Essays on Turkish Linguistics
Edited by Sıla Ay, Ö zgür Aydın, İclâl Ergenç, Seda Gökmen, Selçuk İşsever, and Dilek Peçenek

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Orthographic and morphological aspects of written Turkish in France, Germany and Turkey

*Mehmet-Ali Akinci, **Carol Pfaff, *Meral Dollnick

*Université Lumière Lyon2  **Freie Universität Berlin

1. Introduction
This paper considers orthographic and morphological aspects of written Turkish in the European diaspora in France and Germany and of monolinguals in Turkey. The maintenance of Turkish in diaspora communities involves many interrelated linguistic and social factors of the individuals and particular communities. The present study is part of a larger cross-linguistic study of oral and written bilingual language development, family language background and literacy practices of older children and adolescents in France, Germany and Turkey.¹ This paper compares the written texts in Turkish of 66 bilingual 15-20-year-old secondary level second generation migrant populations in France and Germany and 42 low and high SES monolingual comparison groups in Turkey. Participants produced personal narratives and expository opinions in two spoken and written modalities in each of their languages. In this paper we focus on the written Turkish only.

Orthography, like other linguistic levels of representation differs with language typology. Our aim is to examine the potential effects of interaction between bilinguals’ languages, where the two contact languages, French and German differ from each other as well as from Turkish. Previous discussions of this topic (Aarts & Verhoeven, 1998, 1999; Cabadağ, 2001; Schroeder, 2007) have related orthographic ‘errors’ of various types to social factors, such as parents’ education and literacy practices; or to linguistic factors such as influence from L2 or dialects of L1. In our empirical study, we consider these factors and also availability of instruction in L1 and differing social contexts and literate cultures in the two bilingual settings. The latter factor has been found to be important in a comparative study of L2 orthography in France and England ( Gonac’h, 2008) and we expect that such social variation will also be important for the L1.

2. Turkish immigrants in France and Germany: demography, education and language practices
Immigration from Turkey to Germany began with recruitment of labor in from the mid-1960s to 1973. Immigration to France is much more recent, having begun around 1973, the time that the major immigration to Germany ended. At present there are about 400,000 Turks in France but 3 million Turks in Germany, counting naturalized citizens as well as Turkish citizens. Migrants from Turkey are the largest group in Germany but 8th largest in France. Despite these differences, the populations in both countries maintain a strong
attachment to Turkey through frequent holiday trips and a high proportion of marriages to spouses newly immigrated from Turkey (Akınç, 2006).

In Germany, until recently, little attention was given to instruction of German in preschool whereas in France, this was a major concern. In both countries mother tongue instruction is a voluntary option, in Germany there are a few primary schools which offer bilingual, biliteracy education but this is not the case in France. At the secondary level, Germany differs strikingly from France, having early tracking of children into different types of secondary schools, which is not the case in France. Thus, in Germany children who have difficulties in German may be excluded from higher forms of education, leading to university at an early age. A further difference in the two school systems concerns the division of secondary school into two parts, lower and higher for which the cutoff point differs in the two countries. In France, the cut is after the 9th grade but in Germany it is after the 10th grade. This difference apparently has an effect on our results for 10th graders in both countries as will be seen below.

As reported in the six city study of urban multilingualism in Europe (Extra & Yağmur, 2004), the Linguistic Vitality Index (LVI) of Turkish is relatively high in comparison to other migrant languages. Lyon and Hamburg show similar component values of the LVI, as shown in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Self-assessments of Turkish primary school children in Lyon and Hamburg and Linguistic Vitality Index (Extra &amp; Yağmur, 2004, pp. 172, 267)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency Understands Turkish</td>
</tr>
<tr>
<td>Lyon</td>
</tr>
<tr>
<td>Hamburg</td>
</tr>
</tbody>
</table>

For our present discussion, the most relevant aspect of proficiency in the Extra and Yağmur study is writing. For the oldest group of pupils (age 10-11), combined for all cities, ability to read Turkish was reported by 80% and ability to write Turkish reported by 73%.

3. Background: acquisition of Turkish orthography and literacy

Based on Aksu-Koç and Slobin (1985) work on the acquisition of Turkish by monolingual children, that shown that the basic morphosyntax and phonology is acquired early and mostly error-free by Turkish children. Durgunoğlu (2003, 2006) has made a number of studies on Turkish orthography. She has suggested that the rather systematic transparent orthographic system introduced by Atatürk in 1928 and rather rapid development of phonological awareness make the acquisition of Turkish orthography relatively rapid as well (Durgunoğlu, 2006; Durgunoğlu & Öney, 2002). On the other hand others point out that there remain significant inconsistencies which require even monolingual learners to rely on their intuition (Menz & Schroeder, 2007; Schroeder, 2007). These intuitions may be underdeveloped in second generation Turkish children in Europe. Indeed, literacy proficiency levels of Turkish children in the Netherlands and in Germany have been found to lag that of comparable monolingual children in Turkey (Aarts & Verhoeven, 1998, 1999; Schroeder, 2007; Menz & Schroeder, 2007).
These authors have related orthographic ‘errors’ of children in the diaspora to several social factors, including parents’ (lack of) education and literacy practices, (lack of) instruction in Turkish, and linguistic factors such as influence from dialects of L1 or transfer from the orthographic conventions of L2. Nonetheless, according to Schroeder (2007, p. 118) “We cannot speak of a takeover of the Turkish orthographic system by the German orthographic system, or a collapse of the Turkish system in favor of the German system, as some studies suggest”.

4. Hypotheses
In this paper we focus on the linguistic factors in our analysis of the written texts of older pupils in France and Germany in comparison to those produced by monolinguals in Turkey. Our working hypotheses are the following:

- Errors related to orthographic ambiguity or complexity inherent in the Turkish orthographic system are predicted to be found in both bilingual groups as well as in monolinguals.
- Errors related to spoken varieties of Turkish will be found in bilingual groups more than in monolingual groups at the secondary level due to the longer and more intensive instruction in Turkish in Turkey.
- Errors related to transfer from the contact languages are predicted for both groups but the specific effects will differ for pupils in France and Germany.

5. Method
The present study is part of a larger cross-linguistic study of bilingual language development of older children and adolescents in France, Germany and Turkey, expanding the methods employed by Berman and Verhoeven (2002) study of monolinguals to the investigation of multilinguals. Participants were shown a short video film without dialogue and were asked to produce two types of text (personal narrative and general opinions) in two modalities (spoken and written) in each of their languages. The texts were elicited from participants in two successive sessions. In this paper, only the written texts produced by the subjects in both types of texts will be discussed.

Table 2. Participants, grade, mean age, and age ranges

<table>
<thead>
<tr>
<th>Population</th>
<th>Bilinguals in France</th>
<th>Bilinguals in Germany</th>
<th>Monolinguals in Turkey Denizli</th>
<th>Istanbul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>10th</td>
<td>12th</td>
<td>10th</td>
<td>12th</td>
</tr>
<tr>
<td>Number</td>
<td>10</td>
<td>11</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Mean age</td>
<td>15;05</td>
<td>17;06</td>
<td>16;09</td>
<td>18;06</td>
</tr>
<tr>
<td>Age range</td>
<td>14;10-16;04</td>
<td>17;00-18;04</td>
<td>15;11-18;05</td>
<td>17;10-20;01</td>
</tr>
</tbody>
</table>

5.1 Participants
The bilingual informants for this study are members of the Turkish immigrant communities who attend public schools in Rouen, France and Berlin, Germany. Turkish monolinguals attend either a public school in Denizli (low SES group) or a private school in Istanbul (high SES group). The Denizli monolingual group is comparable to the bilingual groups in
terms of socioeconomic status. All groups had equal numbers of males and females. Table 2 gives the information about number and age of the bilingual and monolingual participants in each country.

5.2 Coding procedures
We considered three categories of errors in writing: orthographic, morphological and lexical. Orthographic errors were categorized as follows (using categories as in traditional methods for grading schoolwork (Erden, Kurdoğlu, & Uslugu, 2002).

– Substitution of graphemes used for two phonologically similar sounds, distinguished in one or more of the languages, e.g., öğrenciler for öğrencilər ‘pupils’ or Ture for Türk ‘Turkish people’ (from French) or aggressivleştir for agressivleştir ‘I get aggressive’ (from German).
– Omission of a single vowel or consonant letter, e.g., atrllatt for hatrlatt ‘I reminded (someone)’.
– Omission of syllable or two or more letters, e.g., dışültür for dışünültür ‘it is thought’.
– Epenthesis: insertion of an unnecessary letter, e.g., bağız for bazı ‘some’.
– Upper/lower case: use of upper case rather than lower case letter, or the reverse, e.g., ikinci Sinavda for ikinci sınavda ‘during (the) second test’.
– Numbers: Use of numbers rather than spelled out words in environments where the spelled out forms are conventional, e.g., 2 haftada for iki haftada ‘in two weeks’.

Morphological errors were categorized as follows:

– Combination of two morphemes which would be written as two words:
– e.g., bende for ben de ‘me too’ or ozaman for o zaman ‘in that case’.
– Separation of base/suffix: nonstandard use of space or apostrophe, e.g., şiddetle for şiddetle ‘with violence’ or film’dede for filmed ‘in the movie’.
– Omission of case, voice or causative markers: e.g., Problem yakakbilar olduğuunu anladım for Problemlim ayakkabılar olduğuunu anladım ‘I understood that the problem was the shoes’.
– Metathesis of morpheme order: e.g., atardilar for atlarıd ‘they usually throw (them) away’.

The only lexical error category distinguished here was calquing or transfer of collocation from L2 to L1, e.g., yanıls buluyorum for yanıls görürüm ‘I consider it wrong’. Actually use of German or French words in Turkish was considered to be code-switching rather than an orthographic morphological or lexical error.

Finally, we noted errors consisting of lack of punctuation, which are likely related to time pressure and not treated further here.

6. Results

6.1 Text length and overview of error types
Before discussing the quantitative results on orthographic errors, it is relevant to consider the length of the texts produced. Table 3 shows the length of texts by group in terms of total words for each text type for all subjects in each age/national group, the mean number of words per text type and the range of text lengths.
Table 3. Text lengths of the informants per text type and population

<table>
<thead>
<tr>
<th>Population</th>
<th>Bilinguals in France</th>
<th>Bilinguals in Germany</th>
<th>Monolinguals in Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade &amp; number of participants</td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>12&lt;sup&gt;th&lt;/sup&gt;</td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>n=10</td>
<td>n=11</td>
<td>n=19</td>
<td>n=26</td>
</tr>
<tr>
<td>Text type</td>
<td>NAR</td>
<td>EXP</td>
<td>NAR</td>
</tr>
<tr>
<td>Total word</td>
<td>691</td>
<td>828</td>
<td>1292</td>
</tr>
<tr>
<td>Mean number of words/participant</td>
<td>69.1</td>
<td>82.8</td>
<td>117.4</td>
</tr>
<tr>
<td>Range of length in words</td>
<td>33-</td>
<td>35-</td>
<td>40-</td>
</tr>
</tbody>
</table>

Table 3 reveals some disparities in the length of texts by the different groups. Of the bilingual groups, the French 10<sup>th</sup> graders produced longer texts than the German 10<sup>th</sup> graders, an effect which may be partially due to differences in the educational status of the 10<sup>th</sup> grade in the two educational systems noted above. In France, 10<sup>th</sup> graders have already been admitted to the higher level of secondary school but in Germany the decision point is after the 10<sup>th</sup> grade. Another affective difference which may have played a role is that the data collection in Germany took place at the end of the school year when the pupils had finished their course work and were nervously awaiting their crucial final grades. Differences in length were also found among the monolingual groups in Turkey; the texts of the lower SES group in Denizli were longer than the texts of the high SES Istanbul group as well as longer than those of all bilingual groups. Moreover, within all groups, there are sizeable individual differences as is evident in the ranges in Table 3.

Table 4. Total number of errors per text type and population

<table>
<thead>
<tr>
<th>Population</th>
<th>Bilinguals in France</th>
<th>Bilinguals in Germany</th>
<th>Monolinguals in Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade &amp; number of participants</td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>12&lt;sup&gt;th&lt;/sup&gt;</td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>n=10</td>
<td>n=11</td>
<td>n=19</td>
<td>n=26</td>
</tr>
<tr>
<td>Text type</td>
<td>NAR</td>
<td>EXP</td>
<td>NAR</td>
</tr>
<tr>
<td>Total errors</td>
<td>118</td>
<td>77</td>
<td>147</td>
</tr>
<tr>
<td>Mean errors/participant</td>
<td>11.8</td>
<td>7.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Range of errors</td>
<td>4-30</td>
<td>1-20</td>
<td>4-23</td>
</tr>
</tbody>
</table>

Turning to the analysis of the errors, an overview of the number of errors by text type and group is given in Table 4. As was the case for text length, there are sizeable individual differences within all groups. For instance for the 10<sup>th</sup> graders in France, the number of errors in narratives ranges from 4 to 30, with more than 25% of the total errors produced by one participant. However there is a clear distinction between monolingual and bilingual...
groups; with monolinguals having fewer errors, independent of the length of their texts. Table 5 presents the percentage of errors of each category.

Table 5. Percentage of errors by category, text type and population

<table>
<thead>
<tr>
<th>Population</th>
<th>Bilinguals in France</th>
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<td>10th</td>
<td>12th</td>
</tr>
<tr>
<td>n=10</td>
<td>n=11</td>
<td>n=19</td>
<td>n=26</td>
<td>n=20</td>
</tr>
<tr>
<td>Text type</td>
<td>Exp</td>
<td>Exp</td>
<td>Exp</td>
<td>Exp</td>
</tr>
<tr>
<td>Orthographic</td>
<td>65.5</td>
<td>66.5</td>
<td>65.5</td>
<td>62.5</td>
</tr>
<tr>
<td>Morphological</td>
<td>29.5</td>
<td>18</td>
<td>29</td>
<td>30.5</td>
</tr>
<tr>
<td>L2 influence</td>
<td>2.5</td>
<td>2.5</td>
<td>5.5</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>2.5</td>
<td>13</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 5 shows that the bilingual groups have more orthographic errors than the monolingual groups. The proportion of errors due to L2 influence in the texts of these secondary school pupil are very low compared to what was found in elementary school pupils in France (Akinci & Koçbaş, 2006; Akinci, 2008). It is striking that for the morphological category, it appears to be the monolingual groups that have higher percentages of errors of this type. This difference is however, only apparent due to our calculation of percentages based on the total number of errors of all types.

6.2 Orthographic errors

Table 6 shows the types of orthographic errors.

Table 6. Percentage of orthographic errors by group and text type

<table>
<thead>
<tr>
<th>Population</th>
<th>Bilinguals in France</th>
<th>Bilinguals in Germany</th>
<th>Monolinguals in Turkey Denizli</th>
<th>Istanbul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade &amp; number of participants</td>
<td>10th</td>
<td>12th</td>
<td>10th</td>
<td>12th</td>
</tr>
<tr>
<td>n=10</td>
<td>n=11</td>
<td>n=19</td>
<td>n=26</td>
<td>n=20</td>
</tr>
<tr>
<td>Text type</td>
<td>Exp</td>
<td>Exp</td>
<td>Exp</td>
<td>Exp</td>
</tr>
<tr>
<td>Substitution</td>
<td>68</td>
<td>71</td>
<td>52</td>
<td>73</td>
</tr>
<tr>
<td>Omission</td>
<td>7.5</td>
<td>7.5</td>
<td>16.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Omission of 2 or more letters</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Epenthesis</td>
<td>7.5</td>
<td>13.5</td>
<td>5.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Upper and lower case letters</td>
<td>10.5</td>
<td>4</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Numbers</td>
<td>1.5</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 6 shows that bilingual groups use more substitutions than both monolingual groups. This is primarily due to transfer from the conventions of L2 orthography, the
dominant language of their schools. Some of the errors are common to both bilingual groups, related to the letters not used in the orthographies of the contact languages or used with a different phonetic value. The letters i, g, s do not occur in either French or German, which the letter ç is used in French but with a different phonetic value e.g., Emin (GR-m-10 16;01) defeat for Defil ‘NEG to be’; e.g., Ismail (FR-m-10 16;04) sinifta for sinifta ‘classroom-LOC’. In some cases, a letter with a similar phonetic value in L2 is used, e.g., for ğ, e.g., Esra (GR-f-12 18;07) deyunmek for deginmek ‘refer to’. However, it was not the case that the uniquely Turkish letters were totally avoided. In some instances they were overused, as in the use of i where i would be standard e.g., Talha (FR-m-10 16;01) kalbsuni for kalbini ‘heart-poss3sg-acc’.

We expected that French and German bilinguals would differ with respect to the un lauted letters ð and ṭ which occur in German but not in French. We found quantitative differences as predicted, French bilinguals substituted non-unlauted letters in words with un lauts in Turkish, more frequently than German bilinguals, e.g., Ismail (FR-m-10 16;04) oremene for oğrtemene ‘teacher-DAT’, oncekile for o Gençlik primary’. Our impression from the oral texts is that these substitutions are characteristic of their orthography only, not of their pronunciation as well.

Some individuals in both bilingual groups and monolinguals occasionally confound voiced and voiceless consonants, especially /d/ in suffixes, e.g., sinifta for sinifta ‘classroom-LOC’ but also /z/ within words, e.g., fasda for fazla ‘much’. An especially frequent lexical item with s for z is herkez for herkes ‘everybody’; however this is a frequent pronunciation of this item.

For both bilinguals and monolinguals, word of Arabic origin constitute the most frequent lexical items with omitted letters, e.g., tabi for tabii ‘sure’, malesef for maalesef ‘unfortunately’.

6.3 Morphological errors

The distribution of morphological error types is shown in Table 7:

Table 7. Percentage of morphological errors by group and text type

<table>
<thead>
<tr>
<th>Population</th>
<th>Bilinguals in France</th>
<th>Bilinguals in Germany</th>
<th>Monolinguals in Turkey Denizli</th>
<th>Monolinguals in Turkey Istanbul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade &amp; number of participants</td>
<td>10³³</td>
<td>12³³</td>
<td>10³³</td>
<td>12³³</td>
</tr>
<tr>
<td>Text type</td>
<td>NAR EXP NAR EXP NAR EXP NAR EXP NAR EXP NAR EXP NAR EXP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combination of morphemes</td>
<td>54 50 39.5 28.5 76 86 74.5 73.5 66.5 65 91.5 60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separation of morphemes</td>
<td>14.5 21.5 44 43 20 14 15.5 17.5 28.5 19 5.5 40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omission of case / voice suffixes</td>
<td>28.5 28.5 16.5 28.5 4 0 8.5 9 5 16 3 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metathesis</td>
<td>3 0 0 0 0 0 1.5 0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As we noted in the discussion of Table 5, the apparent higher frequency of morphological errors for monolinguals reflects our calculation of percentages based on the total of errors of all types. Nonstandard combination of morphemes is found both for
bilingual and monolingual participants, e.g., tabiki for tabii ki ‘of course’, herşey for herşey ‘everything’. A particularly frequent lexical item is yada for ya da ‘either’, probably by analogy with veya ‘or’. Separation of combined forms is also characteristic of both bilinguals and monolinguals, for short forms e.g., hiç bir for hicbir ‘any’, bu gün for bugün ‘today’ and also with longer forms, e.g., ilk okul dayken for ilkokuldayken ‘(when I was) at primary school’. The use of DE (as locative suffix or particle meaning ‘also’), both with and without apostrophe is the most common morphological error for both bilinguals and monolinguals, e.g., video’də for videoda ‘video-LOC’, oda for o da ‘he too’, however the frequency of extra apostrophes, noted by Schroeder (2007) in adult monolingual Turkish as well, is higher for bilinguals in our study.

We expected to find omission of case and voice suffixes more characteristic of bilinguals but, in fact, these were infrequent. Those instances which occurred were predominately lack of the genitive suffix, e.g., Semra (FR-f-10 15:04) sınıf en çok gevezesi for sınıfın en çok gevezesi ‘the most talkative (one) in the class’.

Caleques were obviously found only in the speech of the bilinguals, sometimes blending structures of both languages, e.g., Aslı (GR-f-10 17:08):

(1)  Konuşarak ile de kendi görüşünü gösterebilir veya anlatabilirsin.
‘Durch Sprechen kannst du auch deine Meinung zeigen oder erklären’
‘You can also express or explain your opinion by talking’

7. Conclusions and outlook
The results of our study of the orthography in Turkish texts of secondary school pupils shows similarities and differences between our results and those of previous studies.

Although we find that the frequency of errors is higher for bilinguals in both France and Germany in comparison with monolinguals, unlike the findings for younger bilingual pupils in France (Akcın, 2008), for these older pupils, this is not, however, mainly due to influence of the dominant language. Most of the errors observed were due to other morphological phenomena common to both monolinguals bilinguals such as nonstandard combination and separation of words, especially with DE. These error types were more frequent for the bilinguals, however.

A residue of orthographic errors was attributable to transfer from the L2 orthographic system. Here we find that there are clear differences depending on the differing conventions of the two contact languages. The higher frequency of non-unlauted for unlauted letters (ö and ü) of Turkish is a case in point.

Finally, we observed a great deal of individual variation within all groups, to which we will return in subsequent analysis of the data.

In our continuing work on these and other texts, we will incorporate several different aspects of our study which we have not addressed here. Concerning other aspects of the participants’ Turkish, we will examine the pronunciation features of the oral texts in order to ascertain whether the orthographic features of the individual participants are paralleled by their pronunciation as well. Second we will look in more detail at the relationship of morphological and orthographic errors and the complex syntactic types such as nominalizations where substitution of y for ɣ might be predicted. Third, we will examine one of the social background features, the relationship between performance in Turkish and
the type and extent of instruction in their mother tongue. Finally, we will examine the relationship of features of the participants’ Turkish to their performance in their other languages, their L2 French or German and their L3 English.

Notes
1 The project investigates the later language development of multilinguals in Germany and France in their first and second languages and in their first foreign language, English. We are grateful to the DAAD (grant # D/0628214) and the Partnerships Hubert Curien MAE (grant # 14815/ZA) for providing travel funding for data collection and collaborative conferences in the framework of their PROCOPE binational projects, 2007-2009.
2 We initially expected differences with respect to L1 instruction because all French but only some German pupils participated in after school mother tongue courses. But many of our German sample had previously had such instruction or were taught at home by family members. More detailed information on the nature of their previous formal or informal instruction in Turkish is required for such an analysis.
3 This form is common in several dialects in Turkey.

References
Berman, R., & Verhoeven, L. (Eds.) (2002). Cross-linguistic perspectives on the development of text-production abilities in speech and writing. *Special Issue of Written Language and Literacy, 3*(1) & 3(2).

