Chapter 4, Problem 2: Spanish NPs I

A. The Spanish nouns do obey the SHAC: *jirafa* is feminine and singular, and it may only co-occur with a feminine, singular determiner (such as *la*); *pingüino* is masculine and singular, and it may only co-occur with a masculine, singular determiner (such as *el*). Similar comments hold for the plural nouns *jirafas* and *pingüinos*, which may only co-occur with plural determiners, feminine (*las*) and masculine (*los*), respectively.

B. No, the feature GEND for Spanish is also appropriate for 3rd person plural nouns, as shown by the determiner-noun agreement facts. If *jirafas* and *pingüinos* did not have a feature GEND on which they differ, we would not be able to account for the fact that *las* can only co-occur with the former and *los* can only co-occur with the latter.

C. The type hierarchy under *agr-cat* that we positied for English isn't the one required for Spanish. For the purposes of this problem, we will treat all AGR values as being of type *agr-cat*, for which the features PER, NUM and GEND are all appropriate.

$$
\left\langle \text{la} \,,\;
\begin{bmatrix}
word \\
\text{HEAD} & \begin{bmatrix} det \\ \text{AGR} & \begin{bmatrix} \text{NUM} & sg \\ \text{GEND} & fem \end{bmatrix} \end{bmatrix} \\
\text{VAL} & \begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}
\end{bmatrix}
\right\rangle
$$

$$
\left\langle \text{los} \,,\;
\begin{bmatrix}
word \\
\text{HEAD} & \begin{bmatrix} det \\ \text{AGR} & \begin{bmatrix} \text{NUM} & pl \\ \text{GEND} & masc \end{bmatrix} \end{bmatrix} \\
\text{VAL} & \begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}
\end{bmatrix}
\right\rangle
$$

$$
\left\langle \text{pingüino} \,,\;
\begin{bmatrix}
word \\
\text{HEAD} & \begin{bmatrix} noun \\ \text{AGR} & \boxed{1}\begin{bmatrix} \text{PER} & 3rd \\ \text{NUM} & sg \\ \text{GEND} & masc \end{bmatrix} \end{bmatrix} \\
\text{VAL} & \begin{bmatrix} \text{SPR} & \left\langle \begin{bmatrix} \text{HEAD} & \begin{bmatrix} det \\ \text{AGR} & \boxed{1} \end{bmatrix} \\ \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix} \right\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}
\end{bmatrix}
\right\rangle
$$