**Introduction.** With the picture-word paradigm, different effects of grammatical gender have been observed, depending on language and task requirements. When bare noun production is required, an interference effect of gender congruency has been found in Italian and Spanish, but not in Dutch. Conversely, in determiner+noun production, a facilitation effect of gender congruency has been found in Dutch and German, but not in Italian and Spanish (Paolieri et al., 2010). Cubelli et al. (2005) assumed that in bare noun production the gender congruency effect is visible only in Romance languages, like Italian and Spanish, where nouns are marked for gender and nominal endings are chosen as a function of grammatical gender. Similarly, Miozzo and Caramazza (1999) proposed that in noun phrase production the gender congruency effect appears only in Germanic languages, like German and Dutch, where the definite determiner is specified uniquely by the nominal gender, and not by the phonology of the noun. To ascertain whether the grammatical gender effect reflects the distinction between Romance and German languages, we tested French speaking participants. In French the gender effect has not been found in noun phrase production (Alario & Caramazza, 2002), but it has never been investigated in bare noun production. If speakers of Romance languages (i.e. languages with most nouns with arbitrary grammatical gender because of the absence of the neuter gender) show the same behavior, a grammatical interference effect in bare noun production should be found also in French. However, in French, as in other Romance languages, the selection of the determiner depends on both the grammatical gender and the phonological form of the following noun, but, at variance with Italian and Spanish, nouns have neither gender-marked suffixes nor a clear mapping between phonology and gender. Therefore, if grammatical gender effect depends on the specific properties of languages, French speakers should show no difference between responses to congruent and incongruent target-distracter pairs in both bare noun production (like in Italian and Spanish) and noun phrase production (like in German and Dutch).

**Method.** Overall 48 students of the University of Provence Aix-Marseille participated, 24 in the Experiment 1 (bare noun production) and 24 in the Experiment 2 (noun phrase production). From Lotto et al. (2001) and Snodgrass et al. (1980), 40 pictures were chosen as targets, half with masculine names and half with feminine names. In both experiments participants were presented with a target picture coupled with a distracter word printed on it and were required to name the picture either by providing the bare noun (Experiment 1) or by providing the name preceded by the definite article (Experiment 2). The gender of the distracter word could be either congruent with the gender of the target name or incongruent. The target and distracter nouns were matched for noun frequency, length, number of phonemes, age of acquisition, name agreement and familiarity (Alario et al., 1999; New et al., 2004).

**Results and Discussion.** For both experiments, separate analyses were carried out on RTs with grammatical gender (congruent vs. incongruent) and target type (masculine vs. feminine) as factors. Only a main effect of target type (feminine nouns faster than masculine ones) was found in both experiments. Neither the effect of gender congruency nor the interaction reached significance. A-priori power analyses demonstrated that the number of both participants and items was large enough to detect a large effect size (.35) with a high
power (> .80), according to the criteria proposed by Cohen (1988). Thus, the absence of the gender congruency effect cannot be attributed to the lack of power of our design. The absence of the gender congruency effect in both bare noun and noun phrase production suggests that this effect depends on the specific characteristics of French which is similar to Italian and Spanish for the role of phonology in the determiner selection and to Dutch for the morphological structure of nouns, lacking gender marked suffixes.

References


