The myth of gender copying
Hamans, C.S.J.M.; Awedyk, W.

Published in:
Lingua: nervus rerum humanarum: essays in honour of Professor Stanisaw Puppel on the occasion of his 65th birthday

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
1. Introduction

In the early days of modern linguistics the status of loanwords has been discussed already intensively. However, gender of loanwords was a less popular issue. Nevertheless, Te Winkel (1901), one of the first serious studies on the history of Dutch, discussed the problem of gender assignment of loanwords. He claimed that loanwords usually keep the gender of the language of origin. Te Winkel came to his idea of gender copying since he assumed that adopting a form from a donor language with all original features is the normal way of borrowing. He may have thought so, since gender copying was seen as a result of universal semantic factors by von Humboldt (1827 = 1979) and later also by Baudouin de Courtenay (1929). After all, gender assignment is in the first place a matter of universal semantic factors, even more than of, for instance, referential arguments, according to these founding fathers of modern linguistics.

Corbett’s (1991) modern canonical study on gender, questions the semantic nature of gender assignment and therefore the universality of it. He makes it clear that there is not such a thing as an overall universal system. Semantic, morphological and phonological criteria may play a role in gender assignment and it depends on the specific nature of a certain language which criterion gets priority. Besides, gender assignment becomes more complex and less rigid, since more and more languages become less stable.

The aim of this paper is to contrast the processes of gender assignment of loanwords in selected languages in order to find out whether there is one universal system of gender assignment of loanwords or whether that gender assignment in loanwords is language specific.
2. Recent studies

In recent years, change in gender systems has become a topic of research. Most of these studies concentrate on the changes in the pronominal system. Siemund (2008), who studied varieties of English all over the world, came to the conclusion that the pronominal system changed in the direction of an individuation hierarchy. So, [+count] or concrete nouns get the pronoun he/she, whereas [-count] or mass nouns will be referred to by it. Audring (2009) comes to a similar conclusion for Dutch and some German dialects.

Audring (2006) concentrated on the difference between the German and Dutch nominal and pronominal gender system. German has three genders both in the nominal and in the pronominal system, whereas modern standard Dutch has a two gender system when it comes to nouns, but still a three gender pronominal system. The two gender nominal system consists of a common and a neuter gender. Consequently, the difference between masculine and feminine has disappeared in Dutch where it concerns the nominal system. Common nouns get the definite article de, while neuter corresponds to het.

So in German it is completely correct to say:

(1) Das Mädchen (N) das (N) seine (N/M) Tasche vergessen hat
The girl who forgot her bag

*Mädchen* is neuter and therefore corresponds to the relative pronoun das, which is the neuter form of the German relative pronoun. *Mädchen* also corresponds to sein, which is the neuter as well as the masculine form of the German possessive pronoun (3 person sg.).

For Modern Dutch the corresponding sentence is already ungrammatical:

(2)* Het meisje (N) dat (N) zijn (N/M) tasje vergeten heeft

The ungrammaticality of sentence (2) is caused by the possessive zijn, since the male connotation of this form makes it impossible to refer to a female human being, although the noun meisje is neuter and zijn is also the neuter form of the possessive pronoun (3 person sg.).

Speakers of standard Dutch prefer (3) with the female possessive pronoun (3 person sg.) haar corresponding to the sex of the referent:

(3) Het meisje(N) dat (N) haar (F) tasje vergeten heeft

Substandard but frequently used Dutch is:

(4)* Het meisje (N) die (F/M) haar (F) tasje vergeten heeft
In this last example, the relative pronoun also becomes F(/M), which brings us to the conclusion that the pronominal system of Dutch is changing in the direction of a referential gender system.

Curzan (2003) studied gender shifts in the history of English. She described how the grammatical gender of Old English gradually disappeared and was replaced by a referential system in which the gender of nouns just as the use of personal pronouns became dependent on the natural gender of the referent.

From these three studies it will be clear that there is not such a thing as a rigid, universal system of gender assignment, whether semantic or not. Gender appears to be a category which is not completely inherent and stable. Pronominal gender systems seem to be open to change. We will now discuss nominal gender and will try to find out whether nominal gender systems are susceptible to changes as well, especially in cases of borrowing.

3. French Loanwords in Dutch

Te Winkel (1901: 142–149) discussed gender assignment of all nouns in Dutch, original Germanic-Dutch forms as well as loanwords. He still assumed that standard Dutch of his days had three gender nominal system for the written language, which is extinct in modern standard Dutch now. In modern standard Dutch there are only two genders left: common gender and neuter.

Te Winkel paid special attention to loanwords, in particular to the ones coming from Latin and French (1901: 146-7). Usually, he said, a loanword keeps the gender it has in the donor language. Nevertheless, he realized that there are exceptions, such as *bos*, “woods”, from Middle Latin *buscus*, which in Middle Dutch was still masculine — the copied gender —, but later on became neuter by analogy with the neuter form *woud*, “woods”. On the other hand, formal aspects might have played a role as well. Latin *oleum*, “oil”, with its plural form *olea* has been interpreted as feminine because of the *a*-ending. That is why Dutch *olie*, which has been borrowed via French, was assigned feminine gender according to Te Winkel.

Formations with a borrowed French suffix such as *-ij and -age* are put forward by Te Winkel as an argument for gender copying. The Dutch nominal suffix *-ij*, also *-erij* and *-ernij*, is derived from French *-ie*, and similar forms. The French forms ending in *-ie, -rie* and *-erie* are feminine:

(5) guarante (F) guarantee cf. garant
pêcherie (F) fishery pêcher
gaminerie (F) prank gamin

The corresponding Dutch nominal suffix is normally used to form deverbal nouns, according to Te Winkel. These nouns are feminine, just as French forms ending in *-ie* etc.
(6) visserij (F) fishery cf. vissen V
smederij (F) forge smeden V
kleedij (F) clothing kleed N & kleden V

The suffix -age is a more complicated case. Te Winkel did not adduce examples from French, just as he did not produce French examples with -ie. He restricted himself to the borrowed, Dutch forms. The ultimate Dutch suffix -age results in feminine nouns, such as

(7) vrijage (F) flirtation cf. vrijen
Lekkage (F) leakage lekken

However, the corresponding French suffix produces masculine nouns:

(8) bondage (M) bondage sondage (M) poll
patronage (M) patronage passage (M) passage
séchage (M) drying tirage (M) print

Apparently, Te Winkel’s argument consists of two parts:
– the French masculine suffix does not and can not produce a neuter effect in Dutch. So the result must be either masculine or feminine;
– but because of the final schwa in Dutch the resulting forms have been interpreted as feminine instead of masculine. In older periods of Dutch nouns ending in -e were quite often seen as being feminine. This process of interpretation may be seen as a form of adaptation.

This last form of borrowing is more complicated than pure the instances of pure gender copying discussed in (5) and 6). In the second phase of the process the structure of the recipient language played a decisive role as well and therefore actually opposed to gender copying.

Moreover, Te Winkel does not explain why so many French loanwords become neuter in Dutch, whereas French only has a bivalent masculine-feminine gender system. He only discussed a few neuter examples, which gender he mainly explained by analogy. So bosschage, “boscage”, is neuter because of the corresponding neuter noun bos, “woods”. This is especially problematic since neuter gender is marked in Dutch. Only a relatively small proportion of all Dutch nouns are neuter (cf. Haeseryn et al. 1997:149).

In his study on gender of common nouns borrowed from French, Goemans (1937: 783) followed Te Winkel’s reasoning. Goemans simply pointed to analogy, without explaining how this process of analogy operated and how it could be held responsible for such a comparatively massive collection of neuter loanwords from French.

Te Winkel’s hypothesis of gender copying and analogical adaptation in case of exceptions remained the main explanation for almost the whole 20th century.
It was only Geerts (1970) who criticized Te Winkel. Geerts (1970: 48) expected the system of a recipient language to be so powerful that loanwords have to fit into the classification of this language.

The first who analysed the vast group of neuter French loanwords in Dutch was Jeanine Treffers-Daller (1994). She also suggested a form of analogy but a phonological analogy: “… disyllabic French borrowings, most of which have stress on the second syllable, become neuter through analogy with the neutral deverbal [Dutch] nouns that have stress on the second syllable …” (Treffers-Daller 1994: 137).

That is why borrowed forms have been taken over with their original stress pattern. Subsequently, this formal feature, the stress pattern, has been interpreted within the system of the recipient language and has been seen as a marker for neuter gender. Thus, the first part of the process of borrowing can be seen as a form of copying. In the second phase the structure of the recipient language played a decisive role and resulted in a form of adaptation, which is of course contrary to gender copying.

Van Marle (2004) criticized the analysis of Treffers-Daller. He made a distinction between two forms of Dutch: standard Dutch with its two gender nominal system and the dialects of the South, mainly Flanders.

In the last group of dialects, and also in the supra-regional more or less standardized forms spoken in this area, the gender of French loanwords is a simple matter of gender copying. French masculine nouns remain masculine in the dialects of the South and nouns that are feminine in French remain feminine in these dialects. (Van Marle 2004: 917). There is no place for a neuter gender in this process of borrowing.

In standard Dutch and French, loanwords usually get neuter gender and so belong to that part of the lexicon which is marked for gender, according to Van Marle (2004: 917). Hamans (2009: 23), however, questioned Van Marle’s observation that most of the French loanwords become neuter. However, this does not affect Van Marle’s analysis essentially, which claims a special status in the lexicon for French loanwords. French loanwords behave differently from the autochthonous part of the lexicon in many respects. Therefore, they should be marked as a special group, a ‘Romance stratum’. One of the markers for this special character appears to be neuter gender in Van Marle’s opinion.

Anyhow, in this case, gender assignment has nothing to do with gender copying anymore. To the contrary, the Romance stratum distinguishes itself from the rest of the lexicon and from its origin by a special rule of neuter gender assignment.

This conclusion of Van Marle is not the final word on French loanwords in Dutch. Recently Van der Horst (2009) noted the discussion about the gender of the word “le Louvre” ‘the Louvre’ in Dutch. Normally it is *het Louvre*, a neuter
form that may be explained as part of the Romance stratum or by analogy to the Dutch noun *het museum*, which is also neuter. However, there is a small, but influential group of writers and other literati who claim that the form should be *de Louvre* with common gender since the original French form is *le Louvre*. This last form is a clear example and at the same time an evident plea for gender copying.

Audring and Booij (2009: 15) say a few words about ‘borrowing effects’. Although they do not discuss borrowing of gender or gender copying in detail, they claim that one may expect gender ‘transfer’. Unfortunately, borrowing turns out to be far more complicated.

## 4. English Loanwords in Dutch

Awedyk, Fisiak and Hamans (2005) studied English loanwords in several languages. For Dutch they conclude to a general rule and to some rule based exceptions.

The main rule is that English loanwords get common gender in Dutch

1. \[(9)\]

<table>
<thead>
<tr>
<th>English</th>
<th>Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>the trustee</td>
<td><em>de trustee</em></td>
</tr>
<tr>
<td>the city</td>
<td><em>de city</em></td>
</tr>
<tr>
<td>the roast beef</td>
<td><em>de rosbief</em></td>
</tr>
<tr>
<td>the nonsense</td>
<td><em>de nonsens</em></td>
</tr>
<tr>
<td>the shop</td>
<td><em>de shop</em></td>
</tr>
<tr>
<td>the cup</td>
<td><em>de cup</em></td>
</tr>
<tr>
<td>the output</td>
<td><em>de output</em></td>
</tr>
<tr>
<td>the set</td>
<td><em>de set</em></td>
</tr>
</tbody>
</table>

This might be seen as a form of gender copying, since English has common gender for nouns only and Dutch seems to accept these loanwords without any changes.

However, not all English loanwords keep common gender in Dutch. There are morphological, phonological and semantic exceptions, just as a few exceptions that may be explained by means of analogy.

Morphological and phonological exceptions follow that part of the Dutch system of gender assignment which is morphologically or phonologically rule based, such as

1. \[(10)\]

<table>
<thead>
<tr>
<th>English</th>
<th>Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>infinitives used as nouns are neuter</td>
<td></td>
</tr>
<tr>
<td><em>het slapen</em> sleep</td>
<td><em>het shoppen</em> shop</td>
</tr>
<tr>
<td><em>het lopen</em> walk</td>
<td><em>het racen</em> race</td>
</tr>
</tbody>
</table>

2. \[(11)\]

<table>
<thead>
<tr>
<th>English</th>
<th>Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>nouns with a final part <em>-ment</em> are neuter</td>
<td></td>
</tr>
<tr>
<td><em>het reglement</em> regulations</td>
<td><em>het agreement</em> agreement</td>
</tr>
<tr>
<td><em>het kampement</em> encampment</td>
<td><em>het statement</em> statement</td>
</tr>
</tbody>
</table>

3. \[(12)\]

<table>
<thead>
<tr>
<th>English</th>
<th>Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>nouns with a final stressed cluster <em>-er</em> are neuter</td>
<td></td>
</tr>
<tr>
<td><em>het debet</em> debit</td>
<td><em>het budget</em> budget</td>
</tr>
<tr>
<td><em>het sorbet</em> sorbet</td>
<td><em>het racket</em> racket</td>
</tr>
</tbody>
</table>
Semantic exceptions also follow the rules of the recipient language. In Dutch names of languages are neuter, just as abstract collective nouns or terms for sports:

(13) het Spaans Spanish het Pascal Pascal
het Limburgs Limburger het slang slang
het metaal metal het plastic plastic
het forum panel discussion het panel panel
het schaken chess het bridge bridge
het korfbal korfball het golf golf

Analogical formations are for instance

(14) het billboard because of het bord sign
het copyright because of het recht law

The examples in (9), which may be supplemented by hundreds and hundreds of other forms, suggest that gender copying is the main rule. But since common gender is the unmarked gender for Dutch nouns this type of borrowing does not offer a very convincing argument for gender copying. On the other hand examples (10) – (13) show that adaptation to the grammar of the recipient language operates as well. So only in case the loanword fits into the Dutch pattern of gender assignment automatically – and this is usually the case as in (9) – gender copying works.

What becomes clear from the examples (10) – (13) is that the three factors Corbett (1991) mentions – morphological, phonological and semantic criteria – operate here too, when it comes to adaptation to the Dutch system.

5. German loanwords in Dutch

German has a three gender system for nouns, with a masculine definite article der, a feminine die and a neuter das. The German system is still completely vital. Since Dutch has a nominal system with common and neuter gender only, one may expect some problems. However, the main rule is quite simple (Haman 2009: 26).

German loanwords usually keep the same gender in Dutch as they have in German, on the understanding that German masculine and feminine both become common gender in Dutch.

(15) die Hetze de hetze smear campaign
die Kür de kür freestyle test
die Ansichtkarte de ansichtkaart postcard
However, there are exceptions as well, which can be explained by analogy to already existing Dutch words.

(16) das Waldhorn | de waldhoorn | French horn | because of de hoorn “horn”
das Edelweiss | de edelweiss\(^1\) | edelweiss | because of the rule of plant and flower names, which are normally feminine in Dutch
das Schnitzel | de schnitzel | cutlet/schnitzel by analogy with de biefstuk, “steak”, de karbonade “cutlet”, de rosbief “roast beef”
der Kurort | het kuuroord | health resort | because of het oord “place”
die Kenzahl | het kengetal | dialing code | because of het getal “number”
die Hochsaizon | het hoogseizoen | high season | because of het seizoen “season”

On the one hand, German loanwords in Dutch seem to follow an adapted version of gender copying, on the other hand, it is quite clear that nouns that resemble existing Dutch words tend to adapt their gender by analogy with these words. Plain gender copying does not take place in the process of borrowing from German.

6. English loanwords in German and Norwegian Bokmål

In contrast to Dutch, German has a trivalent gender system, whereas the English gender system is only bivalent. This makes the borrowing of English nouns into German a more complicated question than that of borrowing into Dutch. There seems not to be a general rule, when it comes to English loanwords in German. Maybe this is a result of the complex gender system of German itself. Unlike for instance Latin and Polish the morphonological structure of German words tells very little about their gender. According to Nettmann-Multanowska (2003: 98), gender assignment is a complex process wherein meaning and form seem to conflict.

Therefore, the integration of nouns into German is determined by a number of semantic, morphological and phonological factors (see for details Awedyk, Fisiak and Hamans 2005: 301/2, and especially Arndt: 1970).

\(^1\) Some Dutch dictionaries give het edelweiss. Thus with gender copying.
The myth of gender copying

Bokmål is a language with only common gender and neuter, just as Dutch. So one might expect a pattern of borrowing similar to that of Dutch. However, there is no main rule, according to Graedler (1998). Three factors are of primary importance in the process of borrowing and in the following order: semantic aspects, morphological factors and analogy with Norwegian nouns. The semantic factor says that for instance nouns with [+animate] referents get common gender, just as nouns with [-animate] referents but from such semantic fields as music, beverage and transport. Examples are given in (17). The morphological factor determines gender assignment of for instance nouns ending in -ing, -er and -or (common gender), whereas final -ment leads to neuter.

(17) Common Gender Neuter Gender
jockey gin-tonic doping agreement
suffragette whisky printer argument
caravan folk motor element
truck jazz kalkulator (‘calculator’)

To sum up: for German and Bokmål there seems not to exist a main rule. Moreover, gender copying does not operate at all in these two languages.

7. English loanwords in Polish

Polish is a language with a stable gender system which is mainly phonological and determined by word endings. Moreover, Polish has a trivalent gender system.

Highly simplified, the system is as follows (cf. Awedyk, Fisiak & Hamans (2005: 305) and Hamans 2009: 29/30):
– masculine nouns usually end in a (non soft) consonant, such as sad ‘orchard’ and stól ‘table’
– feminine nouns normally have as a ending -a, such as książka ‘book’ and ryba ‘fish’, while some end in a soft consonant, such as noc ‘night’ and mysz ‘mouse’
– most neuter nouns end in -o or also -e, such as lato ‘summer’, słowo ‘word’ as well as imię ‘name’ and słońce ‘sun’.

Referential gender assignment is exceptional in Polish. Even words with a clear female referent get masculine or neuter gender depending on the phonological shape of the word ending.

(18) babszył M unpleasant woman related to baba F woman
garkotuk M female kitchen staff related to garnek M cooking pot
kurwiszon M invective for a woman related to kurwa F prostitute
kurwiszcze N invective for a woman related to kurwa F prostitute
In informal Polish, where it is quite normal to use hypocoristic forms for personal names, it may happen that masculine diminutive endings are used with women’s names. Ultimately these forms look like masculine diminutives. Consequently, the nouns get the masculine demonstrative pronoun *ten* – the corresponding feminine form is *ta* and the neuter *to* – and should be described as masculine therefore.

(19) Kasia F ten Kasik M  
Ewa F ten Ewcik M  
Slawa F ten Sławcik M  

The stability of the Polish phonologically based gender system suggests that loanwords should adapt to the system of the recipient language and not keep the gender of the original language. This turns out to be true.

Fisiak (1975), Awedyk, Fisiak and Hamans (2005: 305) and Więcławska-Szymańska (2009: 44) came to the conclusion that the main rule for English loanwords in Polish is to follow the Polish gender system

(20) bridge brydż M  
hooligan chuligan M  
deposit depozyt M  
abaca abaka F “kind of Philippine banana, ‘Musa textiles’ ”  
Britannia brytania F “kind of alloy”  
Liberia Liberia F “name of the Republic of Liberia, founded by freed American slaves. Therefore, English is the official language.

canoe canoe N  
mangrove mangrowe N  
judo dżudo N  

Although the Polish gender system is highly stable and more or less fixed, there occur a few exceptions as far as loanwords from English are concerned. All these exceptions can be explained by semantic association, a form of analogy.

(21) miss F because of natural gender of the possible referents  
lady F because of natural gender of the possible referents  
girl F because of natural gender of the possible referents  

---

2 The use of masculine forms for special females is not typical for Polish. Hamans (1989: 80–82) described how one may address female next of kin and next-door neighbours with masculine personal pronouns in some Dutch dialects. In this way, the same extent of respect will be assigned to women of the own ‘group’ as to men. Tobin (2001 & 2005) discussed the issue of gender switch in Hebrew and other languages. He came to the conclusion that a switch from feminine to masculine in the use of personal pronouns for female referents implies a higher degree of affection, intimacy and solidarity.
8. Other loanwords in Polish

Loanwords from other languages do not show a different pattern in Polish. For instance, loanwords from German stay masculine if they end in a consonant.

(22) der Zucker M cukier M sugar
der Ring M rynek M market
der Reim M rym M rhyme

German nouns seldom end in a vowel, except schwa. This schwa becomes \(-a\) in Polish.

(23) die Brühe F breja F broth
die Fuhre F fura F cart
die Kneipe F knajpa F pub

A loanword ending on a full vowel \(-o\) becomes neuter automatically.

(24) das Kino N kino N cinema

The German examples (22) – (24) could be considered as an argument for gender copying. The same may look for French loanwords.

(25) le balcon M balkon M balcony
le ciment M cement M cement
le mecenat M mecenat M maecenatism

French words seldom end in \(-a\). So, this is not an option for French loanwords in Polish. In spite of that there are many French loanwords with a final \(-a\) in Polish. These are nouns which end in \(-ion\) or \(-ie\) in French.

(26) la rébellion F rebelia F rebellion
la recension F recenzja F review
la bourgeoisie F burżuazja F bourgeoisie
la cérémonie F ceremonia F ceremony

So far borrowing from German and French might be analyzed as a form of gender copying as well. However, loanwords ending in \(-o, -e, -u\) and \(-i\) do not keep the gender of the donor language. They all follow the system of the recipient language Polish and become neuter.
This rule, that loanwords become adapted to the system of Polish gender-wise, has been confirmed by loanwords from other languages. These loanwords receive the gender which corresponds with its final segment.

| (28) | diva (Italian) | diwa F |
| mafia (Italian) | mafia F |
| pizza (Italian) | pizza F |
| cholera (Latin/Greek) | cholera F |
| saga (Old Norse) | saga F |
| swastika (Sanskrit) | swastyka F |
| placebo (Latin) | placebo N |

The same pattern appears when one takes a look at the names of countries or makes of cars.

| (29) | Algeria F | Kuwejt M | Kongo N |
| Birma F | Vietnam M | Peru N |
| Tunezja F | Yemen M | Zimbabwe N |

| (30) | ten Mercedes M |
| ta Skoda F |
| to Volvo N |

These last examples show that gender copying is not a serious option for Polish. It is the grammar of the recipient language which determines gender assignment, let it be that quite a few loanwords from different languages keep the gender they had already in the donor language. But that is not because of gender copying, but since the structure of the recipient language assigns the same gender to these loanwords on the basis of structural arguments coming from the recipient language itself.

9. Conclusions

From the examples given so far and from the languages analysed, one must conclude that gender copying is not the general rule. Even German and English loanwords in Dutch, which in a way could be described as a result of (adapted) forms of gender copying, cannot be considered to offer convincing examples for
gender copying. Especially the Polish examples show that it is the grammar of the recipient language that determines gender assignment in this language. The only clear counterexample seems to be the Southern dialects of the Dutch speaking area, as claimed by Van Marle (2004). But just these dialect data have been questioned by De Schutter and Taeldeman (2009). Their research seems to point to a more complicated gender situation. Only in the bilingual city of Brussels speakers of the local dialect appear to copy the French gender system into their Dutch dialect. So only bilingual speakers who have equal access to two grammars seem to be able to transfer a part of one grammar to the other. In case this is true, it is not very surprising to note that scholars such as Te Winkel, who lived in a period in which educated people had a very good command of French, thought that gender copying was a reality at least for the written language.

In all other cases, it is the grammar of the recipient language that determines gender assignment of loanwords. This is the general rule. As a matter of fact, the practical details of this rule differ from language to language. The explanation for this may be found in the fact that not all languages are equally stable when it comes to their gender system. Except for cases of social bilingualism, the general principle is that of adaptation of loanwords. Only the language specific rules differ. In this respect Corbett (1991) is right.

**References**


