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Syntactic variation in French *Wh*-questions: A quantitative study from the angle of Bourdieu's sociocultural theory[1]

Abstract: This paper deals with the issue of social variation at the level of syntax, investigating wh-movement and subject-verb-inversion (stylistic inversion) in wh-constructions in European French. It proposes an analysis of the subjective side of social structure, in terms of the sociocultural theory of Bourdieu and the lifestyle concept. Furthermore, this work shows that acceptability judgments do represent a valid and insight-providing source of evidence in sociolinguistics. Statistical analyses of variance are first calculated with (language-)internal, and then with both internal and (language-)external variables. This two-step strategy reflects the transition from a perspective of a commonly shared system of syntax to one of social variation. The results show that lifestyle is a very prominent element of the variable set. It can be fruitfully applied even when a sample is less diverse from a sociodemographic point of view. These findings underline that a more sophisticated social structure analysis can reveal salient patterns of sociolinguistic variation that would otherwise remain undetected.

Keywords: lifestyle, social class, *wh*-questions, acceptability judgments, syntactic variation

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1 Introduction

The present work is an empirical analysis of syntactic variation inspired by the sociocultural theory of the French sociologist Pierre Bourdieu. Bourdieu is no unknown among sociolinguists. There has been continuous discussion on the concepts of linguistic market, habitus, and practice (e.g., Sankoff and Laberge 1978; Hasan 1998; Bucholtz 1999; Fairclough 2003; Slembrouck 2004; Dodsworth 2008).

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However, the innovation that Bourdieu proposed within social sciences with his lifestyle approach has not been taken up by sociolinguists working quantitatively in their conceptualization of social class. In effect, the situation is surprising, because the traditional variationist sociolinguistic approach to social class is based conceptually on a Weberian conception of stratification (see Labov 1966).

The shortcomings of an essentially economy-based class concept are well-known. Sociolinguists, in particular those working in anthropological sociolinguistics and critical discourse analysis, have long been pointing out that the influence of economic factors is tempered by what scholars as early as Weber (1963 [1922], 1972 [1922]) called life chances (a precursor to lifestyle). Fairclough (2000: 165) states that "the dialogue with social theory needs to include more middle-range and local social theory which opens up empirical work on specific fields, such as the theories of Bourdieu (1988, 1991) and Bernstein (1990, 1996)." Or such as the theories of Giddens (1976, 1998) and Blau (1964, 1977) to mention two other influential modern approaches towards social inequality.

A well-known and successfully applied approach, builds on the notion of *communities of practice* with which the macro-level of class theory and the micro-level of intergroup theory or cultural sociology have been connected in sociolinguistic work (e.g., Eckert and McConnell-Ginet 1992a, 1992b; Holmes and Meyerhoff 1999). The notion of communities of practice unfolds its strength in qualitative studies. Embedded in ethnographic work, it addresses a major criticism passed on Bourdieu both by sociolinguists and sociologists, concerning his "overstructuralized concept of man" (Müller 1992: 348): The individual is seen "more as a product of social structure than as a free agent" (Bucholtz 1999: 205), and mental representations which are the structural basis of the habitus are given little systematic description (Dodsworth 2008: 44).

Nevertheless, this discussion should not cast shadow on the fact that Bourdieu (1979) laid out in his large-scale Paris survey a methodology for a *quantitative* indicator of social differentiation based on subjective factors. Building on his approach, I want to further explore the role of subjective factors in language and investigate whether Bourdieu's notion of lifestyle can be operationalized as a sociolinguistic factor. This paper will not compare the effect of objective and subjective factors of social structure, i.e., the question is not whether one is 'better' than the other. Rather, by exploring lifestyle as a sociolinguistic variable, this work will hopefully bring us one step closer to the goal of a more complete conceptualization of social class in quantitative sociolinguistics for future research: "Perhaps a more sensitive and accurate measure of social class or social status would combine a number of objective factors (like personal wealth and value of home) with subjective factors (like people's aspirations to social mobility, or their friendship networks)" (Meyerhoff 2011: 159).

The statistical part of the present paper is inevitably complex, mainly because the sociology of lifestyle requires the combination of several advanced techniques. However, since I want to make Bourdieu's quantitative social structure analysis accessible to readers less familiar with these methods, many technical elements have been separated and placed in a web-appendix (http://www.social-variation.com/French).

Relating lifestyle and linguistic style, Bourdieu's sociology of language is not limited to the concept of the linguistic market, but expresses hypotheses about social variation in language. He assumes variation in all subfields of language, from phonology to syntax, which can emerge whenever there is optionality. Of course, this is of no surprise to sociolinguists, but it is interesting that a precise connection to linguistic variation is already embedded in his theory.

Knowing that style and prestige considerations are traditionally salient in French grammar, Bourdieu's writings inspired me to have a closer look at syntactic variation. In a first step a plausible notion of syntactic optionality needs to be carved out. The intended bridge between formal syntax and sociolinguistics influenced my choice of method: I use acceptability judgments as a dependent variable. Many sociolinguists are understandably critical about this measure. I propose carefully collected gradient judgments.

2 Grammatical theory and social variation

Syntacticians, especially generative syntacticians, and sociolinguists seem to occupy opposing ends of the spectrum. While generative syntacticians adhere to a nativist approach based on the assumption of the psychological reality of universal grammar and of the ideal speaker/hearer (cf. Chomsky 1965), sociolinguists are interested in external factors determining language behavior and, therefore, the heterogeneity between different groups. There is a deep conceptual and fundamental distance between both paradigms, qualified as a "schism" by Cornips and Corrigan (2005: 2). Some researchers have pointed to the benefits of building a bridge between both approaches. Wilson and Henry (1998: 8) underline that such a bridge will help us to "understand language variation and change as they are driven by social factors but constrained (at one level) by the nature of possible grammars". At the same time, one can design sociolinguistic studies being aware of "the theoretical limits of this variation uncovered by generative linguists" (Barbiers 2005: 235). There has been discussion among sociolinguists as to whether the variationist approach "above phonology" (Sankoff 1980) is really justified. Prominent examples of this discussion are Cheshire (1987), Cheshire et al. (2005), Labov (1978), Lavandera (1978), Romaine (1984) and Winford (1984,

1996). Studies on variation at the level of syntax (or morpho-syntax) are still rare when compared to studies at other levels of language. However, we are observing a growing number of work in this area, for example Coveney (2005) on simple versus doubled subjects in French, Otheguy et al. (2007) on null versus overt subject pronouns in Spanish, Poplack and Dion (2009) as well as Grimm and Nadasdi (2010) on French periphrastic versus inflected future, Henry (2005) on subject verb agreement in Belfast English, King (2005) on subject-verb agreement in Acadian French, or Muysken (2005) on the use and type of gerunds in Spanish, to cite some of them. Examples for quantitative studies on word order variation in the proper sense are Torres Cacoullos (1999) on Spanish clitic-climbing, Barbiers (2005) on the order in clause-final three-verb clusters in Dutch, Elsig (2009) on French interrogative variants, or Owens et al. (2009) on subject-verb order in spoken Arabic.

2.1 Defining the concept 'variation' at the level of syntax

The differences between sociolinguistics and generative linguistics do not only concern the research goals, but also fundamentals in the terminology. Concerning this, Armstrong (2001: 121) writes: "The analysis of variation on the morpho-syntactic levels raises not only serious methodological difficulties, but also very fundamental issues of sociolinguistic definition." Given the "considerable inconsistency among different writers in their use of the term syntactic variation" (Cheshire 1987: 260), I will begin by distinguishing between three major uses of this term to which I am going to refer throughout this article: (i) variation between languages or dialects, (ii) syntax-related, structural variation, and (iii) linguistic inter-group (or inter-individual) variation due to external factors. This distinction helps to keep track of the sometimes confusing polysemy as well as highlighting certain issues specific to the study of variation at the level of syntax.

In generative syntax the term variation usually refers to meaning (i). It reflects the effort to analyze typological differences between languages and dialects. Hale (1997: 72) refers to this meaning when he states: "We cannot learn what we seek to know about that which is invariant in grammar without studying that which is variable in it. We need linguistic diversity." Although syntax and sociolinguistics do not have a substantial overlap, they share a common problem: The issue of an adequate definition of syntax-internal, structural variation, i.e., meaning (ii): On the basis of which criteria can two or more syntactic forms be considered as variants of each other? This question is closely related to the issue of syntactic optionality, a particularly difficult problem since the Minimalist Pro-

gram (Chomsky 1991). The sociolinguistic (or sociological) perspective generally focuses on meaning (iii), i.e., on the diversity within the speech community. The concept of the linguistic variable (Labov 1963), however, requires the combination of meanings (ii) and (iii): Variationist studies at the level of syntax deal with different syntactic variants correlated with other linguistic and/or social variables.

Two points have been raised in various contributions on sociolinguistic methodology: Firstly, which phenomena can be called "syntactic" (as, for example, opposed to morphological)? Secondly, on the basis of which criteria can two structures be considered as variants? Regarding the first issue, different kinds of typologies have been proposed, embracing the subfields ranging from phonology to syntax (Romaine 1980; Winford 1984; Cheshire 1987). I will not delve deeper into this point. I doubt whether this issue is relevant within the scope of this methodological discussion. It depends on the syntactic framework whether a structural phenomenon is to be considered as "clearly syntactic", as "clearly morphological", or as situated somewhere in between. Syntactic theory is in this respect very versatile: One has only to think, for example, of the importance the morphological component has gained since the Minimalist Program, especially in strongly decompositional approaches such as the one followed by Kayne (2000: 131–162). Likewise, research on information structure (e.g., variation in Hungarian focus-raising, Gervain and Zemplén 2005) teaches us that semantic and phonological aspects cannot be isolated from word order . The second point is in my opinion much more fundamental than the question, "where syntax starts" (cf. Labov 1978; Lavandera 1978) and, to put it differently, where phonology or morphology stops: The question of how several syntactic structures can be considered as variants is closely related to the problem of semantic equivalence. In effect, it is particularly complex to propose an adequate and operational definition of semantic equivalence. For example, I do not consider, contrasting with Romaine (1984), the sentences (1a) to (1e) as syntactic variants. Rather, one could capture this variation on a discourse-pragmatic level, e.g., in terms of speech act.

(1) a. *It's cold in here.*
   b. *I'm cold.*
   c. *Are you cold?*
   d. *Would you close the window?*
   e. *Close the window.*

The consequence of a definition based on a rough criterion of similar communicative intention leads in many cases to an excessively high number of possible

syntactic variants. It is thus understandable, why Winford (1996) calls for the strictest possible definition of semantic equivalence, although he too owes a precise operationalization. In addition to semantic criteria it is also necessary to include formal-syntactic criteria into the definition of syntactic variants. The necessity of a theory-dependent definition is even more striking than in the case of semantic equivalence (see also Downes 1984: 210). I have argued elsewhere (Adli 2004: 22–23) that a definition of semantic equivalence can also be *too* strict, citing as an example the case of Japanese multiple *wh*-questions. In these constructions, variant (2a) without *wh*-scrambling allows both the single pair and the pair list reading, whereas variant (2b) with *wh*-scrambling shows a strong preference for the single pair reading (Hagstrom 1998: 74).

(2) a. *dare-ga   kinoo   nani -o   katta   no?*
     who-NOM   yesterday   was -ACC   bought Q
     'Who bought what yesterday?' (PL, SP)
   b. *nani -o$_i$ kinoo   dare-ga   t$_i$ katta   no?*
     what-ACC   yesterday   who-NOM   bought Q
     'What bought who yesterday?' (?*PL, SP)

From the point of view of language *use*, I doubt whether this difference (only relevant in those rare situations, in which the use of the additional pair list reading in multiple *wh*-questions really matters) keeps speakers from producing structures with and without *wh*-scrambling as syntactic alternants. In most contexts, they function as optional variants. Sankoff (1988: 153) calls this phenomenon "neutralization in discourse".

    Many generative syntacticians exclude syntactic optionality and systematically refer to "apparent optionality" or notions like competing, minimally different internal grammars (e.g., Roeper 1999). However, a minority defends the notion of true optionality (e.g., Fukui 1993; Saito and Fukui 1998; Haider and Rosengren 2003; Biberauer and Richards 2006, each with a somewhat different formal realization). The notion of optionality I work with does not only cover semantically vacuous movement. It also incorporates information-structural contrasts assumed not to be situated in core syntax but at the interface levels (following Haider and Rosengren 2003). This notion of optionality is operational for variationist studies at the level of syntax. It excludes all candidates with different lexical content such as the sentences (1a) to (1e). However, it still includes variation in the numeration that has information-structural effects such as indicating topic shift or givenness. For example, it includes the contrast between overt subject pronoun and null subject pronoun in Spanish (e.g., Otheguy et al. 2007). And it also includes semantically vacuous variation between an overtly realized and

nonrealized functional category, e.g., English complement clauses headed by *that* or with *that* deletion (Kroch and Small 1978).

The problem is that such a concept of optionality does not necessarily cover a set of constructions like (3a) to (3f), which are the different variants of *wh*-interrogatives in use in contemporary European French. Whether they do or do not build on the same lexical material, depends again on one's theoretical premises (according to these premises, one may consider that additions of *est-ce que*, *c'est que*, *c'est ... que* are added grammaticalized functional items that do not alter the lexical material of the sentence – or not). However, we need to include the entire set if we want to respect the principle of accountability (Labov 1982: 30) which states that the variants belonging to the same variable must be specified by the total number of occurrences and the potential occurrences or nonoccurrences in the variable environment. This is one of the intricate obstacles at the intersection of syntax and sociolinguistics. A notion of syntactic optionality viable from a formal point of view can be more safely defended for (3a) and (3b) (and possibly for (3c)). I suggest to call the alternance of the whole set (3a) to (3f) *variation at the level of syntax*, but to use the more restrictive denomination *variation at the level of narrow syntax* for the alternance (3a) and (3b). Variation at the level of (non-narrow) syntax respects the principle of accountability. Variation at narrow syntax captures the subset that we can resume under a formally viable notion of syntactic optionality.

(3) a. *Tu   vas où?*
       you go where
   b. *Où   tu   vas?*
      where   you go
   c. *Où   vas- tu?*
      where   go   you
   d. *Où   est-ce que tu   vas?*
      where   EST-CE QUE you go
   e. *Où   c'est que tu   vas?*
      where   it is that you go
   f. *c'est où   que tu   vas?*
      it is   where   that you go
      'Where do you go?'

In my opinion, it does not make sense to play off variation at narrow syntax against variation at (non-narrow) syntax, because the choice depends on the research goal. For example, the narrow syntax perspective is probably not the method of choice if we are interested in change in progress, because diachronic

syntactic processes are not limited to cases of optionality, but include phenomena such as grammaticalization and reanalysis. Furthermore, spontaneous speech data can easily be misinterpreted if we are not aware of the entire picture of variation: Not only because one might miss the full stylistic range in the recordings, such as the more formal subject-clitic inversion variant (3c) in the examples above; also because one can misinterpret the quantitative facts (e.g., the ratios of two minor variants would not reflect whether they are rather infrequent, unless we know the total number of occurrence of all variants).[2] However, the last point does not apply to studies with acceptability judgments, where we are not comparing ratios but absolute measurements of judgment values.

It makes sense to work with variation at narrow syntax, if one wants to bridge generative linguistics and sociolinguistics. Cornips and Corrigan's (2005) statement goes into this direction: "Availing of the formal apparatus provided by the generative paradigm which necessitates a more holistic view of the grammar and takes a keener interest in the acquisition process permits a sociolinguistic account in which one has a more robust view of exactly which variants really are 'alternate ways of saying the same thing' (Labov 1972: 118) and demonstrates just how this variability might be learned." Henry (2002) and Barbier (2005) specifically state that syntactic variants are an inherent property of the grammatical system based on *optional* rules and principles. Finally, one should be aware that sociolinguists work with a more permissive notion of syntactic variants and optionality with respect to semantic similarity, which is also the approach I adopt. Guy (2007: 3), in his debate with Newmeyer (2006) on that matter, expresses this point as follows: "The prevailing consensus is that, while certain structures may have different meanings in some of the contexts they occur in, there are often other contexts in which they function as alternants. Therefore, productive variationist analyses can be conducted, given careful attention to contexts and meaning."

This work looks at variation at narrow syntax. I consider French *wh*-interrogatives with or without *wh*-movement and constructions with or without stylistic inversion as syntactic alternants where movement operations can or cannot be applied. Obviously, there is a trade-off: I work with a formally "safer" notion of optionality, but I cannot cover the whole stylistic range of French *wh*-variants.

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2 Elsig's (2009: 2) work is one example of a corpus study of spontaneous speech, which is not restricted to what I call variation at narrow syntax. He argues that the system of direct French interrogative sentences can be divided into two variable contexts: the first one containing all variants of yes-no-questions, the second one all variants of *wh*-questions.

2.2 Acceptability judgments as sociolinguistic evidence

One consequence of the above-mentioned approach is reflected in the fact that I use acceptability judgments, and not spontaneous speech data. Sociolinguists, as we all know, favor the use of spontaneous speech, and many are suspicious of the validity and reliability of introspective data. Labov (1996), for example, assigns lower validity to judgment data than to production data, stating in his "validity principle" (p. 83): "When the use of language is shown to be more consistent than introspective judgments, a valid description of the language will agree with that use rather than with intuitions". However, not all linguists share this view, which unnecessarily restricts the possibilities of sociolinguistic studies at the level of syntax (Wilson and Henry 1998; Cornips and Poletto 2005; Gervain and Zemplén 2005; Henry 2005). The use of a data source from formal grammar research in the scope of a sociolinguistic study creates in this context a useful intersection between both sub-disciplines and opens the opportunity to new insights on variation. I believe that not only spontaneous speech data but also acceptability judgments are important sources of evidence in research on syntactic variation. Coveney (1996: 121) points out, interestingly in the scope of a variationist study on French *wh*-questions, that certain theoretical issues require the use of acceptability judgments: "There is a certain irony in the fact that a variationist analysis should require the use of intuitive judgments of this kind, since sociolinguists have in the past attacked the uncontrolled use of intuitions as practiced by linguists of other persuasions."

Labov's (1996: 100) reference to "five conditions that promote the failure of linguistic intuitions", namely (i) social intervention, (ii) physical collapse, (iii) semantic suspension, (iv) cognitive strategies and (v) pragmatic opacity, is certainly not baseless (see also Schütze 1996). The conclusion, however, should consist of methodological work for evaluating and optimizing the validity and reliability of acceptability judgments (see also Cornips and Poletto 2005) and not of devaluing judgment data as such.

Problems of validity and reliability of acceptability judgments, often varying and imprecise, are generally an underestimated problem in syntax research, although in recent years authors are increasingly expressing their awareness on this issue (see Schütze 1996, for examples of very doubtful judgments found in syntactic literature; Adli 2004: 35–41).

Generally, (inter-individual) inconsistency in judgments brings up the question whether they correlate with external factors, i.e., whether cases of apparent inconsistency follow in reality a systematic pattern based on hitherto unnoticed correlations with extra-syntactic elements. The phenomenon of divergent judgments prompted Dąbrowska (1997: 737) to formulate the assumption according to

which "the ability to process complex syntactic structures of the kind that one encounters in the TG/GB literature is far from universal and depends to a large degree on the amount of schooling that one has had; hence it cannot simply grow out of an innate language faculty given 'mere exposure'". She showed that the level of understanding of complex constructions depends on the level of education, for example in the case of complex nominal phrases (see also the results reported by Dąbrowska [2010] on the difference between linguists' and non-linguists' judgments).

(4) a. *John noticed that [*$_{NP}$ *the fact that the room was tidy] surprised Arthur.*
    b. *John remembered that [*$_{NP}$ *the fact that criticizing himself was hard] surprised Arthur.*

These points suggest that we need, firstly, more reliable data and, secondly, a better understanding of systematic correlations with external factors. Unfortunately this issue is not always taken very seriously in generative grammar. However, we can observe a new tendency in the last years (e.g., Schütze 1996; Cornips and Poletto 2005; Dąbrowska 2010). The problem is illustrated by an old but still wide-spread opinion of Chomsky (1965: 19): "Allusions to presumably well-known 'procedures of elicitation' or 'objective methods' simply obscure the actual situation in which linguistic work must, for the present, proceed. Furthermore, there is no reason to expect that reliable operational criteria for the deeper and more important theoretical notions of linguistics (such as 'grammaticalness' and 'paraphrase') will ever be forthcoming." This opinion, however, rather reflects a "no will, no way" attitude rather than a corroborated statement. The situation further degenerates if the (reasonable) focus on explanatory adequacy results in a view according to which precise data are not considered as crucially important in the process of theory-building: "It is not necessary to achieve descriptive adequacy before raising questions of explanatory adequacy" (Chomsky 1965: 36). However, it is certainly not in Chomsky's spirit (and not in the spirit of explanatory adequacy) that those data on which the theory builds are wrong. I believe that both sociolinguists' doubts on the validity of judgment data and Chomsky's (1965) lack of recognition of the crucial role of descriptive adequacy detract from understanding the precise form of the interplay between internal and external factors in syntax. The use of gradient acceptability judgments probably triggers skepticism on part of some syntacticians (due to the gradient character) as well as of some sociolinguists (due to introspective character). However, some of the skepticism represents the "labor pain" of a new but promising methodology, deserving a fair chance to uncover both its potential and limitation. Precise methodological work on the data type of acceptability judgments and a systematic assessment of

relevant external factors can reduce the unjustifiable gap between formal syntax and variationist sociolinguistics.

3 Empirical strategy and operationalization

I will subsequently present the method for collecting gradient acceptability judgments, the set of social variables, as well as the sample plan.

3.1 Test sentences

The constructions studied in the present work are word order variants in French *wh*-interrogatives. Throughout this work (5a) and (5b) are referred to as stylistic inversion sentences (meaning ±stylistic inversion) and (6a) and (6b) as *wh*-questions.[3] Both pairs commonly share that one variant exhibits additional syntactic movement which the other lacks. (5a) shows the word order known as stylistic inversion contrasting with the canonical position of lexical subject and verb in (5b). (6a) is a construction with *wh*-movement contrasting with the *wh*-in-situ variant. (6b). All test sentences were preceded by a short context. Furthermore, the *wh*-questions were preceded by a short expression ('tell me'), which is an introductory parenthetical, presentational expression. It has been added in order to remind the subjects that their judgments should be based on the spoken variety. It is important to avoid any bias due to the fact that certain *wh*-variants are perceived as incompatible with the norms of written French. Also, it is important to avoid any bias due to temporary parsing difficulties. Thereby, verbs that have homophonous 3rd singular and 3rd plural forms were avoided in (5a) and (5b), facilitating the disambiguation of subject and object (one should consider that subjects might "speak" the test tokens to themselves in their heads).

(5) a. *Quelle   est   l'   armoire que **refont** les   employés   de la   scierie?*
       which   is   the cabinet that restore the   employees of the workshop
       'which cabinet do the workshop's employees restore?'
   b. *Quelle   est   l'   armoire   que les   employés   de la   scierie   **refont**?*
       which   is   the   cabinet   that the employees   of the workshop restore

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3 These terms are simply concise labels and not theoretically precise descriptions of the structures. This would not make sense either, since the stylistic inversion sentences are also *wh*-constructions.

(6) a. *(Dites-moi:)* ***A qui***   *elle prête sa*   *carte bancaire?*
      tell   me: to whom   she lends her   credit card
      'Tell me: Whom does she lend her credit card?'

    b. *(Dites-moi:)* *Elle*   *prête sa*   *carte bancaire* ***à qui?***
      tell   me: she   lends her   credit card   to whom

It is not the topic of this paper to present a detailed formal analysis of French *wh*-movement and stylistic inversion. I consider stylistic inversion as shown in (5a), and *wh*-movement in French as in (6a), to be optional syntactic operations. According to the adopted notion of syntactic optionality, no movement trigger is necessary (Haider and Rosengren 2003; Barbiers 2005: 255). French *wh*-questions are further discussed in Cheng and Rooryck (2000), Adli (2006), Boucher (2010), Baunaz (2011), and Hamlaoui (2011).

Stylistic inversion is only possible in certain contexts, namely in interrogative, exclamative, cleft, or (as in (5a)) in relative constructions, usually with some *wh*-element in the left periphery. According to Déprez (1990) the subject remains in its VP-internal position while the verb moves leftwards (see Kayne and Pollock 2001 for a different analysis).

Interesting from a variationist point of view, these word order variants correlate with social and stylistic variables (Behnstedt 1973; Coveney 1996). This has also been noticed by Armstrong (2001: 134), who considers *wh*-interrogatives as an "area of French syntax that is undoubtedly socially and stylistically diagnostic, and which raises issues of method and theory that are more fundamental and more complex than those associated with low-level grammatical items such as *ne*". The variant of the sentence pairs with canonical word order is generally considered as the more colloquial construction, i.e., the form without stylistic inversion (5b) and the *wh*-in-situ form (6b). That is, on a continuous scale of formality, ranging from [+colloquial] to [−colloquial] we can state the following on the stylistic value: (5a) > (5b), and (6a) > (6b). Further note that (5a) and (5b) belong to Standard French and are admitted both in spoken and written language, while (6a) and (6b) represent the colloquial segment of the full range of *wh* word order variants given in (3a) to (3f).

3.2 Gradient acceptability judgment test

In order to deal with the problem of validity and reliability of judgment data described above, a paper-and-pencil-based instrument has been developed that applies the technique of graphic rating (a computer-based version of this instrument suitable for auditorily presented stimuli is presented in Adli 2011). The use

of metrical measurements opens new possibilities in the statistical analysis. One is not limited to methods for categorical data, e.g., χ^2 or logistic regression as used by GoldVarb, but has also access to the techniques of analysis for metrical data, e.g., analysis of variance (for a recent sociolinguistic application, see Otheguy et al. 2007). The use of a gradient method has been inspired by Bard et al. (1996). However a classic rating scale is used instead of their logarithmic magnitude estimation scale. Subjects express their judgments by drawing a line on a bipolar scale, between the two endpoints "clearly well-formed" and "clearly ungrammatical". Contrasting with a wide-spread belief among syntacticians, making syntactic acceptability judgments – especially gradient judgments – is anything but trivial for nonlinguists (Schütze 1996; Cornips and Poletto 2005). A pre-test revealed that extensive training is necessary, which is realized according to a 9-step instruction protocol (see web-appendix and Adli 2004: 81–111 for a detailed description). The goal of the training is to impart the concepts *isolated grammaticality* and *gradience*, in order to ensure that first, subjects exclude irrelevant aspects from their consideration (e.g., pragmatic plausibility of the content) and second, do not tacitly continue to work with a still binary ("good/bad"), or ternary ("good/so-so/bad") scale. They were instructed to give their personal introspective judgment, without being concerned by the grammatical norm or, as we put it, without being concerned of what a teacher of French might think of the judgment. A validity criterion has been defined based on the frequency of violations of what can be assumed to be *trivial judgments*. These were judgments on two sets of so-called filler sentences that can be considered without any doubt as clearly acceptable or clearly inacceptable. The data of 65 individuals fulfill the validity criteria of the judgment test and are taken into consideration for the subsequent analyses.[4]

Each of the constructions (5a) to (6b) was presented in 4 lexical variants of which the arithmetic mean value was calculated (see Table 9 in the Appendix). This results in much higher statistical reliability than would have been the case with a single unit.[5] Since judgments were given relative to a reference sentence

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4 One tends to underestimate the difficulties a person unfamiliar with reflections on language can encounter, when asked to isolate non-relevant aspects (such as the pragmatic plausibility of the content of the sentence, or opaque personal impressions of "elegance", etc.) from construction-related aspects, and then express her/his impression in a gradient manner. I have consistently observed in various fieldworks that a minority of subjects (especially those with a low level of education) seem to be, in spite of careful training, overstrained by the task. The number of 13 excluded persons might seem large, but I preferred to be on the conservative side and exclude subjects whenever I had small doubts on the validity.

5 A reliability analysis revealed a Cronbach's α value of 0.79 for the lexical variants of (5a), a value of 0.74 for the lexical variants of (5b), a value of 0.83 for the lexical variants of (6a), and a

judged at the beginning by the subjects themselves, the methodology consisted more precisely of a bipolar, *anchored* rating scale. Anchoring can also increase the reliability, especially when abstract constructs (such as gradient grammatical acceptability) are measured.

3.3 Social variables

3.3.1 Lifestyle

The central social variable in the present study is lifestyle. It covers the subjective side of social structure and embraces a variety of relevant information on the sociocultural profile of an individual (Bourdieu 1984a). The roots of the lifestyle concept can be traced back to Weber (1963 [1922]). It emerged from the shortcomings of the traditional notion of class which no longer has the same explanatory influence in postmodern societies as it had in 19th century continental European societies. The central element is the relation between social structure and culture. Cultural inequality, i.e., the unequal distribution of cultural goods in the broad sense of Bourdieu and the unequal distribution of symbolic means of expression is considered as the main instrument of reproduction of class structures in today's post-capitalistic industrial societies with high standards of living and high levels of education. This concept expresses systematic patterns of the complex sociocultural background. Within Bourdieu's (1979) approach specific lifestyles (which are part of what he calls "practice") translate into socio-structural differences by means of his habitus concept – this relation is the essence of his structure-habitus-practice formula. He describes habitus, a concept which goes back to the sociology of Durhkeim and Mauss (1950), as a system of dispositions that function as (unconscious) schemes of thought, perception and judgment in every-day life; they include principles of social classification which create a person's class ethos (see also Bourdieu 1984b: 29–31).

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value of 0.87 for the lexical variants of (6b). Cronbach's α is a common measure of internal consistency (Cronbach 1951). We can observe that the consistency is somewhat higher for the constructions (5a) and (5b), compared to the *wh*-questions (6a) and (6b). Adli (2005: 13) observes that "consistency of acceptability judgments is not a stable factor but depends on the respective construction", and he suggests that lower acceptability correlates with higher consistency. In the present study the stylistic inversion sentences (5a) and (5b) have a slightly higher overall acceptability value than the *wh*-questions (6a) and (6b) (yet, all sentences are within the range of full acceptability). I will not delve deeper into the issue as to why we find a nuanced difference between (5a)/(5b) and (6a)/(6b).

3.3.2 Other social variables

Furthermore, this study takes into account the variables age, gender, level of education, field of study, and high school orientation. In view of the requirements of the analysis of variance, several social variables had to be recoded. Independent variables have to be categorical and they should have a small number of categories of preferably similar size in order for the test to have a high statistical power 1-β. Therefore, in a first step, these social variables were recoded for the entire sample. The metrical age variable was dichotomized along its median value: The first category regroups persons up to 22 years of age (51% of the sample) and the second persons of 23 years or more (49%).[6] The level of education, separated into 12 categories in the questionnaire, is recoded into two categories, namely persons before the intermediate university diploma (aka *DEUG*), which at the time of the present study was generally achieved after 2 years (39%), and persons after the intermediate diploma (61%). The high school orientation was also dichotomized in a literary (52%) and a nonliterary orientation (48%). Field of study has been recoded into three categories: (i) language and art (28%), (ii) humanities and social sciences (64%), and (iii) mathematics, science and economy (8%). Although this distribution of fields of study is rather asymmetric, a dichotomization is not considered, because it would have overly reduced the expressiveness of the variable.[7]

3.3.3 Sample plan

The sample consisted of 195 French native speakers, students of the University of Toulouse 2. The mean age is 23 years. 95% of the participants fall into the age range between 19 and 30 years (the remaining 5% were between 30 and 40 years old). All had completed a sociocultural questionnaire on lifestyle-related information. Among the 195 persons, 78 randomly chosen persons participated, in addition, in the acceptability judgment test for constructions (5a) to (6b). This sample plan allows us to do the factor and cluster analysis for the lifestyle identification with a sample size of 195-7 = 188 persons (7 persons were excluded due to

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6 Two out of 195 persons have missing values in the variables age and field of study.
7 These categories are essentially based on the taxonomy of the French National Institute of Statistics (INSEE 2005: table G.01-11), with some neighboring disciplines being aggregated to reduce the total number of groups.

missing values in the sociocultural questionnaire). Note that these data reduction methods are preferably applied to large Ns. The higher the sample size, the more reliable the generalization of the lifestyle types from the sample to the population of young, urban adults with at least a medium level of education. Once the lifestyle types are determined, the analyses of variance with social variables and acceptability judgments are carried out with the 65 valid cases of the random subsample.[8]

One has to bear in mind that the acceptability judgment test is a complex and time-consuming technique which requires a non-negligible investment in training and instructing the subjects. All participants had to be French native speakers. Limiting the sample to students improves the internal validity due to the increased homogeneity of the sample, while it reduces external validity due to the narrowing of the underlying population. One of the main goals of this study is to investigate the impact of the subjective side of social structure (namely lifestyle) on language variation. By keeping the difference in the level of education (and also in age) rather small, we are able to interpret any observed correlation as a real lifestyle effect, i.e., which is not due to hidden or indirect effects of social class or generational differences. However, in the scope of a society with a state-funded higher education system, the student population is by no means overly homogenous. On the contrary, this population segment offers the potential of differentiation regarding lifestyle. The *inclination toward stylization*, one of the formal elements of lifestyle, is most pronounced in the (lower) middle class. The inclination of stylization is further amplified by the typical age of students, generally in post-adolescence (Müller 1992: 375–376). An extension of the study to other population segments with nonacademic background would require a multiplication of the sample size. It is up to future research (with larger-scaled resources) to further extend this approach. As regards stratification, the sample has been controlled for high school orientation (first priority) and gender (second priority). I consider stratification along the types of French *baccalauréat* as an effective means to operationalize the language-specific aspects of education.[9] The empirical sample plan attests 52.3% with literary vs.

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8 The 117 persons not participating in the acceptability judgment test participated in a reading time experiment, namely a self-paced reading procedure. These psycholinguistic data are not part of the sociolinguistic topic. They are discussed by the author in other papers.

9 In the French high school system the orientation is generally chosen three years before the *baccalauréat*. This orientation plays for example a role in the admission requirements for different studies. In addition, it has a certain impact in terms of identity construction. With respect to this choice one commonly talks in every-day life of a "littéraire" (verbatim: a man of letters) or a "scientifique" (verbatim: a scientist).

47.7% with nonliterary high school orientation, as well as 58.9% women vs. 41.1% men.

3.4 Operationalization of lifestyle

The first lifestyle scale 'activities' represents classic core information on leisure and covers very diverse areas such as visiting friends, doing sports, or engaging in political or social activities. The second scale 'media' is subdivided into book genres, newspapers, magazines and preferred television programs. The left column in Table 1 and Table 2 shows the respective items of the questionnaire (subjects indicated whether they never/rarely/rather often/very often do/watch/read/listen to it). The operationalization of lifestyle consists of a successive application of factor and cluster analyses on the answers of the subjects, two multivariate data reduction techniques. Four lifestyle types are identified. All quantitative analyses presented in this work were done with the software SPSS.

Table 1: Rotated component matrix of the lifestyle scale 'activities'

Items	Factors		
	$F1_A$	$F2_A$	$F3_A$
going to parties	.781		
visiting friends	.717		
doing things together with friends	.708		
going dancing	.561		
listening to music	.469		
going for a walk/hiking	.411	.330	
going on week-end trips or similar	.341		
going to repertory cinemas		.716	
going to museums/exhibitions		.695	
reading books		.573	
political or social activities		.521	
going to the theater/concerts	.436	.516	
creative activities (playing theater, painting, etc.)		.381	
going to movies		.350	
reading magazines			.675
reading newspapers		.315	.631
listening to the radio			.570
spending time with family			.555
watching TV		−.355	.465
going to sports events		−.324	.459
doing sports	.320		.347

Table 2: Rotated component matrix of the lifestyle scale 'media'

Items	Factors					
	$F1_M$	$F2_M$	$F3_M$	$F4_M$	$F5_M$	$F6_M$
women's magazines (*Elle, Femme actuelle . . .*)	.708					
teenager magazines (*jeune et jolie, OK mag . . .*)	.628					
magazines about celebrities (*Gala, Paris-Match . . .*)	.588					
TV serials (*les feux de l'amour, Beverly hills, X files . . .*)	.566				.308	
writings about love and romance of the *Arlequin* kind	.517					
big entertaining shows (TV)	.517					−.340
quiz shows/game shows (TV)	.487					
TV guides (*Télé 7 jours, téléZ . . .*)	.450				.343	
romantic films	.448			−.309		
sports programs (TV)		.837				
sports magazines (*11 mondial . . .*)		.826				
sports papers *France football* or *L'équipe*		.804				
documentary programs or TV panel discussions on social, political or historical topics			.764			
political TV programs or reports			.598			
magazines on current events (*l'Evénement, Nouvel Obs . . .*)			.566			.358
TV programs about art and culture			.547			.349
documentary programs about other countries and regions			.505			
business magazines (*Investir, Le financier . . .*)		.325	.447			
newspapers *Le Monde* or *Le Figaro*			.371			
computer magazines (*play station mag, PC mag . . .*)				.692		
practically oriented books (cookery books, travel guides, computer books . . .)				.661		
motor magazines (*Auto Plus . . .*)				.645		
do-it-yourself and handicraft magazines (*Maison et travaux . . .*)	.319			.582		
popular science magazines (*Science et vie . . .*)			.300	.537		
crime series/crime thrillers (TV)					.722	
science fiction or action films					.682	
detective novels					.563	
TV comedies					.384	
erotic magazines (*New-look, Hot vidéo . . .*)					.353	
newspapers *Libération* or *l'humanité*						.625
satirical papers *Charly Hebdo* or *Le canard enchaîné*						.620
art magazines: cinema, painting, etc. (*Beaux arts . . .*)						.614
literature: poetry, prose, theater						.490

3.4.1 Factor analysis

In the first step we reduce, in two factor analyses, 21 items of the scale 'activities' to 3 activities-related factors, and 33 items of the scale 'media' to 6 media-related factors. Factor analysis is a quantitative method with which a bigger set of variables is expressed by a small set of variables called factors according to their intercorrelations (not to be confused with factors in VARBRUL, and not to confound with factors in analysis of variance). The idea is that intercorrelating variables express in part common information. Factors are mutually independent, creating therefore an ordered structure with nonredundant information. The most commonly applied variant is the principal component analysis or PCA which goes back to Hotelling (1933) and Kelley (1935).

Two factor-analytical values that are important to the interpretation of this data reduction, are the factor loading a_{ij}, and the factor score f_{mj} (the latter will be described in the subsection on cluster analysis). The numbers in Table 1 and Table 2 are factor loadings a_{ij} which indicate the correlation between a variable i and a factor j. In order to interpret a factor, i.e., in order to correctly express the common information of the single variables that it includes, one generally focuses the attention on those variables with the highest loads. For example, the items 'going to parties', 'visiting friends', and 'doing things together with friends' are the most prominent elements on the first activities factor (F1$_A$). As is customary with correlation values, a loading of +1 or –1 denotes perfect dependence, while a loading of 0 denotes complete independence. Values $|a_{ij}| < 0.3$ are not displayed because they are considered as irrelevant for the interpretation.

One has to bear in mind that factor analysis and cluster analysis are not inferential-statistical techniques for hypothesis *testing*, but heuristic methods for hypothesis *generation*. A theoretically infinite number of solutions exists, among which the researcher has to *select* the most plausible one. The factor solutions in in Table 1 and Table 2 have been chosen according to the following quantitative and qualitative criteria (see web-appendix for details): (i) interpretability and construct validity, (ii), reliability of the factors based on Cronbach's (1951) α and Cliff's (1988) *r*, and (iii) the scree-plot of the eigenvalues λ_j (Bortz and Schuster 2010: 415–424). The denomination (i.e., interpretation) of the factors is given on the right side of Figure 1.

3.4.2 Cluster analysis

Based on each person's individual profile on these 9 factors (technically: based on the factor scores), cluster analysis divides the sample into four groups or

F1$_M$: entertainment around gossip, fashion and people
F2$_M$: sports
F3$_M$: politics, business and culture (intellectual media)
F4$_M$: technology, practice and knowledge
F5$_M$: exciting entertainment: suspense, humor and sex
F6$_M$: social criticism, art and literature (leftist-intellectual)
F1$_A$: social activities, mainly out of home
F2$_A$: sociocultural, intellectual and artistic activities
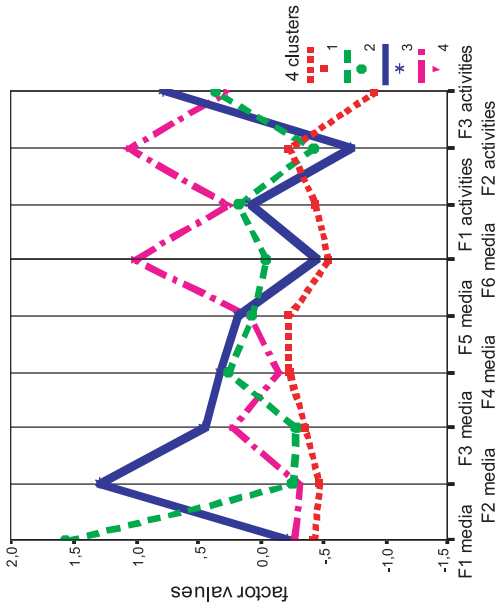F3$_A$: activities centered on classic media, mainly at home; sports interest

Fig. 1: Profiles of the 4 lifestyle types

lifestyle types. Cluster analysis is a method for forming groups of objects according to the criterion of highest possible within-group homogeneity and highest possible between-group heterogeneity (Tryon 1939). Homogeneity and heterogeneity are quantitatively measured by similarity or distance measures. The present work applies a two-step procedure which generally leads to better results than a one-step procedure (see Milligan and Sokol 1980): First, an initial partitioning was obtained with the hierarchical Ward-algorithm, which then was optimized with the nonhierarchical *k*-means algorithm. The 4-cluster solution was chosen based on four criteria: (i) visual assessment of the plot of the squared Euclidian distance against the number of clusters, (ii) operationalizability in subsequent calculations (i.e., solutions with small or very asymmetric cluster sizes were avoided), (iii) interpretability, and (iv) quality of the classification evaluated by a discriminant analysis.[10]

Each line in Figure 1 represents the mean factor scores f_{mj} of the persons in one cluster, i.e., the respective cluster centers. One could also say that each line corresponds to the prototypical sociocultural profile of one lifestyle in the sample. Factors with particularly high or low values are granted higher weight in the interpretation. f_{mj} indicates how salient the feature represented by factor *j* is for person *m*. When a person scores high on the different variables included in a factor (assuming that all variables have positive factor loadings), we can also assume a high f_{mj}. Since factor scores are standardized values, they always have a mean value of 0.

For reasons of space, I will discuss the cluster profiles concisely. The lifestyle profile of cluster 1 (containing $n_1 = 61$ subjects of the sample) is interpreted as an *introverted type without main areas of interest* (abbreviated 'introverted type'). Its most prominent feature is precisely the absence of any striking characteristics, i.e., of any particularly high or low value. I call cluster 2 ($n_2 = 32$) an *entertainment-oriented type with wide range of interests* (abbreviated 'entertainment-oriented type'). Its most prominent feature is the very high value on the first media factor. Intellectual options are not often opted for, however we see a certain interest for technology and practical knowledge (F4 media). Cluster 3 ($n_3 = 42$) can be labeled *sports-oriented type with wide range of interests* (abbreviated 'sports-oriented type'). While all other clusters show little interest in sports

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10 One type of discriminant-analytical evaluation consists of randomly assigning 2/3 of the cases to a training subsample and 1/3 to a test subsample. The training subsample is used to calculate so-called discriminant functions which in turn are used to predict the cluster membership of the cases in the test subsample. The latter reveals 95% correctly classified cases, which indicates that the result of the clustering has a very high quality.
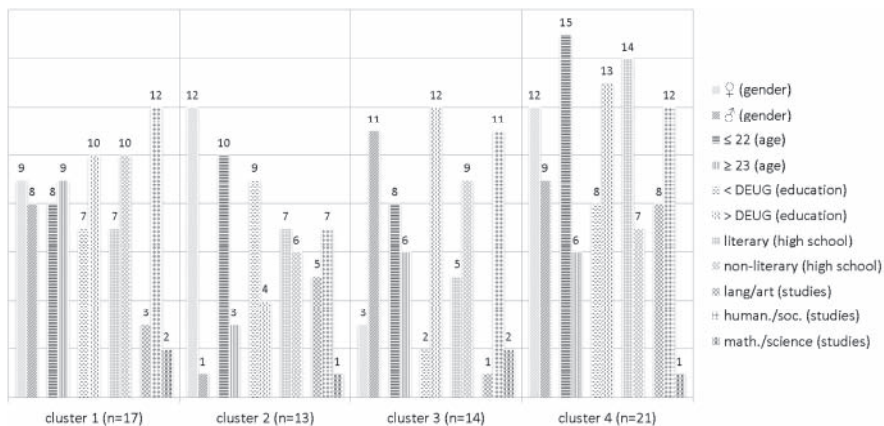
Fig. 2: Social characteristics of the 4 lifestyle types for the "acceptability subsample" (N = 65)

in the media, these persons have a particularly strong inclination toward it (F2 media). They are less focused on classic leftist-intellectual media choices (F6 media), but they are fairly interested in information about politics, business and culture (F3 media). Finally, cluster 4 ($n_4 = 53$) is the *culturally active, politically critical type*. They are particularly inclined toward socially critical, artistic-literary media (F6 media), generally attributed to leftist intellectuals in the context of contemporary France, and also inclined toward sociocultural, intellectual-artistic activities (F2 activities). Interestingly, the *culturally active, politically critical type* and the *sports-oriented type* have the same characteristic factors (F2 media, F6 media, F2 activities), but scoring in opposite directions. We will see later that this contrast also reflects on the acceptability judgments of *wh*-questions.

Please recall that the acceptability judgments reported further below are carried out with the 65 valid cases of a random subsample. Therefore, Figure 2 describes the size and characteristics of each lifestyle cluster for this subsample. The bars indicate, cluster per cluster, the number of persons for each category of the other five social variables (gender, age group, level of education, high school specialization, field of study).

3.5 Initial hypotheses

Given that French *wh*-interrogatives show a very broad array of syntactic variants of diverse stylistic values (cf. Behnstedt 1973: 209; Gadet 1997), they are not only

a particularly suitable object for studying variation at the level of syntax, but also for investigating social-style interaction in the sense of Bell (1984: 152–153).

Bourdieu (1991) integrates linguistic variation into his sociocultural theory by subordinating language to the logic of distinction. In the same way that also the most banal everyday behavior is mapped onto the sociocultural coordinate planes of taste and prestige (Bourdieu 1984a), every communicative behavior expresses stylistic choice and linguistic distinction: "To speak is to appropriate one or other of the expressive styles" (Bourdieu 1991: 54). He presumes two structures conveying distinction, namely structured systems of sociologically relevant linguistic differences and structured systems of social differences. He integrates his concept of style into both structures (see also Irvine 2001). Furthermore, Bourdieu (1991: 54–55) explicitly situates language in an area of conflict between the nativist view of universal grammar and the diversity-oriented view of sociolinguistics: "However great the proportion of the functioning of a language that is not subject to variation, there exists, in the area of pronunciation, diction and even grammar, a whole set of differences significantly associated with social differences". Bourdieu (Bourdieu 1991: 259) predicts that "only the *optional* can give rise to effects of *distinction*" (italics in original). Note that "distinction" does not mean variation of any kind, but precisely those sociocultural differences that can be captured by lifestyle. A somewhat similar stance on syntactic variation is also taken by Kroch and Small (1978: 47) who assume a "tendency for people to make speech choices, even between standardly acceptable syntactic alternants, on the basis of the grammatical ideology". Their notion of grammatical ideology refers to a presumably wide-spread belief according to which nonstandard forms would be seen as "evidence of inferior reasoning".

In sum, the outcome of the present study can be seen from a multidisciplinary perspective: From a linguistic point of view, the choice of lifestyle as a sociolinguistic variable, and of judgments as sociolinguistic data is examined. From a sociological point of view, Bourdieu's (1991) theoretical assumptions on the relation between language and social structure is investigated.

My initial, heuristic presumption for the present study is that educational factors and lifestyle correlate with acceptability judgments, contrasting with age (within the limited range of 19–30) and gender.[11]

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11 High school orientation (i.e., the type of high school orientation within the French school system), and academic orientation or field of study capture important choices concerning education. Level of education is the highest educational certificate so far obtained. The findings of Dąbrowska (1997) mentioned earlier, suggest a correlation between type and extent of education and judgment data leading to the hypothesis of a statistical interrelation between acceptability judgments and level of education or type of education. I have assumed independence between

4 Social effects on acceptability judgments

Subsequently, I will build up in two steps, a multi-way design for an analysis of variance (Lindman 1974; Bortz and Schuster 2010) with internal (syntactic) and external (social) variables (multivariate analysis is not taken into consideration because there is only a single metrical dependent variable, namely the judgment value). In step 1, only internal variables are taken into consideration. The acceptability judgments regarding (5a) and (5b), as well as (6a) and (6b) are analyzed in two subsequent one-way analyses of variance. Social variables are not yet taken into account. In step 2, the design is extended by an independent variable, namely by one of the social variables (in one case also by two interacting social variables). In the VARBRUL terminology independent variables are referred to as factor groups (Guy 1993). This incremental increase of statistical complexity reflects at a methodological level the transition from an analysis based on the assumption of a population with a commonly shared grammar system, to an analysis based on the assumption of a (potentially) heterogeneous population. In other words, it traces the step from the paradigm of a homogeneous system of syntax to a paradigm of syntactic variation in the sense of meaning (iii) defined at the beginning of the paper. It is good practice to make all statistical parameters available, not only the p-value, but also values such as degree of freedom, distribution values (F, χ^2 ...), the decision strategy for α, β, and ε, etc. They are listed in the web-appendix.

4.1 Assuming a homogeneous population

The first analysis of variance (ANOVA 1) compares (5a) vs. (5b). The result is non-significant ($p < 0.152$), i.e., there is no effect of stylistic inversion. The second one (ANOVA 2) compares (6a) vs. (6b). This result is nonsignificant ($p < 0.230$), too, i.e., there is no difference between *wh*-in-situ and *wh*-movement.[12]

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introspection and age, since the sample consists of young adults, i.e., there is no generational contrast. Another initial heuristic assumption is the independence of gender and judgment data (though such a result would not be in line with classic sociolinguistic results with data from spontaneous speech).

12 The error probabilities α and β are set at 5% in the one-way, repeated measures analyses of variance. Fair hypothesis testing is then possible at $N = 65$ and medium effect size (see the online appendix).

4.2 External factors and variation: methodological considerations

The respective within-subject factor A (±stylistic inversion or ±*wh*-movement) is maintained, while a between-subject variable, a social variable B, is added. Such a two-way analysis of variance is computed for each of the social variables lifestyle, field of study, high school orientation, gender, level of education and age. Table 3 and Table 4 demonstrate the extension of the design by the social variable lifestyle which divides the sample into four lifestyle types.[13] The fourfold repetition of the sentences in the table corresponds to a design containing both within-subject and between-subject variables.

I will first present the results of the tests for main effect B (the social variable) and the interactions of B with the within-subject variable A (±stylistic inversion in ANOVA 3 and ±*wh*-movement in ANOVA 4). In addition, the results of simple main effect tests B|a$_i$ which check for an effect of the social variable on each of the word

Table 3: ANOVA 3: Two-way design of ±stylistic inversion with lifestyle

	variable B: lifestyle	b$_1$: type 1	b$_2$: type 2	b$_3$: type 3	b$_4$: type 4
variable A: ±stylistic inversion	a$_1$: +stylistic inversion	(5a)	(5a)	(5a)	(5a)
	a$_2$: −stylistic inversion	(5b)	(5b)	(5b)	(5b)

Table 4: ANOVA 4: Two-way design of ±*wh*-movement with lifestyle

	variable B: lifestyle	b$_1$: type 1	b$_2$: type 2	b$_3$: type 3	b$_4$: type 4
variable A: ±*wh*-movement	a$_1$: +*wh*-movement	(6a)	(6a)	(6a)	(6a)
	a$_2$: −*wh*-movement	(6b)	(6b)	(6b)	(6b)

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13 Due to the fragmentation of the sample in different social subgroups (i.e., due to the fragmentation of the total sample size N into $n_1, n_2, \ldots, n_k$), new values have to be set according to the decision strategy as outlined in the web-appendix: We set $\alpha = 10\%$, $\beta = 20\%$, and an effect size between medium and large (f ≈ 0.35). The larger effect size has two consequences: Firstly, anticipating the results, the significant effect of lifestyle on the acceptability judgments can be regarded as pronounced. In other words, its sociolinguistic relevance is (as is customary in consideration of the error probability α) not easily dismissed. Secondly, it is possible that some of the other non-significant social variables do have an effect. However, they would be of lower intensity than the effect of lifestyle (i.e., they would be of medium effect size or smaller). This hypothesis could be pursued in a new study with a larger sample size.

Table 5: Results (*p*-values) of both two-way ANOVA

external factor (B)	ANOVA 3: ±stylistic inversion				ANOVA 4: ±wh-movement			
	main effect B	interaction A × B	B|a$_1$: simple main effect for (5a)	B|a$_2$: simple main effect for (5b)	main effect B	interaction A × B	B|a$_1$: simple main effect for (6a)	B|a$_2$: simple main effect for (6b)
lifestyle	*0.017	0.725	*0.015	*0.062	0.163	0.311	0.421	*0.087
field of study	0.435	0.434	0.689	0.258	0.421	*0.043	0.395	0.210
gender	0.534	0.424	0.773	0.373	0.760	0.144	0.717	0.388
high school orientation	0.580	0.997	0.616	0.594	0.445	0.898	0.435	0.543
level of education	0.803	0.584	0.677	0.968	0.913	0.175	0.477	0.645
age	0.905	0.476	0.722	0.884	0.543	0.115	0.899	0.241

order variants ((5a)/(5b) in ANOVA 3, (6a)/(6b) in ANOVA 4), are discussed. All in all, $2 \times 4 = 8$ significance tests are conducted for each social variable, summarized in the table below. Significant *p*-values are starred and set in bold. Later on, I will focus on the issue whether subgroups with a specific social profile diverge from the overall picture ('exceptions to the rule').

4.3 Lifestyle

Main effect B of lifestyle is significant in ANOVA 3, i.e., lifestyle has an effect on the acceptability judgments of both, jointly analyzed constructions (5a) and (5b). Simple main effect tests B|a$_i$ unveil an effect on the stylistic inversion construction (5b), on the noninverted construction (5a), and in ANOVA 4, on the *wh*-in-situ question (6b). However, we cannot detect an effect of lifestyle on the judgment of *wh*-initial interrogatives like (6a). One reason why we do not find a lifestyle-specific variation with *wh*-initial interrogatives can be seen in the fact that this interrogative variant represents a less colloquial form, which is equally accepted by all groups. In other words, it is part of the common repertory, which is not subject to social variation. These results show that the fundamental question of this study can already be answered in the affirmative: They reveal the effect of the social dimension on acceptability judgments.[14] Bourdieu's view on linguistic variation from the perspective of his sociocultural theory presents a rationale for the assumption that lifestyle is sociolinguistically relevant and that the selected French word order variants with their pronounced stylistic differences are particularly suitable for identifying lifestyle-specific effects of distinction.

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14 The issue of testing *statistically* for simple main effects between subgroups of the sample, i.e., which pairwise differences between lifestyle types are particularly responsible for the overall significance, cannot be easily answered due to methodological reasons. In principle, these simple main effects can specify which contrasts between single groups are mostly responsible for the overall significance, i.e., these tests are *a posteriori* comparisons. Therefore, they require an adjustment of the α error level. Concerning the four-level lifestyle variable, the adjusted α' is $0.1/6 = 0.017$ (according to Bonferroni's strategy the overall α of 10% or 0.1 is divided by all six possible simple main effect tests). The adjusted α' also requires a new calculation of β and ε. Thus, we obtain effect sizes which far exceed the convention for large effects ($\varepsilon \approx 1.21$), even if β is set to as high as 20%. Simple main effect tests that are only sensitive to such extreme effect sizes are not plausible. I also refer to Cohen (1988: 13 and 284), who cannot imagine reasonable applications for those values, since one is trying to statistically prove the difference in size between "apples" and "pineapples". Such statistical between-group comparisons would contribute more to misinterpretation than to an improved understanding. However, the mean values and standard errors for each cluster are shown in Figure 3 for the *wh*-variants (6a) and (6b) in terms of a descriptive overview.

4.4 Sociodemographic variables

In order to gain a more complete picture of social effects on judgment data, and in order to better situate the relevance of the lifestyle effect, it is necessary to take into account other social variables: Do the variables field of study, gender, high school orientation, level of education and age also have an effect, or does lifestyle have an exclusive status for explaining variation in the judgment data on the word order variants under study?

4.4.1 Field of study

Contrasting with lifestyle, field of study has no main effect on the acceptability judgments, i.e., there is no general difference between the three fields of study for the entirety of the considered constructions (again, (5a)/(5b) in ANOVA 3, (6a)/(6b) in ANOVA 4). However, the first-order interaction A × B with ±*wh*-movement is significant in ANOVA 4.[15] In anticipation of the results presented in the section 'Exceptions to the Rule: *wh-in-situ* vs. *wh-movement*', we can see (notwithstanding the empirical picture of the overall sample) an effect of ±*wh*-movement for the subgroup of students in the fields of language and art. The observed difference or the observed identity between *wh*-movement and *wh*-in-situ depends on the respective field of study, i.e., there is an effect of variable A ±*wh*-movement (and *not* of variable B 'field of study'), which however only shows up for one subgroup of field of study (language and art). This is exactly what an interaction is about.

4.4.2 Gender, high school orientation, level of education, and age

Neither gender, nor high school orientation, nor level of education, nor age have an effect on the acceptability judgments.

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15 Please note that the lack of a main effect A from ANOVA 1 and 2, i.e., the lack of an effect of ±stylistic inversion or ±*wh*-movement, is essentially confirmed in the two-way ANOVAs. In other words, adding a social variable to the model does not change the overall picture, yet with one exception: Main effect A reveals significant in the design with variable A ±*wh*-movement and variable B field of study ($p < 0.035$). However, this result is not surprising, given the significant interaction A × B between ±*wh*-movement and field of study. As will be explained later, main effect A can be traced back to one particular subgroup of field of study, namely to students of language and art.

4.5 Lifestyle-specific effects of sociodemographic variables

We now raise the question whether the other social variables act *via* lifestyle in terms of interaction effects. It is conceivable that some of the other social variables reveal an effect in combination with lifestyle, i.e., a *lifestyle-specific* effect, although they do not have an independent impact on their own. The existence of such interaction effects would not modify the hitherto outlined picture of lifestyle as the core sociolinguistic variable for acceptability judgments. However, the possibility exists that the interpretation with respect to the other five social variables can be nuanced. In order for the interaction effects of lifestyle and another social variable to be tested, the two-way designs in Table 3 and Table 4 are extended by a third variable. The design now consists of the within-subject variable A (±stylistic inversion or ±*wh*-movement), as well as of both between-subject variables B 'lifestyle' and C. Variable C is either field of study, high school orientation, gender, level of education, or age. Table 6 and Table 7 illustrate this three-way design with variable C high school orientation.

In these analyses of variance the sample is divided into 8 groups, since lifestyle consists of 4 and the other social variables consist of 2 categories. As long as we limit ourselves to interaction effects, the small cell sizes are not problematic because the calculation is done on the entire sample.[16]

Only new possible sources of variance are tested: the interaction B × C between lifestyle and the second social between-subject variable, and the second-order interaction A × B × C including ±stylistic inversion or ±*wh*-movement (see Table 8).

Table 6: ANOVA 5: Three-way design of ±stylistic inversion with lifestyle and high school orientation

variable A: ±stylistic inversion	variable C: high school orientation	variable B: lifestyle			
		b_1: type 1	b_2: type 2	b_3: type 3	b_4: type 4
a_1: +stylistic inversion	c_1: literary	(5a)	(5a)	(5a)	(5a)
	c_2: nonliterary	(5a)	(5a)	(5a)	(5a)
a_2: −stylistic inversion	c_1: literary	(5b)	(5b)	(5b)	(5b)
	c_2: nonliterary	(5b)	(5b)	(5b)	(5b)

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16 At $\alpha = 10\%$ and $\beta = 20\%$, the effect size of the interaction tests approximately corresponds to the convention of large values ($f = 0.395$).

Table 7: ANOVA 6: Three-way design of ±*wh*-movement with lifestyle and high school orientation

variable A: ±*wh*-movement	variable C: high school orientation	variable B: lifestyle			
		b_1: type 1	b_2: type 2	b_3: type 3	b_4: type 4
a_1: +*wh*-movement	c_1: literary	(6a)	(6a)	(6a)	(6a)
	c_2: nonliterary	(6a)	(6a)	(6a)	(6a)
a_2: −*wh*-movement	c_1: literary	(6b)	(6b)	(6b)	(6b)
	c_2: nonliterary	(6b)	(6b)	(6b)	(6b)

Table 8: Results (*p*-values) of both three-way ANOVAs

second external factor C	ANOVA 5: ±stylistic inversion		ANOVA 6: ±wh-movement	
	interaction B (lifestyle) × C	interaction A (±stylistic inversion) × B (lifestyle) × C	interaction B (lifestyle) × C	interaction A (±wh-movement) × B (lifestyle) × C
field of study	0.612	0.703	0.603	0.915
gender	0.789	0.956	0.489	0.745
high school orientation	0.837	0.371	0.960	***0.050**
level of education	0.968	0.321	0.836	0.374
age	0.981	0.526	0.714	0.791

4.5.1 Lifestyle and high school orientation

The design shown in Table 6 and Table 7 result in a second-order interaction A × B × C with the factor '±*wh*-movement', i.e., a lifestyle-specific effect of high school orientation on the judgment data of the *wh*-questions. It means that the lifestyle-specific effect of high school orientation is not the same for (6a) and (6b). Due to the significant result, simple main effects of variable A '±*wh*-movement' will be tested for all combinations of the different levels of lifestyle and high school orientation further below (for sake of completeness, the same will also be done for '±stylistic inversion').

4.5.2 Age

There is neither an effect of lifestyle in combination with field of study, nor in combination with gender, nor in combination with level of education, nor in combination with age.

4.6 Exceptions to the rule: *wh*-in-situ vs. *wh*-movement

The present results are extended by another strategy of analysis: We will not test for overall effects of the social variables, or the interactions between social variables and ±stylistic inversion or ±*wh*-movement. In other words, we will not question to what extent the social variables can contribute to explain variance in the acceptability judgments. Rather, we return to the general judgment pattern identified for the whole population and seek particular social subgroups which show a deviating judgment pattern. In the section entitled 'Assuming a Homogeneous Population' we have analyzed the judgments on *wh*-questions and on stylistic inversion sentences, yet without integrating social variables into the design. Those tests revealed that the variable '±stylistic inversion' (ANOVA 3) or '±*wh*-movement' (ANOVA 4) had no effect. This is the picture for the population observed in the present study. Thus, I want to examine whether certain social subpopulations form, so to speak, exceptions to the rule. It is conceivable that some subsets deviate from the general empirical finding and that those subsets only come to the fore, if they are singled out and examined separately. To this end, the judgments of the sentences (5a)/(5b) or (6a)/(6b) (level a_1 and a_2 in Table 3 and Table 4) are analyzed for each subgroup of all social variables (level b_1 to b_k). There are 15 different social subgroups (4 lifestyles + 3 fields of study + 2 genders + 2 high school orientations + 2 levels of education + 2 age groups). Thus, 15 different simple main effects of variable A ($A|b_j$) are tested with regard to ±stylistic inversion (ANOVA 3), and 15 simple main effects with regard to ±*wh*-movement (ANOVA 4). This procedure shows a certain parallel to the way VARBRUL analyses are conducted and presented (in particular if all social subgroups were listed in a table form). However, an important difference is that each result in the variance-analytical simple main effect represents an independent test associated with its own *p*-value. Nonsignificant results are not listed below; in the logic of significance testing, they are all interpreted in the same way, namely as no difference between the judgments.

The results reveals specific subgroups, which give different judgments to constructions of the type (6a), i.e., questions with *wh*-movement, and constructions of the type (6b), i.e., *wh*-in-situ questions; as regards (5a) and (5b), the form with

and the form without stylistic inversion receive identical judgment scores across all different social subgroups.

Firstly, the *culturally active, politically critical lifestyle type* considers sentences with *wh*-movement as better than sentences with *wh*-in-situ. Simple main effect $A|b_4$ is significant ($p < 0.056$). Secondly, *students of the fields of language and art* give higher ratings to sentences with *wh*-movement than to sentences with *wh*-in-situ. Simple main effect $A|b_1$ is significant ($p < 0.017$). Normative considerations seem to influence persons belonging to these two subgroups rather strongly: The variant with *wh*-in-situ belongs to a lower register than the variant with *wh*-movement.[17] This picture of selectively acting normative influences will be complemented below by another subgroup, which shows however an opposed pattern of judgment.

Finally, as a result of the significant interaction $A \times B \times C$ in ANOVA 6 between the variables ±*wh*-movement', lifestyle, and high school orientation, we will now test for simple main effects $A|b_j c_k$. In other words, the effect of *wh*-movement is tested for each of the 8 combinations of B, and C (there are 8 groups of lifestyle and high school orientation).[18] In these tests, the cell sizes can be problematic. Therefore, the results are verified by a robust nonparametrical statistical test, indicated under such circumstances, namely the Wilcoxon-test. The results of the simple main effects $A|b_j c_k$ now reveal for one sub-sample a difference between questions with *wh*-movement such as (6a) and *wh*-in-situ questions such as (6b).

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17 We also find a significant simple main effect $A|b_1$, i.e., persons with a level of education lower than the intermediate university diploma seem to prefer sentences with *wh*-movement over sentences with *wh*-in-situ ($p < 0.071$). This finding could be interpreted as an instance of *hypercorrection*. The individuals belonging to the category with the lower level of education are under a higher pressure to conform to the normative view. However, this result is not interpreted, because it is probably a pseudocorrelation, i.e., an effect which in reality goes back to a third variable (a moderator-mediator variable): The descriptive frequency distribution corroborates this idea: Among the 65 persons retained for the statistical analyses, the majority of the students in the fields of language and art, namely 71%, do not have the intermediate university diploma. They form the biggest group of students without an intermediate university diploma (46%). Therefore, one can assume that the significance concerning the students of the fields of language and art has a secondary effect on persons without intermediate university diploma. The results of other quantitative tests on the multivariate intercorrelations between the social variables also suggest this interpretation, namely χ^2-tests and configural frequency analyses. I therefore only interpret the significant result with the *culturally active, politically critical lifestyle type* and with *students of the fields of language and art*.

18 Again, the same strategy of analysis was also applied to sentences with stylistic inversion for sake of completeness: In line with the results above, all subgroups give identical judgments to sentences with and without stylistic inversion.
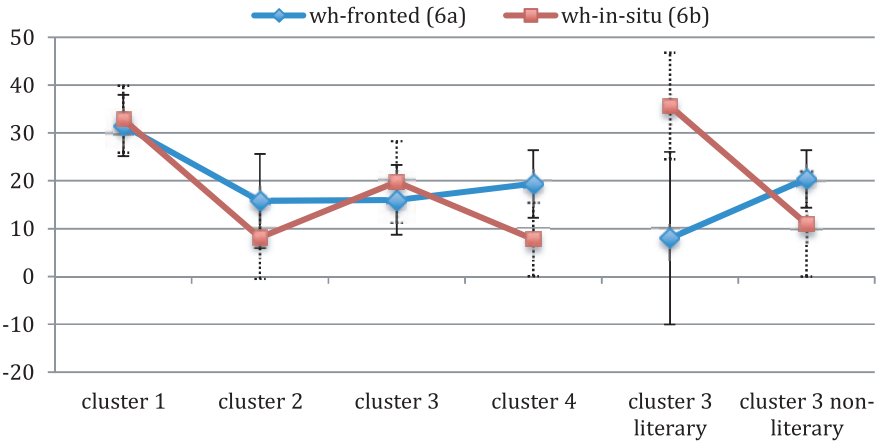
Fig. 3: Mean acceptability and dispersion for *wh*-questions and lifestyle

Simple main effect $A|b_3c_1$ is significant ($p < 0.022$). The result is confirmed by the Wilcoxon-test ($n_{b3c1} = 5$; $Z = -1.753$; $p < 0.080$): The sports-oriented type and a literary high school orientation, judges questions with *wh*-movement *more critically* than *wh*-in-situ questions. Note that this result is not gender-biased. If gender was the real driving force behind this result, it would have shown itself an effect in combination with lifestyle.

Figure 3 represents the acceptability values of both *wh*-variants and their dispersions for the different lifestyle types (mean acceptability is shown relative to the scale anchor at zero; ±1 standard error is shown by full vertical lines for (6a) and by dotted vertical lines for (6b)). In addition, the sports-oriented type is divided into a subgroup with and a subgroup without literary high school orientation.

4.7 Discussion

In sum, lifestyle is the only variable which exerts an independent effect on the acceptability judgments in terms of a main or simple main effect. The other social variables do not show any evidence of this kind. Furthermore, the results in 'Exceptions to the Rule: *wh-in-situ* vs. *wh-movement*' reveal the following picture: Although there is no overall difference in the judgments between interrogatives with *wh*-in-situ and interrogatives with *wh*-movement, i.e., no difference for the entirety of the sample participating in the acceptability judgment test, three

subgroups deviate from this rule and show a group-specific pattern. Two subgroups, (i) the culturally active, politically critical lifestyle type, and (ii) students in the fields of language and art, judge *wh*-in-situ constructions more critically than constructions with *wh*-movement. We have interpreted this finding as a selectively acting, normative influence. Both forms are phenomena of spoken language, but French *wh*-in-situ constructions belong to a lower register than their counterparts with *wh*-movement (in written language, other variants such as the *est-ce que* construction or the construction with subject-clitic verb inversion would be employed). We also know that linguistically normative influences are generally very visible in French society. It frequently occurs that *wh*-in-situ constructions are characterized as "bad French", and not as is more appropriate, as colloquial French. Although Doppagne's (1966: 166) view, according to which most interrogative forms without inversion (apart from the *est-ce que*-construction) are "ghastly" (*horreurs*) and "plebeian forms" (*formes plébéiennes*), seems somewhat antiquated, it nevertheless exposes the sociolinguistic meaning in effect still today. We have also identified a third subgroup, which deviates from the overall picture of identical judgments of *wh*-in-situ and *wh*-movement, but which deviates in the opposite direction: This subgroup is a specific combination of both significantly interacting variables lifestyle and high school orientation, namely the sports-oriented lifestyle type and with literary high school orientation. This subgroup judges the form with *wh*-in-situ better than the form with *wh*-movement. At first sight, this pattern might seem surprising, in particular if one is used to assume a positive correlation between acceptability and register. Nonetheless, we have reasons to believe that there is change in progress and in particular towards increasing use of *wh*-in-situ. This result rather suggests that the phenomenon of *wh*-in-situ is more complex than it at first appears to be. There is not only the selectively acting dispreference (due to critical normative influence), but also the selectively acting preference for this construction. One indication for change in progress is the fact that this form still remains a nearly exclusively colloquial phenomenon. As far as the available sources allow us to reconstruct past stages of spoken language, *wh*-in-situ seems to be nonexistent in 17th century French. One unique source which can be seen, at least tentatively, as a reflection of past oral usage, is the journal of Héroard (Foisil 1989), the quasi-phonetic script of the future Louis XIII (between 1605 and 1610) when the child was between the ages of three and nine (Ernst 1985). There is no *wh*-in-situ construction among the 493 *wh*-questions (see also Ayres-Bennett 2004: 51). Although we cannot tell with certainty when this *wh*-variant emerged in spoken European French, we can at least assume that it is a recent phenomenon. Coveney (1996: 234) observes in his corpus of spoken European French that the *wh*-in-situ form now represents

more than one fourth of all true information *wh*-questions. Interestingly, Elsig (2009: 145–158) shows that *wh*-in-situ questions (still?) represent a minor variant (7.6%) in the Ottawa-Hull corpus of contemporary, modern French in Québec (this form is even practically absent in the Réfqua corpus of the speech of persons born in 19th century Québec).

In the context of the selectively acting preference for this construction, it is interesting to note that the sports-oriented lifestyle type and with literary high school orientation, represents an untypical feature combination. Holders of a literary high school orientation visibly represent the minority for this lifestyle type (36% vs. 64%).

A closer inspection of the different sociocultural components of the lifestyle types delivers further insight into these judgment patterns: The cluster profile in Figure 1 shows for the sports-oriented type below average values regarding sociocultural, intellectual activities (factor "F2 activities"), as well as regarding the inclination toward artistic-literary media (factor "F6 media"); the latter are generally assigned in France to leftist intellectuals. The most salient differences between the sports-oriented type, and the culturally active, politically critical lifestyle type, concern these two characteristics, and their difference in the reception of sports media (factor "F2 media"). Therefore, the sports-oriented type and with literary high school orientation, frequents in his daily life relatively rarely places and situations with a pronounced orientation towards the norms of written language (Halliday 1993). These norms are obviously just as familiar to this subgroup than to the other interviewees (even though the individuals of this subgroup are graduates with a literary high school diploma, all interviewees are after all students). However, they frequent the above-named places and situations relatively rarely in their leisure time. Moreover, the sports-oriented lifestyle favors wide social contacts and, depending on the practiced sport and the place of exercise, also with persons of diverse social classes. They are active persons who are comparatively frequently in situations of communication in which the use of the *wh*-in-situ construction is appropriate or even preferable. The fact that only graduates with a literary high school orientation among this lifestyle type show this judgment pattern, suggests that they are well aware of prescriptive norms and grammatical ideology (Kroch and Small 1978), or of the strategies of overt prestige in the sense of Trudgill (1972) in spoken language. This interpretation suggests the hypothesis that these individuals show a pronounced difference between orality and scripturality.

Figure 4 summarizes the results concerning the social variation with *wh*-questions. The areas in the ellipsis suggest the quantitative aspect of the three judgment patterns. Most persons are situated in the central area. The subgroups with a diverging judgment pattern are located at the smaller extremities.
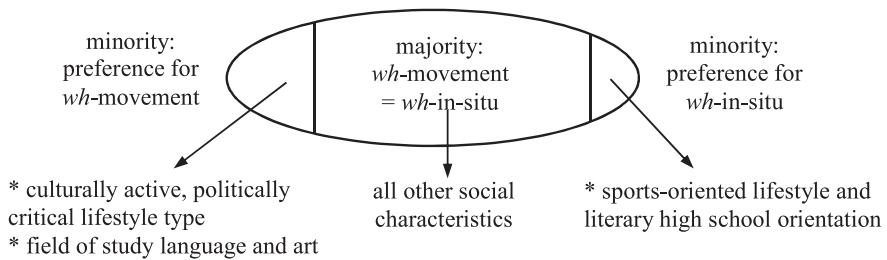
Fig. 4: Variation in judging *wh*-questions

5 Conclusion

Let us summarize the two main results. (A) Bourdieu's notion of lifestyle can be operationalized as a sociolinguistic variable. Data reduction techniques led to four lifestyle types with characteristic profiles. They allow a conceptual as well as statistically meaningful classification of the sample. (B) Gradient introspective acceptability judgments can be sociolinguistically relevant if carefully measured. The effect of lifestyle and of the sociodemographic variables gender, age, level of education, high school orientation, and field of study has been investigated for the word order variants ±stylistic inversion and ±*wh*-movement. It has become apparent that lifestyle exerts an effect, contrasting with the sociodemographic variables (except for interactions with lifestyle). It is conceivable that a sociodemographically more heterogeneous sample would have also revealed sociodemographic effects. However, what matters here is the fact that lifestyle can uncover sociolinguistically relevant differences in less heterogeneous subpopulations. This finding precisely corresponds to the importance that is granted in Bourdieu's socio-cultural theory to 'subtle' yet socially meaningful differences in lifestyle.

I summarize these results by the following observation:

(7) *Grammatical introspection is subject to sociocultural variation.*

Two-follow up questions were investigated: (i) Do sociodemographic variables, although not exhibiting a main effect by themselves, act *via* lifestyle (i.e., statistical interactions of lifestyle-specific effects)? This analysis uncovered an interaction of high school orientation and lifestyle in judging syntactic movement in the *wh*-variants under study. (ii) Do certain social subgroups deviate from the overall judgment pattern (namely identity of the respective variant with and without additional movement), forming exceptions to the rule? The culturally active, po-

litically critical lifestyle type as well as students in the fields of language and art, prefer the variant with *wh*-movement. They stand for the normative point of view. On the opposite side, we find one subgroup of a lifestyle type, namely those individuals of the sports-oriented type who hold a literary high school diploma. Contrasting with the normative point of view, these individuals prefer the variant with *wh*-in-situ.

The central role of lifestyle emphasizes how fruitful a closer connection of social sciences and sociolinguistics is; an endeavor already pushed forward by Guy et al. (1996, 1997). It is important that the range of external factors taken into consideration in quantitative studies goes beyond the standard sociodemographic variable set and an income/occupation-based concept of class. If a study is confined to those variables, it can well be the case that important phenomena of variation simply remain undetected. The present results show that it can be promising to add lifestyle to the list of commonly investigated sociolinguistic factors.

This study focused on a rather limited set of empirical phenomena, and it is desirable to extend its scope in four directions: (i) The effect of lifestyle with spontaneous speech data (including the relationship between speech data and introspection) awaits an empirical answer. (ii) We need to know to what extent the ratings were motivated by ideology as opposed to exposure. Acceptability judgments complemented by ethnographic work can help to tackle this issue. (iii) It is desirable to extend the list of external factors to include direct indicators of the objective side of social structure or class (e.g., income, rent, etc.). (iv) With regard to French *wh*-questions, it is promising to complement the present study on variation at the level of narrow syntax by variation at non-narrow syntax. A study involving the full range of variants (3a) to (3f) can bring to fore new results by placing the judgments on (3a) and (3b) into a broader picture.

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Appendix: Experimental test tokens

The experimental sentences are preceded by a context sentence set in italics.

Table 9: Four lexical variants of each experimental sentence

±stylistic inversion	±*wh*-movement
Un feu de paille s'est déclenché dans la vallée magique.	*Le maître donne le contenu de la boîte pour chien à son caniche.*
Quel est l'incendie que craignent les elfes du bois?	Dites-moi : A qui il donne la pâtée?
Quel est l'incendie que les elfes du bois craignent?	Dites-moi : Il donne la pâtée à qui?
Le gros buffet en chêne doit être retapé.	*Cette femme fait totalement confiance à un inconnu.*
Quelle est l'armoire que refont les employés de la scierie?	Dites-moi : A qui elle prête sa carte bancaire?
Quelle est l'armoire que les employés de la scierie refont?	Dites-moi : Elle prête sa carte bancaire à qui?
Les colombes traversent un horizon sans nuage.	*L'instituteur fait aujourd'hui un cours sur le corps humain aux CM1.*
Quel est le ciel que franchissent les oiseaux de la paix?	Dites-moi : A qui il enseigne la biologie?
Quel est le ciel que les oiseaux de la paix franchissent?	Dites-moi : Il enseigne la biologie à qui?
Dans cette secte, les adeptes doivent une obéissance absolue au gourou.	*La petite amie de Martin prend la montre de Simon.*
Quel est l'engagement que prennent les asservis de la religion?	Dites-moi : De qui elle prend la montre?
Quel est l'engagement que les asservis de la religion prennent?	Dites-moi : Elle prend la montre de qui?