Talking only in past tense

Citation for published version:

Digital Object Identifier (DOI):
10.1016/j.cortex.2021.03.002

Link:
Link to publication record in Edinburgh Research Explorer

Document Version:
Peer reviewed version

Published In:
Cortex

General rights
Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.
We report on the case of an anomic patient who in spontaneous speech uses only past simple tense even when clearly inappropriate.

Matteo (fictitious name), a university student, born and bred in the North of Italy, was in his early 20s when he had a brain injury due to road accident, resulting in a left frontotemporal subdural hematoma and a frontal subarachnoid haemorrhage. We assessed him three months after intensive care. He presented with fluent aphasia and difficulties in lexical retrieval; no deficits at phonological level were observed. Auditory comprehension was preserved; written language mirrored oral language.

His naming ability was impaired (Table 1). On object naming tasks, he produced anomias (e.g. piccione [pigeon] → inizia con p [it starts with p]), circumlocutions (e.g. abaco [abacus] → per fare le somme [to do the sums]), and semantic paraphasias (e.g. carciofo [artichoke] → asparago [asparagus]). Instances of formal paraphasias (decorazione natalizia [Christmas decoration] → descrizione natalizia [Christmas description]) were also registered. A noticeable inability in selecting derivational morphemes resulted in morphologically related words (cubetto di ghiaccio [ice cube] → ghiacciolo [icicle]) or non-words (battente [knocker] → bussatoio [from bussare, to knock, and –toio, -er]). Recurrent perseverations were frequent in both spontaneous speech and verbal tasks.
Matteo’s lexical impairment affected his performance in all tasks assessing verbal long-term memory. On Rey auditory-verbal learning test (Carlesimo et al., 1996), Matteo produced intrusions semantically related to the stimuli: e.g. Sardegna [Sardinia] and meteo [weather], related to isola [island] and tempo [time, weather], respectively. Spontaneous speech was often incomprehensible due to perseverations and paraphasias. He was unaware of his language difficulties (Cocchini et al., 2010), refused speech therapy and was exasperated when someone underlined his verbal mistakes.

Matteo also had acalculia and a mild dysexecutive syndrome including problems in cognitive flexibility (see detailed test scores and lists of errors in Supplementary Material).

The most striking feature of Matteo’s neuropsychological profile was the systematic use of the simple past tense in spontaneous speech and in describing complex scenes and image sequences (Table 2). He systematically substituted the past simple for the present simple and the present continuous. In his spontaneous speech, he described what typically occurs or what is currently occurring as if it had happened in the past. The lexical retrieval difficulty coupled to the tendency to use the simple past tense led to the production of non-existing words like “dociò” (instead of “ha fatto la doccia” [he had a shower]), obtained by adding the inflectional suffix for the past tense -ò [–ed] to the noun doccia [shower]. The simple past tense was used also in naming pictures depicting simple actions: e.g., tagliare [to cut] → segò [he sawed], affondare [to sink] → annegò [he drowned]; annaffiare [to water] → lavò i fiori [he washed the flowers].

His knowledge of the grammar of verbs appeared to be intact. Matteo consistently declined correctly the verbs even when using circumlocutions in naming tasks, due to anomias: e.g., museruola [muzzle] → per bloccare cane che abbaia [to stop dog barking]. Further, he performed well in conjugation tasks. He made errors only when asked to produce the present simple of the irregular verb “andare” [to go]: in this case he was not able to retrieve the root of the present simple “io vado” [I go], thus confirming the lexical selection deficit. Matteo
showed the same difficulties with auxiliary verbs “essere” [to be] and “ avere” [to have], even if for these verbs irregular forms are not limited to the present tense.

Matteo showed no syntactic impairments, nor a defective conceptual representation of time. The use of the past tense was limited to narrative speech and associated with lexical retrieval deficits and perseverative behaviour. Three months later, he showed a clear improvement; his spontaneous speech remained abnormal, although his inappropriate use of past tense was much less overt.

Matteo’s speech was unique. We are not aware of cases with a similar verbal behaviour. It is rather unusual to confound the present with the past while declining the past tense rightly; if anything, language deficits are characterised by the opposite pattern, aphasic patients use the present tense more than the past, the inflection of which is more often wrong (Druks & Carroll, 2005), also in Italian (De Bleser & Luzzatti, 1994). Deficits of tense processing and tense production in aphasia have been widely reported in patients with agrammatism (Friedmann & Grodzinsky, 1997). Yet, Matteo was not agrammatic; rather, he showed signs of paragrammatism with the substitution of prepositions and other closed class words.

Colman et al. (2009) reported that Dutch speaking patients with Parkinson’s disease (PD) showed an “excessive, inappropriate use of the past tense when a present tense was required” (p. 937). However, the task used in this study was sentence completion, which is rather different from spontaneous speech as the alternation of present and past tenses as correct answers could facilitate perseveration errors. Interestingly, the PD patients’ performance on verb production correlated with their poor score on a set-switching task and decreased visual attention, suggesting that executive dysfunctions may underlie their performance. Matteo also showed signs of dysexecutive syndrome.

In conclusion, Matteo showed a new type of aphasic errors: the pervasive use, even if transient, of the past simple. The combination of lexical difficulties and executive disturbances probably plays a role in the genesis of the phenomenon. An impaired selection of the correct verbal forms and the tendency to perseverate could have been the cause of the privileged use of the past tense. Alternatively, his deficit could be accounted for by a problem at the pragmatic knowledge and interpreted as a selective impairment of the present tense as an abstract grammatical feature underlying narrative speech. The present tense is obligatory
in describing observed scenes and predominant in contemporary fiction (Jauss, 2014). A deficit of pragmatic knowledge could produce the wrong selection of the verbal tense, thus impairing the ability to tell tales.

**Acknowledgements.** We thank Dan Mirman who read an earlier version of this manuscript.

**References**


Laiacona, M., Barbarotto, R., Baratelli, E., & Capitani, E. (2016). Revised and extended norms for a picture naming test sensitive to category dissociations. *Neurological Sciences* 37(9); DOI: 10.1007/s10072-016-2611-0


Table 1. Matteo’s performance in picture naming tests.

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>Range</th>
<th>Cut off</th>
<th>Matteo’s score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objects¹</td>
<td>0-60</td>
<td>&lt;43</td>
<td>42*</td>
</tr>
<tr>
<td>Objects²</td>
<td>0-48</td>
<td>&lt;41.98</td>
<td>33.8*</td>
</tr>
<tr>
<td>Objects³</td>
<td>0-80</td>
<td>≤67.58</td>
<td>70.81</td>
</tr>
<tr>
<td>Actions⁴</td>
<td>0-50</td>
<td>≤36.86</td>
<td>35.6*</td>
</tr>
</tbody>
</table>

¹Goodglass et al., 1983; ²Catricalà et al., 2013; ³Laiacona et al., 2016; ⁴Papagno et a 2019
* Pathological score.
### Table 2. Examples of Matteo’s spontaneous speech production and scene description.

<table>
<thead>
<tr>
<th></th>
<th>Original Italian</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tell me about your typical day</strong></td>
<td>&quot;Mi alzai alle 8.10 e andai in bagno. Feci i miei lavaggi in bagno e poi andai in cucina a fare colazione con latte, caffè e biscotti ma prima però presi le medicine. Dopo la colazione lessi un libro e parlai con mia madre. A mezzogiorno cucinammo e tornò mio padre a mangiare. Fino alle due mio padre stette a casa e guardammo insieme la tv ma poi tornò al lavoro. Finito ciò feci una chiamata, lessi un libro e scambiammo musica assieme a mia madre, visto che per molti generi musicali ci intendiamo per altri ci alteriamo. Poi preparammo la cena e mio padre tornò a casa dopo lavoro. Tornato a casa mio padre si docció1 e poi cenammo tutti insieme&quot;.</td>
<td>&quot;I got up at 8.10 and went to the bathroom. I did my washings in the bathroom and then I went to the kitchen to have breakfast with milk, coffee and biscuits but first I took the medicine. After breakfast I read a book and talked to my mother. At midday we cooked and my father came back to eat. Until two my father stayed at home and we watched TV together but then he went back to work. After that I made a call, read a book and I exchanged music with my mother, since for many musical genres we agree with one another, for others we lose our temper. Then we set dinner and my father came home after work. Back home my father showered and then we all had dinner together&quot;.</td>
</tr>
<tr>
<td><strong>Scene description (BADA, Miceli et al., 1994)</strong></td>
<td>&quot;La polizia si fermò in un benzinaio a farsi mettere del diesel nella macchina. Questo lavoro venne fatto dal benzinaio che lavorava lì e allora la polizia si spostò e arrivò ad un semaforo e si fermò perché trovò il segnale rosso. La polizia però non si fermò da sola perché di fianco a lui c’era una macchina di una brava persona. Appena il segnale del semaforo diventò bello verde la polizia partì subito con una grande velocità, mentre la persona civile e brava ci mise di più a ripartire e soprattutto lo fece con calma e partendo dopo la polizia&quot;.</td>
<td>&quot;The police stopped at a gas station to get diesel in the car. This work was done by the gas station attendant who worked there and then the police moved and came to a traffic light and stopped because they found the red signal. But the police didn’t stop alone as next to them there was the car of one good person. As soon as the traffic light turned nice green, the police immediately left at great speed, while the civilized and good person took longer to restart and above all he did it calmly and left after the police.&quot;</td>
</tr>
<tr>
<td><strong>Scene description (ENPA, Capasso and Miceli, 2001)</strong></td>
<td>&quot;I ladri rubarono in una casa. La signora lavorò con la lana e l’anziana si stupì. I ragazzi guardarono il video. Il papà lesse il giornale e il cane guardò il video. La porta era aperta. I ladri portarono via una radio&quot;.</td>
<td>&quot;The thieves stole from a house. The lady worked with wool and the old woman was surprised. The boys watched the video. Dad read the newspaper and the dog watched the video. The door was open. The thieves took away a radio&quot;.</td>
</tr>
</tbody>
</table>

---

1 “docciò” is non-word a made up past perfect from the noun “doccia” (shower) and the past perfect inflection, it should be “fece una doccia” (had a shower)