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%
% File:            ch2_bgw.dtr                                %
% Purpose:         Bininj gun-wok noun class and gender assignment %
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% Documentation:   'Network Morphology', Brown & Hippiusley 2012 %
%                 Evans, Brown & Corbett (2002) 'The semantics of gender %
%                 in Mayali' Language 78, 111-155           %
% Related Files:   ch2_bgwlex.dtr, ch2_bgwdec.dtr, ch2_bgwkklex.dtr %
% Version:         1.14 (December 6, 2011)                  %
%                                                          %
% % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % %
% Load the ordinary language lexicon (ch2_bgwlex.dtr), and the show %
% declarations file ch2_bgwdec.dtr. Unquote the third load direction %
% to load the Kunkurrng register (ch2_bgwkklex.dtr) lexicon (96 nouns). %

# load 'ch2_bgwlex.dtr'.
# load 'ch2_bgwdec.dtr'.
%# load 'ch2_bgwkklex.dtr'.

% OL: normal case defaults for noun class are                %
%   animate - V                                             %
%   inanimate - CONG                                        %
%                                                           %
% KK: normal case defaults for noun class are                %
%   human - V                                              %
%   animate - CONG                                         %
%   inanimate - CONG                                       %
%                                                           %
% OL: exceptional case defaults for noun class are           %
%   animate - CONG                                         %
%   inanimate - V                                          %
%                                                           %
% KK: exceptional case default for noun class is always CONG %
%                                                           %

MOR_NOMINAL:
<mor> ==
<mor form> == "<mor prefix>" "<stem>"
<mor i > == na _
<mor ii > == '( ' ng ' )' al _
<mor iii > == man _
<mor iv > == kun _ .

% NOMINAL                                                    %
% Unlike the MOR_NOMINAL node, this node defines the properties of nominals %
% as lexemes (i.e. it combines information about syntax, stems and %
% morphology).                                               %
% * First equation states that things are undefined if not stated. %
% * For information about syntax, refer to the 'dummy' syntax node %
%   SYNTAX, which generates noun phrases.                   %
% * A stem is by default the same as a root.                %
% * Go to MOR_NOMINAL for your morphology.                  %

NOMINAL:
<> == undefined
<syn> == SYNTAX
<stem> == "<root>"
<mor> == MOR_NOMINAL .

% MODIFIER                                                    %
% * Modifiers are nominals.                                 %
% * Their syntactic category is mod(ifier)                  %
% * To determine the prefix associated with a particular gender, the %
%   path <mor> at MOR_NOMINAL is extended with the morphological class %
%   value which corresponds to that gender. This information is found at %
%   the node CLASS_FROM_GENDER.                             %

MODIFIER:
<> == NOMINAL
<syn cat> == mod
<mor prefix> == MOR_NOMINAL:<mor CLASS_FROM_GENDER:<> >.

% NOUN                                                         %
% * The syntactic category of nouns is 'noun'.              %
% * The syntactic gender of nouns is determined by evaluating their %
%   semantic category (the output of the semantic hierarchy). %
% * A noun's prefix is determined by extending the path %
%   <mor> with the value assigned for morphological_class for the noun %
%   in question.                                           %
% * Nouns are assigned morphological class by evaluating their %
%   register and semantic category.                         %
% * Congruence is defined as the evaluation of gender and the assignment %
%   of morphological class on the basis of gender.          %
% * The default register is the 'ordinary language'.        %

NOUN:
<> == NOMINAL
<syn cat> == noun
<syn gender> == GENDER:< "<sem cat>" >
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<mor prefix> == MOR_NOMINAL:<mor "<morphological_class>" >
<morphological_class> == MORPHOLOGICAL_CLASS:< <eval_morphological_class> >
<eval_morphological_class> == "<prag register>" "<sem cat>"
<congruence> == CLASS_FROM_GENDER:< "<syn gender>" >
<prag register> == o_l. %ordinary language

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GENDER:

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<> == masculine
<entity which_is animate> == GENDER_FROM_SEX:< "<sem sex>" >
<entity which_is animate and bird> == feminine
<entity which_is inanimate> == vegetable
<entity which_is inanimate and body_part> == neuter
<entity which_is inanimate and pertaining_to_weather> == neuter
<entity which_is inanimate and action> == neuter
<entity which_is inanimate and pertaining_to_landscape> == neuter
<entity which_is inanimate and body_part and sexual> == vegetable
<entity which_is inanimate and body_part and excretory> == vegetable
<entity which_is animate and crustacean> == feminine
<entity which_is animate and reptile and turtle> == feminine
<entity which_is animate and reptile and snake and swallowing_snake>
== feminine.

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MORPHOLOGICAL\_CLASS:

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<> == EXCHANGE:< "<eval_morphological_class>" >
<kunkurrng> == "<congruence>"
<kunkurrng entity which_is animate and human> ==
<o_l entity which_is animate and human>
<o_l entity which_is inanimate> == "<congruence>"
<o_l entity which_is inanimate and pertaining_to_domestic_fire> == iv
<o_l entity which_is animate> == v.

```

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% EXCHANGE: any ordinary language noun will exchange class V for congruence %
% as the exceptional case default, or congruence for class V. This is %
% achieved by requiring the evaluation of morphological class and then %
% giving the opposite from that expected. This is the function of the %
% paths which contain the 'exchange' attribute. In contrast, kunkurrng %
% nouns will have congruence. %

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EXCHANGE:

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<o_l> == < exchange MORPHOLOGICAL_CLASS >
<kunkurrng> == "<congruence>"
<exchange> == v
<exchange v> == "<congruence>".

```

GENDER\_FROM\_SEX:

```

<> == GENDER
<female> == feminine.

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CLASS\_FROM\_GENDER:

```

<masculine> == i
<feminine> == ii
<vegetable> == iii
<neuter> == iv.

```

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% % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % %
%
% SEMANTICS %
% % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % %

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ENTITY:

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<sem> == stop
<sem cat> == entity which_is "<sem type>"
<sem type> == inanimate "<sem subtype>".

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ANIMATE:

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<> == ENTITY
<sem type> == animate "<sem subtype>".

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PLANT:

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<> == ENTITY
<sem subtype> == and plant "<sem subtype>".

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HUMAN:

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<> == ANIMATE
<sem subtype> == and human "<sem subtype>"
<sem subtype> == and "<sem sex>".

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FEMALE\_H:

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<> == HUMAN
<sem sex> == female stop.

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MALE\_H:

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<> == HUMAN
<sem sex> == male stop.

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MALEVOLENT\_BEING:

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<> == ANIMATE
<sem subtype> == and malevolent_being "<sem subtype>".

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MACROPOD:

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<> == ANIMATE
<sem subtype> == and macropod "<sem subtype>".

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MALE\_MACROPOD:  
<> == MACROPOD  
<sem sex> == male stop.

FEMALE\_MACROPOD:  
<> == MACROPOD  
<sem sex> == female stop.

REPTILE:  
<> == ANIMATE  
<sem subtype> == and reptile "<sem subtype>".

TURTLE:  
<> == REPTILE  
<sem subtype> == and turtle "<sem subtype>".

SNAKE:  
<> == REPTILE  
<sem subtype> == and snake "<sem subtype>".

SWALLOWING\_SNAKE:  
<> == SNAKE  
<sem subtype> == and swallowing\_snake "<sem subtype>".

BIRD:  
<> == ANIMATE  
<sem subtype> == and bird "<sem subtype>".

FISH:  
<> == ANIMATE  
<sem subtype> == and fish "<sem subtype>".

SHELLFISH:  
<> == ANIMATE  
<sem subtype> == and crustacean "<sem subtype>".

INSECT:  
<> == ANIMATE  
<sem subtype> == and insect "<sem subtype>".

DOMESTIC\_FIRE:  
<> == ENTITY  
<sem subtype> == and pertaining\_to\_domestic\_fire "<sem subtype>".

WATER:  
<> == ENTITY  
<sem subtype> == and pertaining\_to\_water "<sem subtype>".

BOATS/PLANES:  
<> == ENTITY  
<sem subtype> == and pertaining\_to\_boats\_or\_planes "<sem subtype>".

CARDINAL:  
<> == ENTITY  
<sem subtype> == and cardinal\_direction "<sem subtype>".

ACTION:  
<> == ENTITY  
<sem subtype> == and action "<sem subtype>".

LANDSCAPE:  
<> == ENTITY  
<sem subtype> == and pertaining\_to\_landscape "<sem subtype>".

METEOROLOGICAL:  
<> == ENTITY  
<sem subtype> == and pertaining\_to\_weather "<sem subtype>".

BODY\_PART:  
<> == ENTITY  
<sem subtype> == and body\_part "<sem subtype>".

SEXUAL\_BODY\_PART:  
<> == BODY\_PART  
<sem subtype> == and sexual "<sem subtype>".

EXCRETORY\_BODY\_PART:  
<> == BODY\_PART  
<sem subtype> == and excretory "<sem subtype>".