munich’ on the construction project was scheduled for October 21st, 2001. It comprised, on the one hand, the passing of the legal planning requirements for the construction of a football stadium in the ‘Fröttmaning industrial estate’ and the complete absorption of construction costs by the Munich football clubs. On the other hand, the city of Munich would commit to providing a municipal plot in the framework of a long-term inheritance rights contract and to contribute, to the usual extent, to the necessary infrastructure measures (in particular, the construction of public rail transportation and road connections). It should be noted that this ‘usual public contribution’ amounted to as much as €210 million, of which the city of Munich provided €107 million (N. N. [33]). The plot itself was valued at about €85 million (N. N. [31]).

Notably, the voter turnout in the subject referendum was about 37.5%, which is the highest turnout in the history of referendums in Munich. At the city level, a significant majority (65.7%) voted in favour of the new stadium, indicating that most of the residents expected the public (monetary) costs to be offset by an increase in their utility. Besides the expected positive economic impact of the stadium projects (Matheson [28]), these positive net utilities may stem from a sense of civic pride, well-being and happiness or consumption benefits and public good benefits such as being or becoming a ‘world-class city’ (Carlino and Coulson

[13], Coates and Humphreys [16], Groothuis, Johnson and Whitehead [22], Szymanski and Kavetsos [43]). It should also be noted that the new stadium was regarded as a prerequisite for Munich to be the host city of the 2006 FIFA World Cup. Any (lifestyle-specific) utility expected from this event would also influence voters' decisions. Another channel through which lifestyle-specific preferences could operate is the 'iconic' architecture planned for the stadium, for which the architects Herzog & DeMeuron were commissioned.

2.2 Lifestyle: Introducing a novel metric scale value

Although the concept of lifestyle² was mentioned in 1900 by Simmel [39] and in 1922 by Weber [47], it did not earn much attention before the mid-1980s (Mochmann and El-Menouar [29]). Veal [46] summarises various descriptions and defines lifestyle as 'the pattern of individual and social behavior characteristic for an individual or a group' (p. 249). Geißler [20] argues that, although the concept of lifestyle is focused on consumption and leisure, it also refers to family, taste and culture. Sometimes, other aspects and spheres of life, such as occupations or politics, are included. Therefore, the lifestyle approach accounts for different ways of life beyond the class-specific observable/objective socio-structural variables, such as income and education. Nevertheless, lifestyle is not independent of class or strata because behaviour is also affected by family background and level of education (Mochmann and El-Menouar [29]). Evidently, it is easier for researchers to address the inequalities of societies and populations in empirical terms through the concept of class because they can use indicators like income or education. However, due to the increasing individualisation of inequalities, the 'death of class' debate has questioned the idea of a class society (e.g. Clark and Lipset [14], Clark, Lipset and Rempel [15], Grusky [24], Pakulski and Waters [34]). In

² The terms 'lifestyle group' and 'social milieu' are often used synonymously, e.g., by Sinus-Sociovision.

addition to class-specific indicators, the lifestyle approach includes tastes, behaviour, attitudes and values (Mochmann and El-Menouar [29], Veal [46]).

We propose to quantify lifestyle groups by employing the MOSAIC Milieu classification scheme. The MOSAIC Milieus were developed for direct marketing applications and correspond to the Sinus Milieus created by the market research institute Sinus-Sociovision with a spatial reference. Groups of like-minded individuals are classified into ten milieus, which can be visualised in a two-dimensional diagram with strata affiliation at the vertical axis and value orientation at the horizontal axis (see Fig. A1 in Appendix A). Socio-economic factors and general attitudes of life or consumption are also included (Sinus-Sociovision [40]). The ten milieus can be described in table 1.

Sinus Milieus are provided with links to a microgeographic dataset on the distribution of consumers, determining the probability of belonging to a specific milieu (Sinus-Sociovision [41]). These probabilities are computed based on an extensive survey questionnaire that is presented in Appendix B. We use the probability of belonging to a certain Sinus Milieu (Sinus-Sociovision [41]) for the 455 Munich subdistricts in 2005 provided by the Munich district administration; the data for 2001 are not available.

The application of these milieu data in empirical analyses is difficult because the data describe the probability of having a categorical attribute. To avoid this weakness, we propose to convert the milieu data into metric scale values. Therefore, the two axes in the milieu diagram are scaled from zero to ten. The geographic centre of each of the ten milieus is chosen to represent the respective milieu, such that the individual milieu m is described by the numeric values for its strata affiliation at the vertical axis (y_m) and its value orientation at the horizontal axis (x_m) (see Appendix A, Fig. A1). A higher (lower) y -value indicates membership in higher (lower) social strata; a higher (lower) x -value denotes a higher degree of modernity (traditionality) in the value system.

Our analysis requires a connection between social and physical space. Therefore, we compute the aggregated indices of social strata (Y) and value orientation (X) for each of the 261 subdistricts i based on the MOSAIC milieu probabilities of belonging to a certain milieu m in subdistrict i and multiply each by our auxiliary coordinates of the respective Sinus milieu:

$$X_i = \sum_{m=1}^{10} p_{im} \times x_{im} \quad \text{and} \quad Y_i = \sum_{m=1}^{10} p_{im} \times y_{im} \quad (1)$$

2.3 Other Data

At the time of the assessment (October 21st, 2001), a total of 1,259,730 inhabitants were living in Munich, Germany in an area of 310.41 km². The municipal area of Munich was divided into 25 municipal districts, 106 constituent districts and 455 subdistricts. Aside from the municipal districts, the municipal area could be further subdivided into 656 voting precincts at the time of the assessment. However, in the event of smaller ballots, such as a public poll, the city used a different division of the voting precincts for reasons of cost and turnout. Accordingly, for the referendum on the new stadium, the municipal area was divided into 311 voting precincts.

In the referendum on the new stadium in Fröttmaning, 902,061 citizens were entitled to vote. They were all German nationals or nationals of other EU member states who had reached the age of 18 on polling day and who had been registered as predominantly resident in Munich for at least three months. 338,225 citizens who took part

Among the 311 voting precincts, there were 50 postal vote districts, which cannot be further considered in this assessment because of a lack of spatial classification by the Munich electoral office. After the postal vote districts are subtracted, 261 constituencies or polling stations remain in the actual assessment, in which 278,171 Munich voters cast their votes on polling day.

In addition demographic data on the population, such as age, gender and the proportion of foreigners in Germany and the EU as of September 30, 2001 are included in our analysis. These data are available in the 656 voting precincts and were aggregated to the 261 precincts, according to the official register. Furthermore, we obtained data on the distribution of the overall purchasing power from the Munich statistics office (München [30]), which derives the data from a prognosis of the consumer research society Gesellschaft für Konsumforschung (GfK) for 2004. Here, purchasing power indicates a household's income available for consumption, adjusted for taxes and social security contributions. No purchasing power data for 2001 are available.

We adjust the data on purchasing power, party affiliation and milieu probabilities to the level of the 261 voting precincts using GIS (Geographical Information System) and standard area interpolation techniques (Arntz and Wilke [12], Goodchild and Lam [21]). Our empirical analyses are based on the observation of grouped data at the precinct level because individual data on residents' preferences are not available. We use the method of 'ecological inference', similar to Rushton [36], to infer the probability of a voter, whom we consider representative for a precinct, supporting the project. An extensive discussion of the underlying assumptions of ecological inference can be found in Shively [38], King [26] or King, Rosen and Tanner [27].

3 Empirical Results

3.1 Descriptive Analysis

An initial descriptive assessment of the effects of voters' lifestyles on their stadium preferences is facilitated by a comparison of the distribution of the 'yes' votes, the strata affiliation (Y_j) and the value orientation (X_j) for all voting precincts j in Munich (see Fig. 1).

Fig. 1 a) – c) The distribution of ‘yes’ votes, strata affiliation & value orientation

Map a) shows that the proportion of ‘yes’ votes is higher in the north-west and south-east of Munich and that voters in the centre tend to oppose the project. The voting behaviour in proximity to the new and the old stadium differs: in the precincts near Fröttmaning, the area of the new stadium, the share of the ‘yes’ votes is small in comparison to the rest of the city. In the voting precinct that includes the old Olympic stadium, the proportion of ‘yes’ votes is higher than in Fröttmaning, although ambiguous: To the north of the Olympic park – where the ‘ZHS Gelände’ represents an alternative site for the new stadium – the share of ‘yes’ votes is relatively high, while the share in the south and east of the old stadium decreases beginning at a distance from the site of around 500 meters.

These patterns could be indicative of proximity costs of the arena that were expected to dominate the benefits, similarly detected within a range of 3-5 km for other professional sport facilities (Ahlfeldt and Maennig [6]). In the case of the old stadium, the residents in the Olympic district and in the north supported the relocation to reduce or avoid proximity costs. Second, given that stadia may increase land values and property prices (Ahlfeldt and Kavetsos [3], Ahlfeldt and Maennig [4], [5], Carlino and Coulson [13], Feng and Humphreys [17], Tu [45]), the negative effect in Fröttmaning might have been driven by renters. They would normally oppose projects that increase property prices because they would be driven out of the housing consumption optimum (Ahlfeldt [2]). Third, and of crucial importance for this study, Coates and Humphreys [16] argue that distinct types of households derive different net utilities from a stadium, depending on the members’ preferences for the consumption benefits of football. This hypothesis could explain the relatively low proportion of ‘yes’ votes to the south of the Olympic stadium, which could result from the settling of milieus with a high affinity towards football. Parts b) and c) of Fig. 1 depict the distribution of the milieu indices. The left part of the figure shows that lifestyle groups with a more modern value orientation

concentrate in central areas, with only a few exceptions at the fringe (e.g., in the west of Fröttmaning or in the east of Munich in Riem). In contrast, higher status milieus tend to group into clusters (Fig. 1 c)).

Fig. 1 a) to c) indicate that a higher level of each milieu index (strata affiliation and value orientation) is accompanied by a lower proportion of proponents of the new stadium. For example, there are high status groups and low levels of ‘yes’ votes in the centre, west and south of Munich, while milieus with a modern value orientation and a low levels of ‘yes’ votes can be found in the centre, north and east of Munich. This observation is confirmed by Quadrants a) and b) in Fig. 2, which indicate a negative correlation of milieu indices to the share of ‘yes’ votes. To avoid capturing the same phenomena with both milieu indices, we show the correlation of strata affiliation and value orientation in Quadrant d) of Fig. 2. As both indices are weakly correlated, our objective of capturing distinct dimensions of lifestyle with each of the variables seems to have been met.

It could be argued that the milieu indicator ‘strata affiliation’ captures effects that are mainly related to income, which is often used as a socio-structural variable in empirical models. Although, as expected, ‘strata affiliation’ is correlated to our income proxy (purchasing power), Quadrant c) shows that purchasing power and the proportion of ‘yes’ votes are only weakly correlated, if at all. Hence, income does not represent a direct determinant of voters’ preferences for the stadium project. One interpretation is that income only has an indirect influence because it is just one of the determinants that constitute lifestyle.

Fig. 2 a) – d) Pairwise correlation of indices

To facilitate an integrated multivariate correlation analysis of the support for the Allianz-Arena and both milieu indices, we plot the observed share of ‘yes’ votes into a two-dimensional strata-value space. This social space is similar to the original illustration of Sinus-Sociovision and displays the strata affiliation on the y-axis and the value orientation on

the x-axis (see Fig. 3). For this purpose, we apply standard area interpolation techniques to form a smoothed social surface of the average approval rate, which we examine with respect to the milieu indices on the axes.

Fig. 3 Interaction between the share of ‘yes’ votes and milieu indices

The share of ‘yes’ votes decreases in both indices, confirming the validity of the scatter plots in Fig. 2. Holding the status index constant and raising the value orientation index cause a decline of the ‘yes’ votes’ share and vice versa. A notable outlier to the relatively uniform decline of the share of the ‘yes’ votes is the modern and lower-middle class edge of the milieu surface. At this location, milieus tend to be particularly sceptical of using (public) funds for a professional football facility. This part in the social space roughly corresponds to the hedonistic milieus (hedonists and experimentalists) in the Sinus classification scheme.

3.2 Multivariate Analysis

The results of the descriptive bivariate correlation analyses (Fig. 2) and the quasi-multivariate illustration (Fig. 3) in the previous section support the hypothesis that belonging to certain lifestyle groups is associated with distinct probabilities of voting for (or against) the new stadium. Furthermore, Fig. 1 indicates the presence of direct stadium externalities, as shown by Ahlfeldt and Maennig [7]. If the location of stadia and the distribution of household types are jointly determined or otherwise mutually dependent, we should account for these direct stadium externalities to obtain an unbiased estimate of lifestyle effects. Lastly, non-lifestyle related, socio-demographic attributes may also contribute to the net utility derived from a professional sports stadium.

Therefore, we set up a generalised spatial regression model as follows:

$$pcvy_i = \alpha + \sum_n \beta_n Z_{in} + \sum_m \varphi_m g_m + \sum_m \eta_m g_{im} \times D_{im} + \Phi X_i + \Psi Y_i + \varepsilon_i, \quad (2)$$

where the dependent variable $pcvy_i$ represents the percentage of ‘yes’ votes in the respective precincts i in the Munich referendum. Z_n is a vector of non-lifestyle and non-location explanatory variables. We consider age, gender and the unemployment rate, which covers potential stadium construction effects, as factors with a *direct* influence. Also, citizens of non-German EU member states, who were allowed to participate in the referendum, are included due to their limited attachment to local football geography, and their interest in keeping taxes low.

The proximity effects of stadia are captured by the distance D_m to the stadium m , where $m=\{\text{Olympic Stadium, Allianz-Arena}\}$. These effects can be either positive or negative and are related to use as well as non-use values (e.g., the transportation cost of attending matches, externalities related to spending and congestion, as well as architecture and landscape design). We define the two indicator variables $g_{im} = I\{D_{im} \leq G \text{ km}\}$. They take the value of one for precincts in the areas impacted by the stadium and capture otherwise unobserved location characteristics that are common to these areas. We use the same variables to constrain the linear marginal effect of the stadium’s distance from these areas by interacting the stadium’s distance and the indicator variables. While ε_i is a random error term, all other Greek letters denote the unknown parameters to be estimated.³

We estimate different variations of Equation (2) to investigate the impact of lifestyle on voters’ preferences. Inspired by C.G. Renfro [35] who shows that different econometric software packages may differ significantly in the values obtained, we estimated our empirical models using Stata 13.0 and R 3.0.2.⁴ White/Huber ‘sandwich’ corrections were implemented using the “robust”

³ We address heteroscedasticity by using the standard White/Huber ‘sandwich’ correction in the benchmark specification. As a spatial structure is detected in the error term, we also estimate a spatial error correction model.

⁴ Stata regressions were run using Stata 13.0 Special Edition under Windows 7 Enterprise Service Pack 1 GB 64-bit, on a Intel(R) Xeon(R) CPU W3530 @ 2.80GHz 2.80 GHz Memory (RAM) machine. R regressions were run using R 3.0.2 (2013-09-25) under Windows 7 Enterprise Service Pack 1 on Platform: i386-w64-mingw32/i386 (32-bit)

command in Stata. We were able to replicate not only the point estimates but also the standard errors in R using a code compiled by Toomet [44]. The results are listed in Table 2. The first two regressions are carried out to set a benchmark for evaluating the other models. The first benchmark model comprises the set of control variables, which are assumed to exhibit a direct influence on the stadium preferences (Z_n) as well as the location variables (g_m and D_m). However, there are no proxies for lifestyle. Thus, regression 1 is the basic model to assess the contribution of milieu indicators to explaining residents' support for the Allianz-Arena project.

The basic model is extended for purchasing power in Model 2. This model is the classic approach to account for strata affiliation through income measures.⁵ In Model 3 we replace purchasing power by the above milieu indicators for 'strata affiliation' (Y) and 'value orientation' (X). In Models 4 to 6, purchasing power, as a proxy for income, is assumed to exhibit an indirect influence on stadium preferences by determining lifestyle. Among other variables, purchasing power is used as an instrument for the lifestyle measures in a two-stage design.

A comparison of the results of Models 1 and 2 indicates a modest marginal contribution of purchasing power to the overall explanatory power of the model. Specifically, R-squared increases from 0.541 to 0.550. The milieu indicators included in Model 3 have a stronger impact. The adjusted R-squared increases from about 0.550 in the first two regressions to about 0.701. The coefficient of strata affiliation has highly significant negative sign. Thus, the higher the status of the residents in a given precinct, the lower is the proportion of 'yes' votes. The parameter of value orientation is only weakly significant and has a smaller magnitude. There are some notable effects on the control variables. In comparison to Models 1 and 2, the

⁵ Similar to Salomon and Ben-Akiva [37], we compare the lifestyle indicators with the commonly used 'low-level' descriptor 'income'.

EU-foreigners' share and the proportion of male population are hardly affected. Furthermore, the age groups, with the exception of the proportion of 25-35 year-old population, become insignificant and the unemployment rate changes sign and is only weakly significant. These sensitivities could result from a dependent relationship between these variables and the milieu indicators (particularly age and value orientation as well as unemployment and strata affiliation). Finally, the coefficients of the four proximity variables show the same signs and similar magnitudes in all three models and are highly significant. As expected, these variables remain unchanged due to their independence from the lifestyle measures.

The application of the lifestyle measures introduced in Model 3 is complicated by endogeneity concerns. First, in contrast to variables like age, gender, employment status or country of origin, the milieu indicators are choice variables. The choice of a certain lifestyle and preference for (professional) football are potentially jointly determined. If the model does not cover the underlying fundamental determinants, a correlation of lifestyle variables with the error term could emerge, which would lead to an omitted variable bias. Second, if the exogenous variables that we assume to have a direct impact on voters' preferences also determine lifestyle choice, these variables would serve as 'bad controls' (Angrist and Pischke, [10]), implying a potential downward bias in the estimated lifestyle effect. Third, the milieu data are from 2005, but the referendum took place in 2002. As the milieu variables stem from post facto observations, residents may have reacted by changing their location in the meantime. Thus, problems of reverse causality may arise.

To avoid these problems of endogeneity, we apply three exogenous lifestyle shifters to instrument the milieu variables. We assume that these instruments determine lifestyle choice and, at the same time, have no direct impact on stadium preferences. As discussed above, we employ the purchasing power as an instrument. The direction of influence from the higher income groups on the share of the 'yes' votes is unclear a priori. On the one hand, higher

income groups could show a higher level of support for the new stadium because, for example, richer people can afford to visit the stadium more frequently. In addition the new facility has a large number of business seats and was designed to satisfy the demands of more affluent spectators. On the other hand high-income voters are subject to higher tax rates. Specifically, they would be reluctant to support expenditure programs that potentially lead to cuts in school quality or cultural offerings, to name a few possibilities. We thus argue that the preferences towards the new stadium do not change linearly with income per se, which is supported by Fig. 2 c).

The second instrument is the political party affiliation to the CSU (Christian Social Union). This party is conservative and takes its origins in Christian values. At the federal level, it is associated with the CDU (Christian Democratic Union). While party affiliation is a choice variable in principle, it could be argued that affiliation with the CSU, the dominant and traditional Bavarian party, is largely determined by family background. In an empirical setting, CSU affiliation under this assumption captures the ‘inherited’ lifestyle component and any adjustments that individuals make in their lifestyles with respect to the ‘political style’ and value system of the party. The data for political party affiliation are the results of the federal election on September 22nd, 2002. The election took place approximately one year after the referendum, and thus, it left little time for voters to relocate with respect to the new stadium. In the election, 837,846 citizens were entitled to vote, and 80.3% voted on polling day. We obtain all voting data from the Munich statistics office or the Munich district administration department (München [30], N. N. [32]).

The third instrument is the proportion of the Evangelical population from the Munich statistical office for the year 2001 as a lifestyle shifter. Following the same reasoning as above, we can assume that religious denomination is exogenous because it is chosen by one’s parents in childhood. Like purchasing power and political party affiliation, religious

denomination has no obvious direct influence on football preferences, as expressed in the referendum, but it has an indirect effect by determining lifestyle, which is the identifying assumption. Again, the base year 2001 left little time for the sorting of residents, which alleviates reverse-causality concerns.

Models 4 to 6 employ a two-stage design where, in the first regression stage, the predicted values for milieu variables strata affiliation (\hat{Y}_i) and value orientation (\hat{X}_i) are obtained from regressions of each indicator on all non-lifestyle variables from Equation (2) (V_q) and the three instrumental variables (IV_o) discussed above.

$$Y_i = \alpha^{IY} + \sum_q \gamma_q^{IY} V_{qi} + \sum_o \Omega_o IV_{io} + \omega_i \quad (3)$$

$$X_i = \alpha^{IX} + \sum_q \gamma_q^{IX} V_{qi} + \sum_o \varsigma_o IV_{io} + \varpi_i, \quad (4)$$

where ω and ϖ are error terms; all other Greek letters are parameters. In the second stage, the predicted values (\hat{X}_i) and (\hat{Y}_i) replace the milieu indices in Equation (2).

The results of the first stage are presented in the Appendix A (Table A1). They show that the instruments have the expected effects on the lifestyle variables. Purchasing power and religious denomination have a highly significant positive influence on strata affiliation; political party affiliation has a “negative” impact on value orientation, i.e. the higher the proportion of CSU voters, the higher the probability of belonging to a lifestyle milieu with more conservative values. Additionally, the test statistics indicate that the instruments applied are adequate. The Kleibergen-Paap statistic refuses an underidentification and the Hansen J reveals that the model is not overidentified.

Table 2 displays three approaches investigating the impact of the instrumented lifestyle variables in the second stage. The basic two-stage least-squares approach (2SLS) is presented in Model 4. We estimate two extended versions to check for significant bias due to spatial

mis-specifications. First, we run a two-stage weighted least-squares estimation (2SWLS), in which the variables are weighted by the number of voters (Model 5). This specification prevents the results from being driven by marginal precincts with a relatively small number of voters. The standard Lagrange multiplier (LM) test for spatial dependence detects a significant degree of spatial dependency in Model (4), rejecting a lag model in favour of an error correction model. The results for the two stage error correction regression employing the maximum likelihood technique are presented in Model 6.⁶

In general, all three methods yield similar results for the parameters and significance levels, although the standard errors are somewhat lower in the weighted and spatial Models 5 and 6. In comparison to Model 3, all coefficients of the distance variables remain the same and are still highly significant. This robustness indicates that the stadium's effects on voting patterns, as evidenced by the descriptive analysis and the benchmark models, are probably not driven by the spatial correlation between different household types and the stadium's location (i.e., due to sorting).

Taking these findings and the positive first-stage test statistics together, we can conclude that the estimated impact of value orientation on stadium preferences is downwardly biased in OLS. This trend is at least partially due to a right-side endogeneity of lifestyle with respect to observable socio-demographic characteristics. In Model Specifications 3 to 6, the employed lifestyle variables outperform the traditional indicator for economic wealth and significantly contribute to the explanation of the spatial voting pattern. These results strongly support the existence of heterogeneity in the expected net utility of the project, which may be attributable

⁶ The error-correction model (Anselin [11]) corrects for the spatial structure as follows: $\varepsilon = \lambda W\varepsilon + \mu$, where W is a row-standardised inverse distance weights matrix. The hypothesis that there is no spatial correlation is rejected with nearly 100%. The LM test statistics are p-values: $LM_{lag} = 0.00$, robust $LM_{lag} = 0.51$, $LM_{error} = 0.00$, robust $LM_{error} = 0.00$.

to either varying (consumption) benefits or subjective assessments of the opportunity cost of the project.

Summarising these results confirm that the preference for professional football is characteristic of substrata or middle strata and reveal that the value orientation applied here is as important as the strata affiliation. Additionally, it should be mentioned that the strata affiliation index derived from the Sinus milieus includes a variety of indicators besides income and is thus a more multifaceted indicator. Lifestyle, preferences, tastes and attitudes are not linearly constituted along an income ray, but follow more complex social patterns.

4. Discussion and Conclusion

The current study proposes a novel method to quantify lifestyles and test evidence for the variation of consumer preferences across lifestyle groups. We find that lifestyle proxy variables contribute significantly to explaining the voting outcomes of the 2001 referendum on the Munich Allianz-Arena. Compared to an established income measure, the application of these variables results in a substantially improved model fit.

Although we used different models and approaches and compared them throughout the paper, we acknowledge that our work was constrained by the availability of data capturing the milieu phenomenon of interest as well as econometric tools embedded in current statistical software.⁷ We thus do not want to treat our empirical approach as definitional, but as a first proposal to quantify and test the socio-economic concept of „milieu“ on a multivariate basis.

Having said this, the finding may contribute to inform empirical social science research more generally on the relevance of lifestyle heterogeneity in perceived (consumption) utilities.

These findings also have important implications for authorities and planners. They highlight the importance of accounting for lifestyle compatibility as a criterion in choosing locations for

(public) facilities with local costs (and benefits). Local opposition, widely described as the NIMBY phenomenon, can be reduced if the proposed project fits well into the systems of values, preferences and tastes of the local population.

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⁷ We owe this reservation to an advice by editor Charles Renfro.

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Table 1

Sinus-Milieus, Grouped by Superordinate Milieus

Reference Milieus

<i>Establishment</i>	Self-conscious, highbrow and high income Success-oriented, realistic can-do mindset High-level, aesthetic and selected consumption patterns
<i>Post-Materialist</i>	Highbrow, self-conscious and tolerant/liberal Individualistic attitudes and no striving for social status
<i>Modern Performer</i>	Unconventional and performance-oriented Intensive life – job-related and personal Multi-optionality and flexibility Young and intellectual people with high income

Traditional Milieus

<i>Conservative</i>	Elderly educated middle-class Focus on tradition and values with humanistic sense of responsibility Conservative mindset with focus on stabilisation and protection of culture
<i>Traditionalist</i>	Mainly retired workers or employees, war-generation (WW II) Values such as tidiness, decency, or conscientiousness
<i>GDR-Nostalgic</i>	Socialistic ideas of justice and solidarity Refusal of capitalism, globalisation and prestigious consumption

Mainstream Milieus

<i>Middle-Class Mainstream</i>	Status-oriented, modern Willing to perform and striving for a comfortable, secure life with family and friends
<i>Consumer-Materialist</i>	Lowbrow milieu Low purchasing power but a preference for status-oriented consumption Effort to compensate for social disadvantage

Hedonistic Milieus

<i>Experimentalist</i>	Individualistic, spontaneous and stylish with hedonistic attitudes Living in antagonisms Modern occupation and high education
<i>Hedonistic</i>	Trend-oriented and fun-loving Denial of conventions and behavioural expectations Young workers, employees or apprentices

(Allgayer [9], Fischer [18], Sinus-Sociovision [42]).

Table 2

Determinants of the share of ‘yes’ votes and regression results

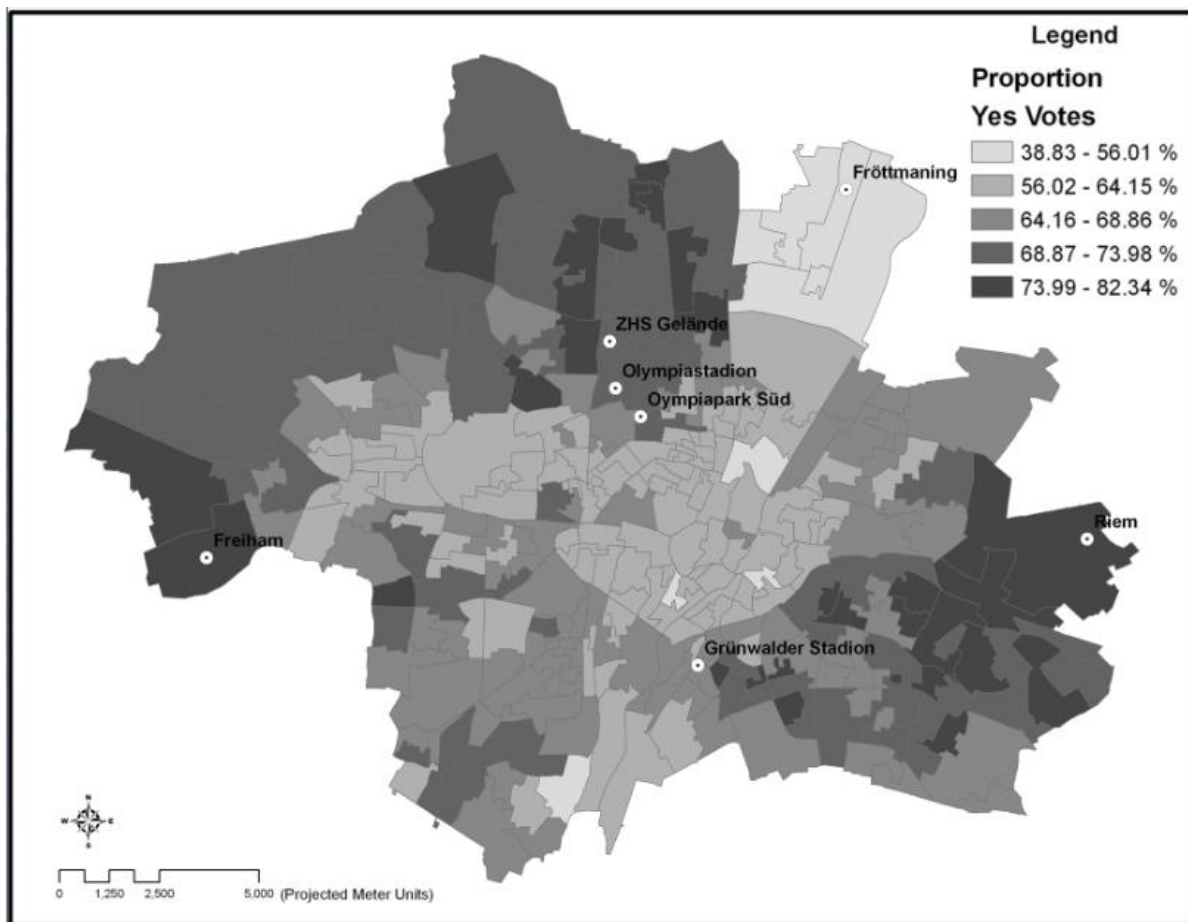
Model	1	2	3	4	5	6
Explaining variables	OLS	OLS	OLS	2SLS	2SWLS	2SSAR
Value Orientation (x)			-.069* (-.038)	-.851*** (-.182)	-.849*** (-.115)	-.785*** (-.123)
Strata Affiliation (y)			-.277*** (-.025)	-.286*** (-.047)	-.285*** (-.032)	-.281*** (-.035)
Proportion of Population 18-25 Years Old [%]	.804*** (-.249)	.759*** (-.247)	.165 (-.185)	-.172 (-.334)	-.212 (-.219)	-.067 (-.228)
Proportion of Population 25-35 Years Old [%]	-.431*** (-.119)	-.455*** (-.118)	-.451*** (-.088)	.292 (-.246)	.287* (-.146)	.271* (-.146)
Proportion of Population 35-45 Years Old [%]	.509*** (-.192)	.449** (-.193)	-.094 (-.148)	.100 (-.282)	.129 (-.167)	.137 (-.177)
Proportion of Population 60+ Years Old [%]	.454*** (-.116)	.422*** (-.114)	-.097 (-.096)	-.863*** (-.235)	-.841*** (-.159)	-.740*** (-.163)
Unemployment Rate [%]	.781*** (-.222)	.575** (-.238)	-.402* (-.216)	.318 (-.441)	.23 (-.261)	.284 (-.253)
Proportion of Population Male [%]	.677*** (-.143)	.723*** (-.145)	.402*** (-.123)	-.661** (-.299)	-.585*** (-.198)	-.550*** (-.196)
Proportion of Population EU-Foreigner [%]	.021 (-.125)	-.039 (-.127)	-.120 (-.114)	.686** (-.290)	.717*** (-.162)	.583*** (-.154)
Distance to Olympic stadium $\leq 4\text{km}$ (g^{Olympic})	.066*** (-.017)	.057*** (-.017)	.056*** (-.013)	.084*** (-.022)	.081*** (-.015)	.084*** (-.016)
g^{Olympic} x distance to Olympic Stadium [km]	-.019*** (-.006)	-.017*** (-.006)	-.017*** (-.004)	-.026*** (-.007)	-.025*** (-.005)	-.025*** (-.005)
Distance to Allianz-Arena $\leq 5\text{km}$ (g^{Allianz})	-.316*** (-.025)	-.322*** (-.027)	-.343*** (-.031)	-.325*** (-.054)	-.319*** (-.022)	-.327*** (-.022)
(g^{Allianz}) x distance to Allianz-Arena [km]	.075*** (-.008)	.076*** (-.008)	.078*** (-.008)	.068*** (-.014)	.065*** (-.006)	.068*** (-.007)
Purchasing Power [1000€ p.c.]		-.003** (-.002)				
Constant	.0996 (-.120)	.190 (-.126)	2.464*** (-.290)	7.117*** (-1.104)	7.052*** (-.724)	6.654*** (-.752)
Lambda						.907***
Observations	261	261	261	261	261	261
R-squared	.541	.550	.701	.698	.712	.697

Note: The endogenous variable is the share of ‘yes’ votes. Olympic 4k (Fröttmaning 5k) denotes precincts within 4 km (5 km) of the Olympic Stadium (Allianz-Arena). The standard errors are in parentheses.

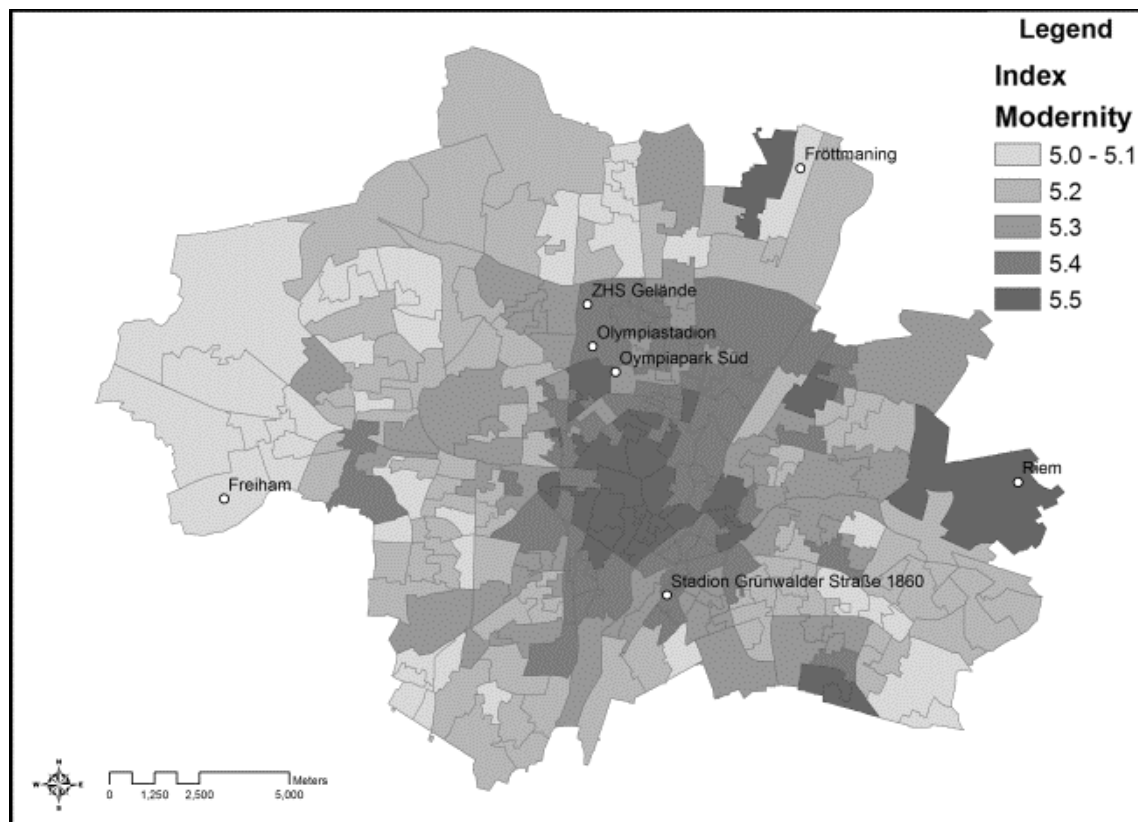
***/**/* denote significance at the 1/5/10% levels, respectively.

Fig. 1. The distribution of 'yes' votes, strata affiliation & value orientation.

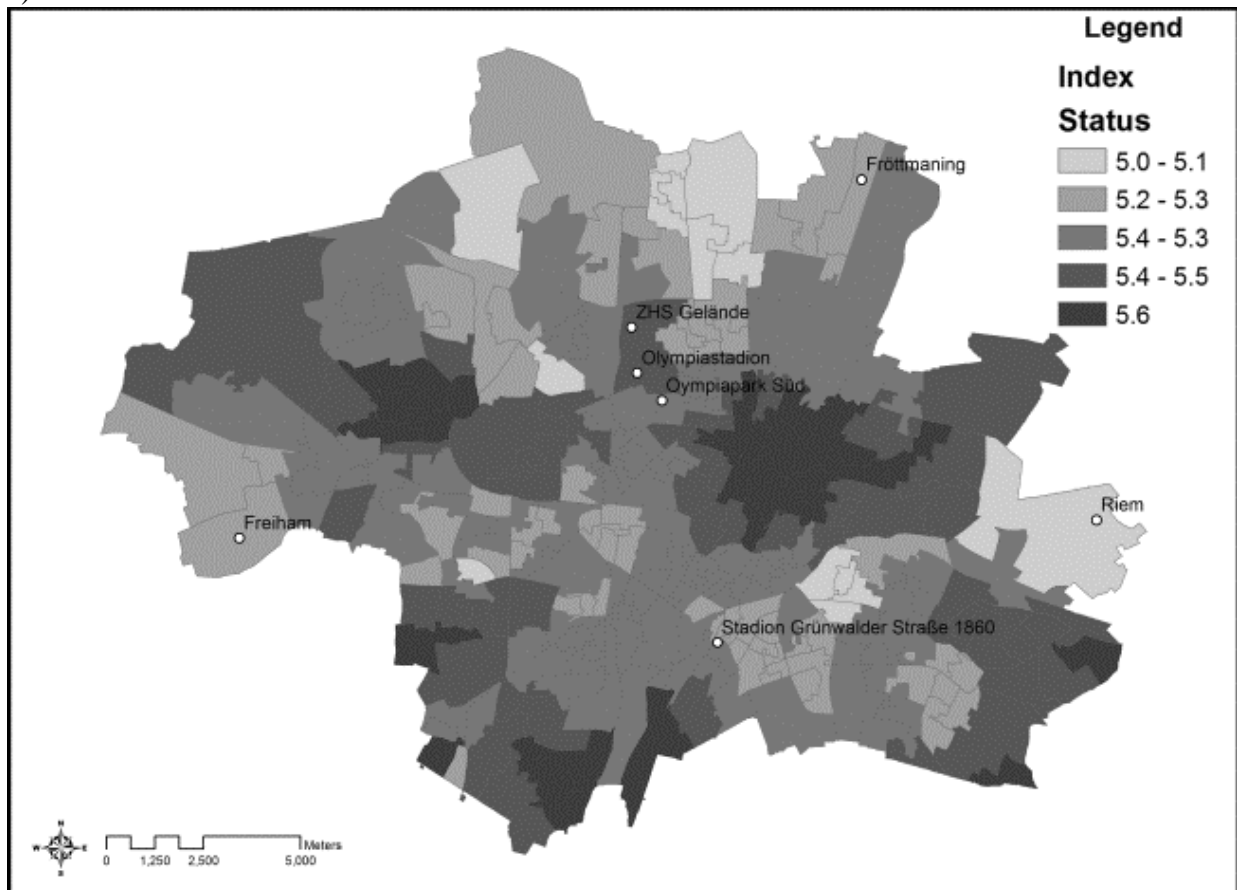
a) Distribution of Yes Votes



b) Local Indexes of Modernity

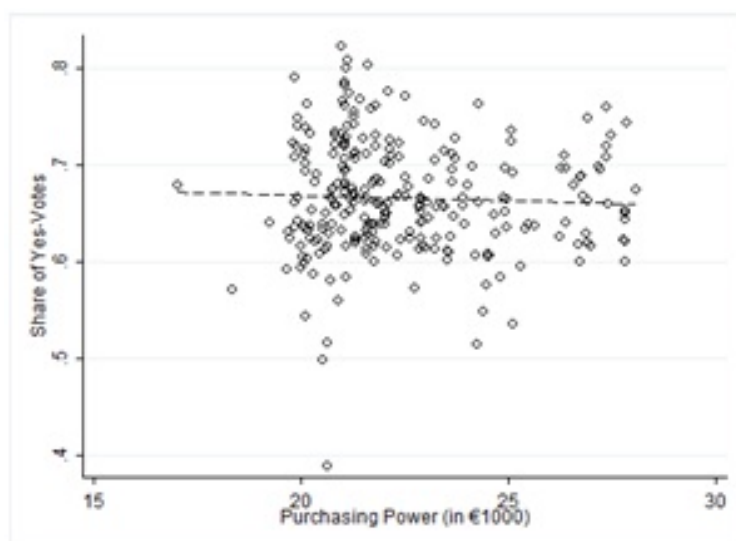
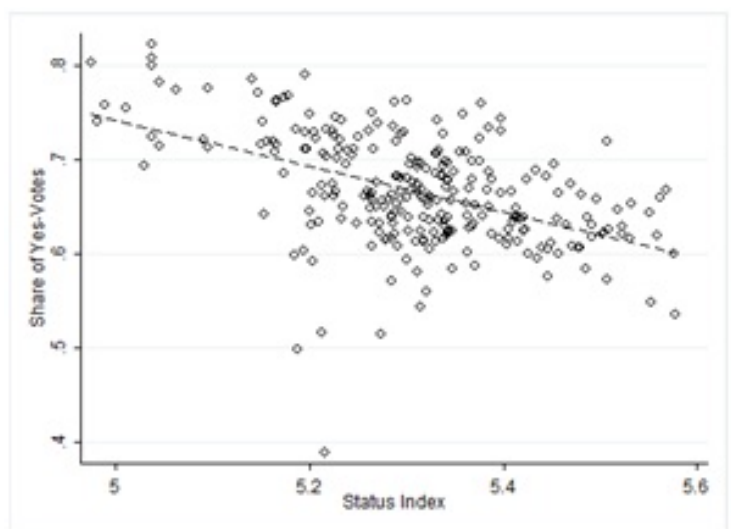
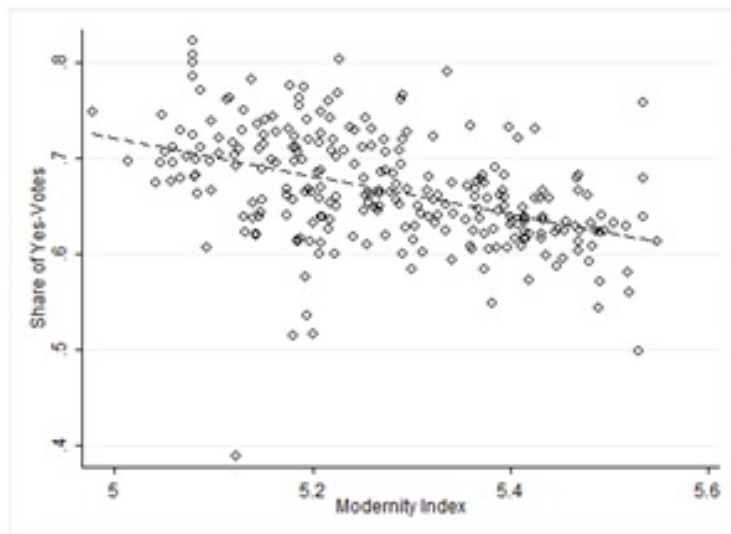


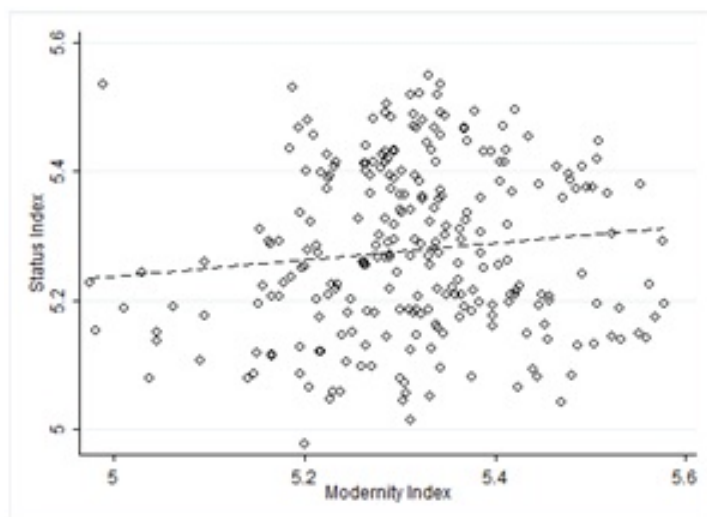
c) Local Status Index



Note: Own illustration, based on the Munich Allianz-Arena referendum (Map a) and on our calculation of the lifestyle indices (Maps b and c).

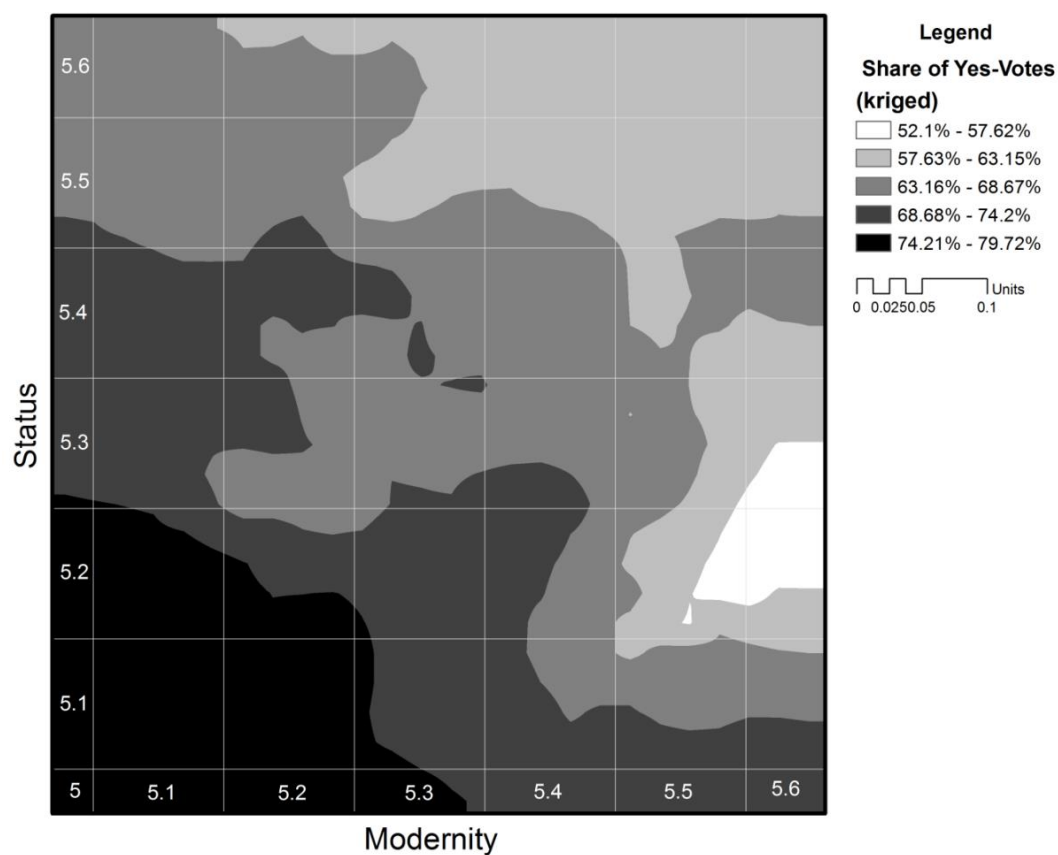
Fig. 2. Pairwise correlation of indices.





Note: The lower-bound outliers in a) to c) are the precincts around the Allianz-Arena in Fröttmaning.

Fig. 3. Interaction between the share of ‘yes’ votes and milieu indices.



Note: Own illustration. The shares of ‘yes’ votes are interpolated using ordinary kriging with a spherical semi-variogram model.

Appendix A – Tables and Figures

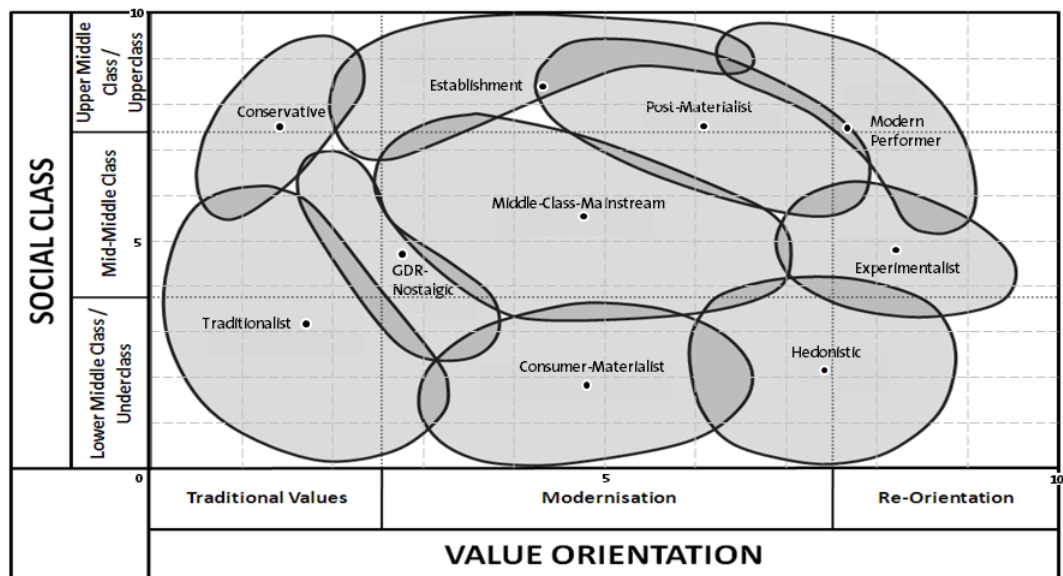
Table A1

First stage regression results

VARIABLES	Value orientation	Strata affiliation
Proportion of Population 18-25 Years Old [%]	-0.142 (0.335)	-1.049*** (0.328)
Proportion of Population 25-35 Years Old [%]	0.576*** (0.170)	-0.440*** (0.166)
Proportion of Population 35-45 Years Old [%]	0.386 (0.244)	-0.904*** (0.239)
Proportion of Population 60+ Years Old [%]	-0.854*** (0.159)	-0.925*** (0.155)
Unemployment Rate [%]	0.570 (0.354)	-1.481*** (0.347)
Proportion of Population Male [%]	-0.968*** (0.199)	-0.237 (0.195)
Proportion of Population EU-Foreigner [%]	0.790*** (0.181)	0.309* (0.177)
Olympic stadium 4k	0.023 (0.023)	0.009 (0.023)
Olympic 4k x distance to Olympic Stadium [km]	-0.009 (0.008)	-0.006 (0.008)
Allianz-Arena 5k	0.024 (0.040)	-0.054 (0.039)
Allianz-Arena 5k x distance to Allianz-Arena [km]	-0.011 (0.011)	-0.006 (0.011)
Political party affiliation CSU [%]	-0.419*** (0.096)	-0.137 (0.094)
Religious denomination Evangelic [%]	0.100 (0.190)	2.537*** (0.186)
Purchasing Power [1.000€ p.c.]	-0.003 (0.002)	0.009*** (0.002)
Constant	5.953*** (0.167)	5.564*** (0.163)
Observations	261	261
R-squared	84.5%	81.5%
Hansen J statistic (overidentification test, p-value)		69,69%
Kleibergen-Paap statistic (underidentification test, p-value)		0,00%

Note: The endogenous variables are value orientation and strata affiliation. Olympic 4k (Fröttmaning 5k) denotes precincts within 4 km (5 km) of the Olympic Stadium (Allianz-Arena). The standard errors are in parentheses. ***/**/* denote significance at the 1/5/10% levels, respectively.

Fig. A1. Sinus-Milieus Germany.



Note: Own illustration, on the basis of Sinus-Sociovision [40].

Appendix B – survey questionnaire

Own translation of:

„Ausschnitt aus dem Fragebogen 1999 zum Thema “Lebensführung” published in:

Gunnar Otte, 2008: Sozialstrukturanalysen mit Lebensstilen: Eine Studie zur theoretischen und methodischen Neuorientierung der Lebensstilforschung. 2. Auflage. VS Verlag fuer Sozialwissenschaften. Wiesbaden.

Excerpt from the Questionnaire 1999 on lifestyle

1. Self-assessment of lifestyle

Next we would like to ask you a few questions about your lifestyle. I have a list here in which different ways of how one's everyday life can be lived are described. Please tell me about each description whether it applies fully, more or less, rather not or not at all to your personal lifestyle.

[Int.: When the respondent needs a lot of time for consideration: Please answer without thinking about it too long!]

		Applies fully	Applies more or less	Does rather not apply	Does not apply at all	Don't know/ answer refused
A	I lead a simple life.	25.1	31.5	30.3	12.3	0.9
B	I think a lot and try to get to the bottom of matters.	36.4	41.6	18.4	3.2	0.4
C	My everyday life is strongly characterized by old values such as frugality, cleanliness and order.	27.8	30.1	32.0	9.9	0.2
D	My standard of living is high.	10.0	39.1	38.9	11.1	0.9
E	I believe that the meaning of life is to have fun and to be able to afford whatever I like.	24.9	36.9	29.6	7.9	0.7
F	I am going out very often.	12.2	23.8	44.8	19.1	0.1
G	My life is based on religious principles.	9.2	22.4	25.9	42.5	0.0
H	I think it is important to be full of imagination and creative.	30.5	41.5	20.0	7.2	0.9
J	I enjoy life to the full.	22.9	40.2	27.7	8.6	0.5
K	In the evening I often find myself sitting in front of my TV set letting it entertain me.	12.6	24.9	39.9	22.4	0.2
L	I had to work hard for everything I can afford.	43.4	29.2	23.2	3.8	0.3
M	I don't like this modern electronic disco music.	40.7	15.5	25.5	18.1	0.2
N	I am interested in psychology and self-experience.	18.3	33.3	29.1	18.8	0.4
O	I hold on to old family traditions.	22.5	29.7	31.7	15.7	0.4
P	It is important to me to have a leading position in my job, an organization, an association or the like.	16.1	24.8	35.4	22.9	0.8
Q	I like to surround myself with a certain luxury.	9.7	36.7	36.7	16.5	0.5
R	I prefer staying at home during my leisure time.	14.0	25.0	46.4	14.2	0.4
S	I want to make new experiences and develop my capacities again and again.	48.6	38.3	8.9	3.7	0.4
T	There is nothing I worry more about than my health.	28.2	27.5	38.0	6.1	0.1
U	I often go on educational tours.	6.4	17.6	32.6	43.0	0.3
V	I own things that certain others don't: a weekend house, a yacht, works of art or antiques or the like.	4.9	9.7	17.7	67.4	0.3
W	I am interested in technical innovations.	26.1	36.2	23.2	14.1	0.4
X	I enjoy my life most when a lot is going on.	22.0	34.6	34.4	8.7	0.3

Sources of the (partially modified) items: “Wohlfahrtssurvey 1993” / Spellerberg 1993 (Items A, D, G, H, J); Schulze 1992 (B, N, X); SINUS / M. Vester et al. 2001 (C, E); “Dialoge 3” / Konietzka 1995 (F, L, S); H.-G. Vester 1988: 115 (R); “Austrian Life Styles 1988” / Richter 1991 (U); Neubildung (K, M, O, P, Q, T, V, W).

2. Leisure activities I

Please tell me now how often you go to the following events or visit the facilities listed below. Often, sometimes, hardly ever or never?

		often	sometimes	hardly ever	never	don't know/ answer refused
A	Art exhibitions, galleries	12.5	27.2	36.0	24.3	0.0
B	Cinema	23.0	26.2	30.6	20.2	0.0
C	Discotheques	7.9	13.3	22.5	56.3	0.0
D	Church services	12.0	17.5	31.9	38.6	0.0
E	Classical concerts, operas	12.6	23.1	27.1	37.1	0.1
F	Bars	24.0	24.7	23.1	28.1	0.0
G	Restaurants	29.8	44.7	20.6	4.9	0.0
H	Gambling Halls	0.2	2.0	5.9	92.0	0.0

3. Leisure activities II

In the following I name various activities that can be performed in the leisure time. Please tell me whether it is often, sometimes, hardly ever or never that you are doing such things.

		often	sometimes	hardly ever	never	don't know/ answer refused
A	Being together with friends	70.0	20.5	7.3	2.2	0.1
B	Attending courses, extending my knowledge privately	10.8	25.7	33.7	29.7	0.1
C	Watching TV	43.6	29.4	23.0	3.9	0.0
D	Working in the garden	19.5	13.9	15.3	51.3	0.0
E	Doing sport	33.0	20.3	22.0	24.6	0.1
F	Reading books	51.2	25.6	18.3	4.9	0.0
G	Do-it-yourself, tinkering, practicing handicraft	29.2	24.5	23.4	22.8	0.0
H	Looking after children	44.4	16.2	19.2	20.2	0.0
J	Being idle, doing nothing	20.7	34.5	32.4	12.4	0.1
K	Working at the PC	26.6	18.5	15.4	39.4	0.1
L	Using the internet	12.2	9.9	11.0	66.9	0.2
M	Making trips and day excursions	29.8	39.0	21.4	9.7	0.1

4. Taste in music

Next we deal with your taste in music. Tell me please how you like the following kinds of music. Do you like them very much, quite well, less or not at all?

[Items A to C are rotated]		Very much	Quite well	Less	Not at all	Unknown/ answer refused
A	German Volksmusik (folk music)	10.5	13.3	24.3	51.7	0.2
B	Pop music	26.0	34.7	21.4	17.4	0.6
C	Classical music	32.4	29.8	27.4	10.3	0.2
D	Rock music	22.3	27.9	26.2	23.1	0.5
E	Musical	25.8	33.1	27.6	13.3	0.1
F	German "Schlager" (pop songs)	12.9	18.9	32.9	34.8	0.4
G	Jazz	15.1	23.3	32.4	28.7	0.5
H	Reggae, soul, funk	16.3	25.5	25.3	28.5	4.4
J	International folk music	10.5	20.8	38.7	29.1	0.9
K	Opera	21.1	21.0	31.1	26.6	0.3
L	Techno, house, drum'n'bass	8.9	12.2	21.4	53.4	4.1
M	Hip hop	9.5	16.8	22.5	45.2	6.0
N	Independent, Punk	3.0	7.0	20.5	58.0	11.5

5. Television

When thinking of television offers how much do you like the following kinds of television programs?

Do you like them very much, quite well, less or not at all?

1.5 I don't watch TV

		Very much	Quite well	Less	Not at all	Unknown/ answer refused
A	Television shows and quiz programs	11.1	19.3	42.6	25.3	0.2
B	Entertainment shows	16.3	26.0	38.3	17.5	0.4
C	Political magazines	28.5	37.7	24.0	7.8	0.4
D	Music channels like <i>MTV</i> or <i>VIVA</i>	13.0	24.6	27.5	29.5	3.8
E	Action films	15.7	24.3	30.3	27.8	0.4
F	Documentations of contemporary history	39.3	37.0	17.3	4.7	0.3
G	Popular theater	9.5	12.4	32.3	44.2	0.2
H	Films with regional background	10.3	10.5	29.6	48.0	0.1
J	Science fiction, fantasy	17.3	20.8	24.2	35.1	1.2
K	Cultural programs	30.7	36.3	25.5	5.7	0.4
L	Commercials	2.5	7.0	26.1	62.7	0.2

6. Newspapers

How often do you read the following kinds of daily newspapers? Do you read them often, sometimes, hardly ever, never?

		often	sometimes	hardly ever	never	don't know/ answer refused
A	A tabloid, e.g. <i>Bild</i>	9.1	8.2	21.8	60.8	0.1
B	A national daily, e. g. <i>FAZ</i>	18.3	20.6	26.5	34.5	0.1
C	A local newspaper, e. g. <i>Mannheimer Morgen</i>	65.2	15.0	11.1	8.6	0.1

7. Places where you can buy clothes

Please reflect where you buy your clothes. How often do you buy them in the following shops? Often, sometimes, hardly ever, never?

		often	sometimes	hardly ever	never	don't know/ answer refused
A	in a store, e. g. <i>Kaufhof</i> or <i>Karstadt</i>	29.0	26.1	31.7	13.1	0.1
B	in exclusive boutiques	6.8	13.6	36.1	43.4	0.1
C	from mail-order companies	9.7	14.6	22.6	52.8	0.2
D	in secondhand shops	3.8	6.4	12.0	77.5	0.3
E	in shops with young fashion, e. g. <i>H&M</i>	22.3	24.6	17.3	35.3	0.6

8. Maximum spending at restaurants

When going out to eat quite well in a restaurant, how many deutschmarks per person – including beverages – do you spend at the maximum? [Int.: Please give whole numbers only!]

_____	DM
2.5	never go to a restaurant
1.2	always being invited
0.8	don't know
0.3	answer refused

9. Subjective assignments to classes of population

Nowadays classes of population are much discussed again. To which class do you reckon you belong to? To the...

0.9	Upper class
16.9	Upper middle class
64.1	Middle class
15.2	Working class
1.1	Lower class?

0.6	neither class
0.9	don't know
0.4	answer refused

10. Using facilities in Mannheim

There is a lot one can do in Mannheim. How often do you use the following facilities and offers?

Often, sometimes, hardly ever or never?

		Often	sometimes	hardly ever	never	don't know/ answer refused
A	Courses at the Volkshochschule (adult education center)	5.4	14.4	23.2	57.0	0.0
B	Art gallery, art association	10.9	21.7	30.0	37.5	0.0
C	National theater	14.6	26.1	30.8	28.5	0.0
D	Offers by the alternative cultural scene, e.g. TiG7, craftwork, cabaret	5.4	19.8	27.9	46.9	0.0
E	Landesmuseum für Technik und Arbeit, Reißmuseum	11.7	34.5	33.9	19.9	0.0
F	Fitness Center	13.0	7.5	12.3	67.2	0.0
G	Luisenpark, Herzogenriedpark [<i>Int. in sommer</i>]	42.5	32.8	17.5	7.1	0.0
H	Shopping in the city of Mannheim	41.5	30.1	22.3	6.2	0.0
J	Festivals in the city center, e. g. Blumenpeterfest, Christmas market	29.2	28.2	26.4	16.2	0.0
K	Neighborhood and street festivals	25.4	25.0	26.8	22.8	0.0
L	Public lectures, readings, panel discussions	2.6	14.3	29.6	53.4	0.0
M	Galas and balls in the Rosengarten	3.5	8.5	24.5	63.3	0.1
N	Meetings of senior citizens	2.6	2.9	5.6	88.7	0.1
O	Coffee klatch in a pastry shop	3.9	10.5	15.1	70.5	0.0
P	Visits of sport events	13.8	18.4	28.3	39.4	0.0
Q	International meeting centers	1.4	7.8	17.6	73.1	0.0
R	Rheinpromenade, Waldpark	24.3	28.0	21.4	26.1	0.2

Gunnar Otte, 2008: Sozialstrukturanalysen mit Lebensstilen: Eine Studie zur theoretischen und methodischen Neuorientierung der Lebensstilforschung. 2. Auflage. VS Verlag fuer Sozialwissenschaften. Wiesbaden.

Anhang 3: Ausschnitt aus dem Fragebogen 1999 zum Thema „Lebensführung“

1. Selbsteinschätzung der Lebensführung

Als nächstes würden wir Ihnen gern ein paar Fragen zu Ihrem Lebensstil stellen. Ich habe hier eine Liste mit Beschreibungen, wie man seinen Alltag gestalten kann. Bitte sagen Sie mir für jede Beschreibung, ob sie für Ihre persönliche Lebensführung voll und ganz zutrifft, eher zutrifft, eher nicht zutrifft oder überhaupt nicht zutrifft.

[Int.: Wenn Befragter lange überlegt: Bitte antworten Sie, ohne lange nachzudenken!]

	Trifft voll und ganz zu	Trifft eher zu	Trifft eher nicht zu	Trifft überhaupt nicht zu	w.n./ verw.
A Ich führe ein einfaches, schlichtes Leben.	25.1	31.5	30.3	12.3	0.9
B Ich bin ein Mensch, der viel nachdenkt und versucht, allen Dingen auf den Grund zu kommen.	36.4	41.6	18.4	3.2	0.4
C Mein Alltag ist stark durch die alten Werte Sparsamkeit, Sauberkeit und Ordnung geprägt.	27.8	30.1	32.0	9.9	0.2
D Ich pflege einen gehobenen Lebensstandard.	10.0	39.1	38.9	11.1	0.9
E Der Sinn des Lebens besteht für mich darin, Spaß zu haben und mir leisten zu können, was mir gefällt.	24.9	36.9	29.6	7.9	0.7
F Ich gehe viel aus.	12.2	23.8	44.8	19.1	0.1
G Ich lebe nach religiösen Prinzipien.	9.2	22.4	25.9	42.5	0.0
H Es ist mir wichtig, phantasievoll und schöpferisch zu sein.	30.5	41.5	20.0	7.2	0.9
J Ich genieße das Leben in vollen Zügen.	22.9	40.2	27.7	8.6	0.5
K Abends passiert es mir häufig, dass ich vor dem Fernseher sitze und mich berieseln lasse.	12.6	24.9	39.9	22.4	0.2
L Ich habe mir bislang alles in meinem Leben hart erarbeiten müssen.	43.4	29.2	23.2	3.8	0.3
M Mit dieser neumodischen elektronischen Disco-Musik kann ich nichts anfangen.	40.7	15.5	25.5	18.1	0.2
N Ich interessiere mich für Psychologie und Selbsterfahrung.	18.3	33.3	29.1	18.8	0.4
O Ich halte an alten Traditionen meiner Familie fest.	22.5	29.7	31.7	15.7	0.4
P In meinem Leben ist es mir wichtig, eine Führungsposition – im Beruf, in einer Organisation, einem Verein oder ähnlichem – zu übernehmen.	16.1	24.8	35.4	22.9	0.8
Q Ich umgebe mich gern mit einem gewissen Luxus.	9.7	36.7	36.7	16.5	0.5
R In meiner Freizeit bleibe ich am liebsten gemütlich zu Hause.	14.0	25.0	46.4	14.2	0.4
S Ich will immer wieder neue Erfahrungen machen und mich weiterentwickeln.	48.6	38.3	8.9	3.7	0.4
T Über kaum etwas mache ich mir so viele Gedanken wie über die Erhaltung meiner Gesundheit.	28.2	27.5	38.0	6.1	0.1
U Ich mache häufig Bildungsreisen.	6.4	17.6	32.6	43.0	0.3
V Ich besitze Dinge, die nicht jeder hat – etwa ein Wochenendhaus, eine Yacht, Kunstwerke oder Antiquitäten, oder ähnliches.	4.9	9.7	17.7	67.4	0.3
W Ich interessiere mich für technische Neuerungen.	26.1	36.2	23.2	14.1	0.4
X Mein Leben gefällt mir dann besonders gut, wenn ständig etwas los ist.	22.0	34.6	34.4	8.7	0.3

Quellen der (zum Teil modifizierten) Items: „Wohlfahrtssurvey 1993“ / Spellerberg 1993 (Items A, D, G, H, J); Schulze 1992 (B, N, X); SINUS / M. Vester u.a. 2001 (C, E); „Dialoge 3“ / Konietzka 1995 (F, L, S); H.-G. Vester 1988: 115 (R); „Austrian Life Styles 1988“ / Richter 1991 (U); Neubildung (K, M, O, P, Q, T, V, W).

2. Freizeitaktivitäten I

Bitte sagen Sie mir nun, wie häufig Sie die folgenden Veranstaltungen oder Einrichtungen besuchen. Besuchen Sie sie oft, manchmal, selten oder nie?

	oft	manchmal	selten	nie	w.n./ verw.
A Kunstausstellungen, Galerien	12.5	27.2	36.0	24.3	0.0
B Kino	23.0	26.2	30.6	20.2	0.0
C Diskotheken	7.9	13.3	22.5	56.3	0.0
D Gottesdienste	12.0	17.5	31.9	38.6	0.0
E Klassische Konzerte, Opern	12.6	23.1	27.1	37.1	0.1
F Kneipen	24.0	24.7	23.1	28.1	0.0
G Restaurants	29.8	44.7	20.6	4.9	0.0
H Spielhallen	0.2	2.0	5.9	92.0	0.0

3. Freizeitaktivitäten II

Im folgenden nenne ich Ihnen einige Tätigkeiten, die man in seiner Freizeit ausüben kann. Sagen Sie mir bitte bei jeder Tätigkeit, ob Sie das oft, manchmal, selten oder nie machen.

	oft	manchmal	selten	nie	w.n./ verw.
A Mit Freunden zusammen sein	70.0	20.5	7.3	2.2	0.1
B Kurse besuchen, mich privat weiterbilden	10.8	25.7	33.7	29.7	0.1
C Fernsehen	43.6	29.4	23.0	3.9	0.0
D im Garten arbeiten	19.5	13.9	15.3	51.3	0.0
E Aktivsport treiben	33.0	20.3	22.0	24.6	0.1
F Bücher lesen	51.2	25.6	18.3	4.9	0.0
G Heimwerken, Basteln, Handarbeiten	29.2	24.5	23.4	22.8	0.0
H mich mit Kindern beschäftigen	44.4	16.2	19.2	20.2	0.0
J Faulenzen, einfach nichts tun	20.7	34.5	32.4	12.4	0.1
K mich mit dem Computer beschäftigen	26.6	18.5	15.4	39.4	0.1
L das Internet nutzen	12.2	9.9	11.0	66.9	0.2
M Ausflüge und Tagestouren machen	29.8	39.0	21.4	9.7	0.1

4. Musikgeschmack

Als nächstes kommen wir zu Ihrem Musikgeschmack. Sagen Sie mir bitte, wie Ihnen die folgenden Arten von Musik gefallen. Gefallen sie Ihnen sehr, ziemlich, weniger oder überhaupt nicht?

[Items A bis C werden rotiert]

	sehr	ziem- lich	weniger	überh. nicht	unbek./ verw.
A Deutsche Volksmusik	10.5	13.3	24.3	51.7	0.2
B Pop-Musik	26.0	34.7	21.4	17.4	0.6
C Klassische Musik	32.4	29.8	27.4	10.3	0.2
D Rock-Musik	22.3	27.9	26.2	23.1	0.5
E Musical	25.8	33.1	27.6	13.3	0.1
F Deutsche Schlager	12.9	18.9	32.9	34.8	0.4
G Jazz	15.1	23.3	32.4	28.7	0.5
H Reggae, Soul, Funk	16.3	25.5	25.3	28.5	4.4
J Internationale Folklore	10.5	20.8	38.7	29.1	0.9
K Oper	21.1	21.0	31.1	26.6	0.3
L Techno, House, Drum'n'Bass	8.9	12.2	21.4	53.4	4.1
M Hip Hop	9.5	16.8	22.5	45.2	6.0
N Independent, Punk	3.0	7.0	20.5	58.0	11.5

5. Fernsehinteressen

Wenn Sie an das Fernsehangebot denken, wie sehr gefallen Ihnen die folgenden Arten von Sendungen? Gefallen sie Ihnen sehr, ziemlich, weniger oder überhaupt nicht?

1.5	sehe überhaupt kein Fernsehen					
		sehr	ziemlich	weniger	überh. nicht	unbek./verw.
A	Fernsehshows und Quizsendungen	11.1	19.3	42.6	25.3	0.2
B	Unterhaltungsserien	16.3	26.0	38.3	17.5	0.4
C	Politische Magazine	28.5	37.7	24.0	7.8	0.4
D	Musiksender wie <i>MTV</i> oder <i>VIVA</i>	13.0	24.6	27.5	29.5	3.8
E	Actionfilme	15.7	24.3	30.3	27.8	0.4
F	Dokumentationen zur Zeitgeschichte	39.3	37.0	17.3	4.7	0.3
G	Volkstheater	9.5	12.4	32.3	44.2	0.2
H	Heimatfilme	10.3	10.5	29.6	48.0	0.1
J	Science Fiction, Fantasy	17.3	20.8	24.2	35.1	1.2
K	Kultursendungen	30.7	36.3	25.5	5.7	0.4
L	Werbespots	2.5	7.0	26.1	62.7	0.2

6. Zeitungslektüre

Wie häufig lesen Sie folgende Arten von Tageszeitungen? Lesen Sie sie oft, manchmal, selten oder nie?

		oft	manchmal	selten	nie	w.n./verw.
A	Eine Boulevardzeitung, z.B. die <i>Bild</i>	9.1	8.2	21.8	60.8	0.1
B	Eine überregionale Tageszeitung, z.B. die <i>FAZ</i>	18.3	20.6	26.5	34.5	0.1
C	Eine Lokalzeitung, z.B. den <i>Mannheimer Morgen</i>	65.2	15.0	11.1	8.6	0.1

7. Orte des Bekleidungskaufs

Denken Sie einmal daran, wo Sie Ihre Bekleidung kaufen. Wie häufig kaufen Sie in den folgenden Geschäften ein? Oft, manchmal, selten oder nie?

		oft	manchmal	selten	nie	w.n./verw.
A	im Kaufhaus, z.B. bei <i>Kaufhof</i> oder <i>Karstadt</i>	29.0	26.1	31.7	13.1	0.1
B	in exklusiven Boutiquen	6.8	13.6	36.1	43.4	0.1
C	bei Versandhäusern	9.7	14.6	22.6	52.8	0.2
D	in Secondhand-Shops	3.8	6.4	12.0	77.5	0.3
E	in Läden mit junger Mode, z.B. bei <i>H&M</i>	22.3	24.6	17.3	35.3	0.6

8. Maximale Ausgaben im Restaurant

Wenn Sie einmal in ein Restaurant richtig gut Essen gehen, wie viel D-Mark geben Sie dann maximal pro Person – inklusive Getränke – aus?

[Int.: Bitte nur ganze Zahlen angeben!]

	DM
2.5	gehe nie ins Restaurant
1.2	werde immer eingeladen
0.8	weiß nicht
0.3	Antwort verweigert

9. Subjektive Schichteinstufung

Es wird heute wieder viel über Bevölkerungsschichten gesprochen. Welcher Schicht rechnen Sie sich selbst am ehesten zu? Der...

0.9	Oberschicht
16.9	oberen Mittelschicht
64.1	Mittelschicht
15.2	Arbeiterschicht
1.1	Unterschicht?
0.6	keiner dieser Schichten
0.9	weiß nicht
0.4	Antwort verweigert

10. Einrichtungsnutzung in Mannheim

In Mannheim kann man ja einiges unternehmen. Wie oft nutzen Sie die folgenden Einrichtungen und Angebote? Oft, manchmal, selten oder nie?

	oft	manch- mal	selten	nie	w.n./ verw.
A Kurse der Volkshochschule	5.4	14.4	23.2	57.0	0.0
B Kunsthalle, Kunstverein	10.9	21.7	30.0	37.5	0.0
C Nationaltheater	14.6	26.1	30.8	28.5	0.0
D Angebote der alternativen Kulturszene, z.B. TiG7, Kleinkunst, Kabarett	5.4	19.8	27.9	46.9	0.0
E Landesmuseum für Technik und Arbeit, Reißmuseum	11.7	34.5	33.9	19.9	0.0
F Fitness-Center	13.0	7.5	12.3	67.2	0.0
G Luisenpark, Herzogenriedpark [Int.: im Sommer]	42.5	32.8	17.5	7.1	0.0
H Einkaufsbummel in der City von Mannheim	41.5	30.1	22.3	6.2	0.0
J Volksfeste in der Innenstadt, z.B. Blumenpeterfest, Weihnachtsmarkt	29.2	28.2	26.4	16.2	0.0
K Stadtteilstadt, Straßenfeste	25.4	25.0	26.8	22.8	0.0
L öffentliche Vorträge, Lesungen, Podiumsdiskussionen	2.6	14.3	29.6	53.4	0.0
M Galas und Bälle im Rosengarten	3.5	8.5	24.5	63.3	0.1
N Seniorentreffs	2.6	2.9	5.6	88.7	0.1
O Kaffeeklatsch in einer Konditorei	3.9	10.5	15.1	70.5	0.0
P Besuch von Sportveranstaltungen	13.8	18.4	28.3	39.4	0.0
Q internationale Gemeinschafts- und Begegnungszentren	1.4	7.8	17.6	73.1	0.0
R Rheinpromenade, Waldpark	24.3	28.0	21.4	26.1	0.2