The Influence of Dutch on the Pronunciation of Modern English Loanwords in Sranan

The Case of /g/ and /y/

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Preface

As a student of linguistics and as a Surinamese native, it has long been a wish of mine to investigate some linguistic aspect of Sranan, one of the creole languages of the Republic of Surinam in South America. My native language is Dutch, but Sranan is my second language. Over the years, I have also developed a deep fondness for the English language.

Having been raised in Surinam till the age of six, I became aware of the fascinating dynamic between the Dutch language and Sranan early on and, eventually, also noticed the influence of English. A typical conversation between acquaintances or friends in Sranan looks something like this:

Speaker 1: "Fa yu e tan"

How are you doing?

Speaker 2: "A e go, saf' safri."

I am doing alright.

Speaker 1: "Fa fu wroko?"

How is work?

Speaker 2: "Mi abi en druk."

I am busy.

"Mi basi e gi mi ed'ati".

My boss is giving me a headache.

"Nownowde, mi musu meki wan nyun logo."

Right now, I have to make a new <u>logo</u>.

This conversational fragment contains the words druk and logo. The former is a lexical borrowing from Dutch. The latter, on the other hand, is a loanword from English, curiously pronounced with a [γ] rather than the original English [g], even though the speech sound $/\gamma$ is lacking from the phoneme system of Sranan. It is present, however, in Dutch, one of the superstratum languages of Sranan that has greatly affected the vocabulary of this creole language. It is precisely this phenomenon that is under investigation in the present thesis.



Fig. 1 Map of the Republic of Surinam (Encyclopædia Britannica, 2010b).

1. Introduction

With a total population of 492.829 (Kenswil, 2007), the Republic of Surinam is the smallest independent country of South America. It is situated on the northern coast of the continent and is surrounded by French Guiana in the east, Guiana in the west, and Brazil in the south (Fig. 1). Because of an almost literally checkered colonial history, Surinam is home to a plural society consisting of, for example, inhabitants of Creole, South Asian, and Javanese descent as well as those of Chinese, Indian, and Dutch origin. With such a diverse population, it will come as no surprise that most Surinamese people speak at least two different languages, albeit with varying degrees of competence (Encyclopædia Britannica, 2010a). Dutch, the language of the seventeenth century colonizers, is the country's official language¹. It is the first (L1) or second language (L2) of approximately 70% of the population. In addition to its role as the language of government, commerce, and education, Dutch is also the home language for nearly half of the population (ABS Suriname, 2004). Other languages spoken in Surinam include Sranan, an English-based creole, Saramaccan, a Portuguese-based creole, Javanese, and Sarnami Hindustani, a language derived from Urdu and Hindi. Sranan, the national language of Surinam², is used for informal purposes only, in contrast to Dutch (Encyclopædia

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¹ It is not Standard Dutch that is spoken in Surinam, but a variety of Dutch called Surinamese-Dutch.

² A national language is defined here as a language that represents the national identity of a people. Sranan is considered to be the national language by most Surinamese people, as opposed to Dutch, which has been the official language since 1876 (Holm, 1989: 435).

Britannica, 2010b). It is the L1 or L2 for 9% and 37% of the population, respectively. Additionally, Sranan serves as a *lingua franca* among the various resident ethnic groups as well as for new immigrants with different language backgrounds, for example, from China and Brazil (Visser, 2005). Over the years, a steadily increasing amount of literature in Sranan and in Surinamese-Dutch has been published as well. Two famous Surinamese writers are — the now deceased — Robin Ewald Raveles, particularly known for his collection of folklore stories titled *Anansi-Tori*, and Cynthia McLeod, author of the historical novel *Hoe Duur Was de Suiker?*.

As stated in the preface, the topic of the present paper arose from personal curiosity, being a Surinamese native, as well as from a linguistic interest. Sranan is an interesting language to study because its linguistic components originate in several different languages, among which English, Dutch, Portuguese, and, history being the way it was, a small number of African languages. However, the interest here is not in the language's origin but in its contemporary interaction with some of the original and current linguistic donors, namely English and Dutch. As Muysken (2004: 154) states, quite a large amount of Dutch-Sranan code mixing occurs on a lexical level. What is also common is the use of new English loanwords in Sranan spoken language. The average Surinamese person is directly exposed to English on a daily basis through media such as television, cinema, and music. Many Surinamese people also regularly visit the United States of America, most often on their holidays. Additional exposure to English occurs indirectly via the Dutch language. Against this background, the goal of this thesis is to investigate the influence of Dutch phonology on the pronunciation of modern English loanwords in Sranan. This paper will specifically focus on the Sranan pronunciation of the English voiced velar stop consonant $/g/^3$, as in the words go and girl. This consonant is part of the native phoneme inventory of Sranan (Smith, 1987: 279), occurring in words such as gowtu 'gold' and gridi 'greedy'. As is well-known, this consonant is absent from the phoneme inventory of Dutch. This language has the voiced velar fricative /y/3 in words such as groot 'big' and geen 'none'. Consequently, English loans in Dutch are usually adjusted, [g] being replaced by [y], as in *golf* and *graffiti*, which are pronounced as [yolf] and [yrafiti]. This velar fricative in its turn is not present in Sranan phonology (Smith, 1987: 288). Nevertheless, personal observation has revealed that some contemporary English loanwords, such as to log in are pronounced with a Dutch [y] (i.e.

³ Representation according to the International Phonetic Alphabet (IPA).

[loɣin]) instead of the English [g] in Sranan. In this study, I investigate the latter phenomenon, aiming to answer the following research questions:

- a) How does Dutch affect the pronunciation of /g/ in English loanwords in Sranan speech?
- b) Is there a difference in pronunciation between word-initial, word-internal, and word-final position of the /g/ in English loanwords?

1.1 General Structure

This paper is composed of seven main sections. Section one contains an introduction to the paper's topic and is divided into four paragraphs. Paragraph 1.2 discusses relevant historical and linguistic facts concerning Sranan. Paragraph 1.3 and 1.4 consider the relevant phoneme categories in Sranan and the pertinent aspects of Sranan syllable structure, respectively. Section two covers previous research. Subsequently, the hypotheses and predictions from which this thesis starts are stated in section three. The experiments conducted in this study and the methodology are described in detail in section four. This section consists of four paragraphs, namely: §4.1 Design, §4.2 Subjects, §4.3 Materials, and §4.4 Procedure. Section five discusses the results of the experiments, and section six provides a discussion of these results. Both of these sections are divided into three paragraphs. The first paragraph describes the results of experiment 1. Paragraph 2 presents the data obtained from experiment 2, and the last paragraph contains a comparison of both production tasks. Finally, in section seven, the findings are summarized and some concluding remarks are made.

1.2 Historical and Linguistic Facts about Sranan

Before Surinam's independence in November, 1975, the country was occupied by the English and the Dutch, among others. In 1651, the colony of Surinam was established by Francis Lord Willoughby, the former Governor of Barbados. The import of slaves from West and Central Africa commenced quickly after the foundation of the colony (Smith, 1987: 87). The original lingua franca used by the English-speaking plantation owners and the slaves was an expanded form of West African Pidgin English (WAPE) spoken in the seventeenth century. As a result of its contact with the African languages of the slaves, this expanded pidgin underwent many changes. Phonologically, one of the most prominent transformations was word-final vowel insertion in words with consonants in coda position, a phenomenon that is characteristic of many creole languages and is called *paragoge* (Plag & Uffmann, 2000). Consequently, the pidginized words mimicked the CV syllable structure of the African languages Gbe and

Kikongo, as in the words *lafu* 'laugh' and *bigi* 'big'. Eventually this new pidgin, which ultimately became known as Sranan, creolized and became one of the native languages of the people of Surinam (Smith, 1987: 151).

Because of its history, Sranan contains lexical, morphological, and syntactic elements from the African languages mentioned as well as English. It was not until 1667 that the Dutch assumed power in Surinam, after which the Dutch language slowly and increasingly influenced the Sranan lexicon (Echteld, 1961: 2-3). According to Echteld (1961: 3-4), the major lexical sources in Sranan originate from more or less two periods:

- i. a Negro-English-Portuguese period, starting in 1718 until approximately 1800.
- ii. a Negro-English-Dutch period, stretching from 1800 to the present.

In the first period, English and the previously mentioned West-African languages were the primary source of lexical material and were only accompanied by a small portion of Portuguese loans. The Portuguese influence is more salient in Saramaccan, a creole language spoken in the area near the Surinam River (Holm, 1989: 438), some 300 miles inland. Dutch words entered Sranan in the second period with increasing numbers. Some examples of Sranan words and their English and Dutch originals are presented in Table 1 below (Echteld, 1961).

Sranan	English	Sranan	Dutch
waka	walk	frustu	verroest 'rusty'
dagu	dog	moy	mooi 'beautiful'
olo	hole	birti	buurt 'neighborhood'
sisa	sister	sekrepatu	schildpad 'turtle'
sem	same	mangri	mager 'thin'
son	sun		

Table 1. Sranan words and their English and Dutch sources.

1.3 Sranan Phonology: Consonants

Since the focus of this paper is on the pronunciation of the voiced stop /g/, the description of the phonological system of Sranan will be limited to its consonant inventory. Sranan has the following consonant system⁴ (Smith & Haabo, 2004):

Plosives

/p/: pasi 'road', apra 'apple', pusu 'to push'

⁴ The examples are spelled according to the orthographic rules of the Sranan-Dutch dictionary published by Pinas et al. (2007).

/b/: bedi 'bed', abra 'over', brudu 'blood'

/t/: tori 'story', ati 'heart', trusu 'to thrust'

/d/: dede 'dead', ede 'head', doro 'door'

/k/: koti 'to cut', uku 'corner', kasi 'cheese'

/g/: gotro 'gutter', grabu 'to grab', gado 'god'

/tj/: tyari 'to bring', batyaw 'dryed codfish', tyapu 'to chop'

/dj/: dyari 'garden', dyonsro 'soon', bradyari 'braggart'

Fricatives

/f/: furu 'many', fadon 'to fall', afu 'half'

/s/: kunsu 'pillow', aksi 'to ask', sibi 'to sweep'

/sj/: syatu 'short', shen 'shame', syow 'to carry'

Nasals

/m/: mata 'mat', meki 'make', emre 'bucket'

/n/: noso 'nose', nati 'wet', anu 'hand'

/nj/: nyan 'to eat', nyun 'new', panya 'smashed'

/η/: tranga 'strong', anga 'to hang', singi 'song'

Liquids

/l/: lustu 'to crave', lon 'to run', alata 'rat'

/r/: redi 'red', broko 'to break', barba 'beard'

Glides

/w/ (rounded): waka 'walk', swaki 'weak', owru 'old'

/j/: yuru 'hour', yere 'hear', ayun 'onion'

The consonantal speech sounds of Sranan are categorized according to manner and place of articulation in Table 2 below.

	Place				
Manner	labial	dental/alveolar	palatal	velar	
stops	p b	t d	ty dy	k g	
fricatives		f s	sy		
nasals	m	n	ny	ŋ	
liquids	l r				
glide	W		У		

Table 2. Consonant system of Sranan categorized according to manner and place of articulation (Adamson & Smith, 1995: 220).

This system can be compared with the consonantal phoneme systems of English and Dutch, as described in sources such as Collins & Mees (2003) and Trommelen & Zonneveld (1979). As Table 2 shows, Sranan has the voiced plosive pairs /p/-/b/, /t/-/d/, and /k/-/g/, just as English. It also has the voiced stops /ty/ and /dy/, which are similar to the English /tʃ/, as in *church*, and /dʒ/, as in *gin*. Strikingly, and differently from both English and Dutch, the Sranan phoneme inventory contains the voiceless fricatives /s/ and /f/, but not their voiced counterparts, /z/ and /v/. The nasal speech sounds /m/, /n/, and /ŋ/ are the same as in English and Dutch, and the /ny/ can be compared to the Spanish palatal /ŋ/, as in *mañana* 'morning'. The liquids and glides are also comparable in the three languages, although the /w/ is much more rounded in Sranan. This is a well-known feature in fact also of Surinamese-Dutch, for which it is quite renowned (Janssens & Marynissen, 2005). Finally, as previously mentioned, the consonant inventory of Sranan does not contain the voiced /ɣ/ or voiceless /x/, just as English, but in contrast to Dutch.

1.4 Sranan Syllable Structure

As a result of the influence of the West-African languages spoken by the slaves during the colonial period, the majority of words in Sranan consist of open syllables. In other words, the basic syllable structure is CV, as in words such as *moro* 'more', *baka* 'back', and *oso* 'house'. Consonant clusters in the onset are also common in Sranan. In words such as *brada* 'brother', *grabu* 'to grab', and *krosi* 'clothes', the syllable structure follows a C(C)V pattern. The only consonants that are at all allowed to occur in coda position with some frequency are words ending with nasals or glides, for instance: *krin* 'clean', *gon* 'gun', *bay* 'buy', and *kaw* 'cow'.

English and Dutch loanwords have adjusted to the phonological system of Sranan by means of the linguistic phenomena *syncope* and *apocope*, among others. The former is the deletion of one or more sounds in word-internal position, as in *sisa* < 'sister', and the latter is the omission of one or more sounds in word-final position, as in *gron* < 'ground'. English and Dutch loanwords ending in voiced or voiceless plosives, or fricatives were subject to *paragoge* and were adapted to the phonological system of Sranan by adding a vowel at the end of the word (Holm 2000: 140-42). Some examples are:

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/t/: 'to meet' \rightarrow miti /d/: 'god' \rightarrow gado /p/: 'stop' \rightarrow tapu /b/: 'have' \rightarrow abi /k/: broek 'pants' \rightarrow bruku /g/: 'dog' \rightarrow dagu /s/: 'lost' \rightarrow lasi /f/: 'enough' \rightarrow nofo
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Something that is particularly noteworthy for the present topic is that, in Sranan spoken language of the 20th century up to current Sranan, voiced and voiceless obstruents *do* occur at the end of a word, as the result of a relatively pervasive phonological process of 'sandhi' (the linking of juxtaposed words in a phrase or sentence during rapid speech). This happens in sentences such as those in (1)-(3):

- (1) Tapu a doro. \rightarrow Tap' a doro. [tapadoro] Shut the door.
- (2) Teki a sani. \rightarrow Tek' a sani. [tıkasani] Take/Pick up that thing.
- (3) Figi a tafra. \rightarrow Fig' a tafra. [figatafra] Wipe the table.

In these sentences, vowel deletion occurs in word-final position, resulting in a CVC syllable structure for the words involved. Notice that, in these examples, vowel deletion occurs before another vowel. Examples (4)-(7), however, show that word-final vowel deletion takes place even when the subsequent word does not begin with a vowel (Donicie, 1967: 19).

- (4) No bari so. \rightarrow No bar' so. [noba:rso] Don't shout.
- (5) Dati meki... \rightarrow Dat' meki... [datmɪki] That's the reason why...
- (6) Mi sabi dati... \rightarrow Mi sab' dati [misapdati]

 I know that...
- (7) Mi lasi moni. Mi las' moni. [milasmoni] *I lost money*.

In examples (3) and (6) the thematic verbs *figi* 'to whipe' and *sabi* 'to know' are contracted, giving them the syllable structure CVC. There is, however, a big difference between the two sentences. The voiced obstruent /g/ in the verb *figi* remains voiced when the following word starts with a vowel. In contrast, the voiced stop /b/ in *sabi* becomes a [p] when the succeeding word starts with a consonant. In other words, this looks a lot like the phenomenon of word final devoicing, which is – as is well-known – a salient feature of Dutch phonology (see, for instance, Trommelen & Zonneveld, 1979), but is not part of English phonology.

2. Previous Research

The creole languages of Surinam, Sranan and Saramaccan in particular, have been studied extensively in the field of creolinguistics. There is a considerable body of literature available

devoted to different linguistic aspects of Sranan. Echteld (1961) has conducted a lexicographical study of the abundance of Sranan words that originate from English. Arends (1989), Bruyn (1995), Donicie (1967), Plag (1993), Sebba (1987), Voorhoeve (1953, 1957, 1962), and others have investigated the grammatical system of Sranan. Sranan phonology has been studied by Adamson & Smith (1995), Smith (1987), and Smith & Haabo (2004). Alber & Plag (2001), Berg (2003), Bhatt & Plag (2006), Braun (2009), Lappe & Plag (2003), and Smith (2003) are some of the researchers who have analyzed the morphology of Sranan. Some of the results and conclusions of the literature germane to the topic of this paper will be discussed in more detail below.

In his work, Echteld (1961) provides an elaborate analysis of the influence that English has had on the lexical and morphological system of Sranan. He discusses various linguistic aspects of Sranan in relation to its vocabulary, namely, prosody, phonology, phonetics, orthography, and syntax. Throughout his work, the author draws structural comparisons between Sranan and English word-structure and also frequently supplies material evidence from the relevant West-African languages. Echteld (1961:28) reports that the morphological system of Sranan is far removed from that of English. Excluding words ending in nasals and the occasional exceptions such as *neks* < Du. *niks* 'nothing', words in Sranan end in open syllables. Moreover, inflection in Sranan is virtually non-existent. Features such as grammatical gender and plurality are realized through prefixation, e.g. den boy 'the boys' and man/uma pikin 'man/woman child' (23). However, the influence of the English grammatical system becomes apparent from the sentence structure in Sranan. That is to say, the creole language follows a relatively strict SVO word order. The author concludes that Sranan is truly a linguistic melting pot consisting of a mix of lexical, morphological, and syntactic components resulting from the explosive contact between English and a few West-African languages (173). According to Echteld (1961:174), Sranan of the 1960s – the period in which he wrote his work – was well on its way "towards becoming a mature language that can equal any other".

Smith (1987) studied the creolization process of the creole languages of Surinam, among which Sranan. He tackled this issue from the perspective of historical phonology. For this purpose, he conducted a large-scale historical comparative analysis of the phonological inventories of the Surinamese creoles. In his thesis, he accepts that the so-called *Language Bioprogram* (LB)⁵, proposed by Bickerton (1981; 1984), is involved in creole genesis but

⁵ In short, the *Language Bioprogram Hypothesis* assumes that children have an innate biological language program which drives language acquisition (Bickerton, 1981; 1984). Bickerton claims that the presence of this

argues against its involvement in the creation of the creole languages in Surinam. Smith (1987: 65-6) claims that similarities in the development of the phonological systems of the creoles of Surinam and other English-based and Portuguese-derived creoles spoken in the Atlantic region provide evidence against the operation of the LB in the creation of the Surinamese creoles within Surinam. For instance, the consonant cluster /ft/ (e.g. 'soft') after a vowel is reduced to /f/ (i.e. *safu*) in Sranan, but also in Krio (i.e. *saf*), and Jamaican (i.e. *saaf*) (71). In addition, contrary to what the LB predicts, certain phonemes that are present in English and Portuguese were adapted differently in the various creole languages of Surinam. The transformation of the voiceless plosive /p/ to /b/ is a perfect example. In Sranan, English words such as 'sleep' and 'scrape' became *sribi* and *krebi*. In contrast, similar items in the Portuguese-based creoles were not subject to this conversion (67). Smith (1987:167-8) concludes that Sranan and several of the other Surinamese creoles originate from West African Pidgin English (WAPE). In turn, this ancestor was a creolized form of a pidgin language spoken in Sierra Leone, as a result of the LB.

Adamson & Smith (1995) describe various aspects of Sranan, ranging from phonetics and phonology to syntax, supplying the reader with a concise, but clear picture of the main characteristics of this creole language. They state that, with respect to phonetics and phonology, Sranan can be compared to Dutch and English in that it is an accent language, as opposed to a tone language such as Saramaccan. Most words follow a basic trochaic accent pattern, for example, *táki* 'talk', *fára* 'far', *bróko* 'to break' (221).

In their paper, Smith & Haabo (2004) present an extensive description and comparison of the phonological systems of Sranan, Ndyuka, and Saramaccan, three of the creole languages spoken in Surinam. The authors give detailed phonological accounts of the vowel systems of the creoles using the standard lexical Wells sets, i.e. KIT, DRESS, TRAP etc., as well as the consonant systems. According to Smith & Haabo (2004: 527), the vowel inventories of Sranan and Ndyuka consist of 5 vowels: /i, e, a, o, u/. Saramaccan, on the other hand, has two additional vowels, totaling 7: /i, e, ε , a, σ , o, u/. The consonant system of Sranan is made up of 19 consonants and is a subset of the other two creoles (528; see Table 2 in §1.3 above).

Notably, Sranan has both /r/-full and /r/-less realizations of several English loanwords. Examples of the former are *fara* 'far', *tara* 'tar', and illustrations of the latter are *fo* 'four' and *foto* 'fort' (549). The authors also state that Sranan must have come into contact with /h/-less

and /h/-full varieties of English evident by the occurrence of a selected set of words that have lost the /h/ in word-initial position in present-day Sranan, while it was present in nineteenth century Sranan. Some examples are *onti* 'hunt' and *ipi* 'heap' (556). Another development that is apparent in Sranan is the conversion of /v/ > /b/, as in *liba* 'river' and *abra* 'over' (560). Smith & Haabo (2004: 563) conclude that the phonological systems of the creole languages of Surinam are worlds apart from their original English ancestors spoken in London in the seventeenth century.

As the brief review of some of the existing literature shows, researchers have tended to focus on ascertaining the lexical, grammatical, phonological, and morphological origins of Sranan and on describing the creolization process as well as the contributing factors involved in this process. The topic of the current thesis is that of the adaptation or integration of new loanwords from the original superstratum languages into Sranan, a topic on which no research has been conducted so far, at least to the best of the present author's knowledge. More specifically, out of a number of potentially interesting topics in this area and taking as a starting point some of my own preliminary observations of this integration process, the purpose of this paper is to determine the effect of Dutch on the phonological treatment of current English loanwords containing the phoneme /g/, in Sranan spoken language. To this end, a group of 20 bilingual speakers of Sranan and Dutch living in the Netherlands were tested by means of two production experiments.

3. Hypotheses and Predictions

In the present paper, it is hypothesized that the Sranan pronunciation of the target phoneme /g/ in English loans depends on two factors:

- a) phoneme position: word-initial, word-internal, and word-final
- b) *loanword type*: direct or indirect

Phoneme position pertains to the location of the target phoneme /g/ in the loanword. In the presentation of my data I will make a distinction in the location of the syllable at which this target phoneme occurs because such a distinction may be relevant to its realization and hence to my results. The velar stop consonant /g/ occurs in the word onset in an example such as the English *gadget* (phonetically: [gædʒɪt]). It occurs word-medially in the English word *bogus* (phonetically: [bo:gəs]), and in word coda position in a word such as *airbag* (phonetically: [ærbæg]). Loanword type here refers to the source of the loanword, that is to say, whether the loan was imported – in so far as we can actually ascertain – directly from English into Sranan, or indirectly, from English into Sranan but via Dutch.

Hypothesis one (H1) generates the following predictions:

- P1: In directly imported English loanwords containing a /g/ in word-initial or word-internal position, the velar stop consonant will remain unchanged in Sranan: e.g. *goal* and *bogus* with the English plosive [g].
- P2: Indirectly imported words with a /g/ in word-initial or word-internal position will be pronounced with a $[\gamma]$ in Sranan: e.g. *glitter* and *logo* pronounced with the Dutch velar fricative $[\gamma]$; this fricative sound will be found because this is the way Dutch usually adjusts these loanwords.
- P3: As a result of final devoicing, English loanwords with /g/ in word-final position (e.g. *bug* and *airbag*) will be pronounced with a [k] in Sranan, if the next word starts with a consonant or the word itself is situated at the end of a sentence.

The second hypothesis assumed in this paper is that, in Dutch, the pronunciation of /g/ in English loanwords will vary based on two factors:

- a) loanword type: integrated or on-line
- b) phoneme position: word-initial, word-internal, and word-final

In the case of Dutch, loanword type distinguishes between "integrated" and "on-line" loans (Peperkamp & Dupoux, 2001). The former are loanwords that have been assimilated into the lexicon of the recipient language and are as such no longer recognized as foreign words (or not recognized as such in a linguistically relevant sense) by the speakers who use them in their native Dutch. In contrast, the latter are adaptations of foreign words incorporated ad hoc into the discourse of the borrowing language. For present purposes, this usage can be considered similar to the phenomenon of code switching in sociolinguistics. The second hypothesis (H2) makes a similar prediction as H1 regarding the pronunciation of English loans ending with a /g/ in Dutch, that is: final devoicing will take place. However, H2 makes a different prediction with respect to English loanwords with a /g/ in the onset or in the middle of the word. The two additional predictions for the Dutch experimental condition are as follows:

- P4: In integrated English loanwords with g in word-initial or word-internal position (e.g. grip, burger), the velar stop consonant will be pronounced as [y] in Dutch.
- P5: On-line English loanwords with /g/ in word-initial or word-internal position (e.g. *gravel*, *trigger*) will be produced with a [g] in Dutch.

Summarizing, the above discussion implies that, if H1 is true, final devoicing is expected to occur in Sranan and Dutch sentences such as (SR10) and $(DU10)^6$. H1 also predicts that the pronunciation of the set of English loans in Sranan sentences such as (SR8) and (SR9) will vary depending on the loanword type. If H2 holds, the target phoneme in Dutch sentences such as (DU8) and (DU9) will sometimes be pronounced with a [g] and sometimes with a [g].

4. Experiments

4.1 Design

The aim of this study is to investigate the influence of Dutch phonology on the pronunciation of English loanwords in Sranan, specifically loanwords with English /g/. The approach of this study towards this aim is an experiment with a mixed design, consisting of three within-subjects variables. The hypotheses stated in section 3 were tested by means of two production tasks. Subjects were first tested on their pronunciation of the English target-phoneme /g/ in English loanwords embedded in Sranan sentences. The task contained three experimental conditions: a) 15 loanwords with word-initial /g/, b) 15 loanwords with word-internal /g/, and c) 7 loanwords with word-final /g/. Additionally, 15 randomly chosen English loanwords acted as fillers. Thus one of the within-subjects variables tested here was "phoneme position", defined as the position of the phoneme /g/ in the loanword.

A second production experiment was conducted in parallel to investigate the pronunciation of the same set of English loanwords in identical experimental conditions in Dutch sentences. As such, the second within-subjects variable was "sentence type", with "type" defined as Dutch or English.

The third within-subjects variable under investigation was "loanword type", with "type" defined as integrated or on-line, in the case of Dutch, and direct or indirect, in the case of Sranan.

The group of participants was counter-balanced according to gender. That is to say, the experimental group was comprised of roughly the same number of male and female subjects. Information such as age, knowledge of any other foreign languages, amount of exposure to English (AEE), and length of residence (LOR) in the Netherlands was gathered by means of a short questionnaire in Dutch (Appendix I).

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⁶ The designations SR10 and DU10 refer to example 10, Sranan and Dutch, respectively.

4.2 Subjects

The experiments were conducted with 22 subjects, 10 of whom were female and 12 who were male. Two of the subjects were later excluded because of incomplete background information. As a result, the final experimental group consisted of 20 adult subjects in total (9 female and 11 male). The subjects' mean age is 49.5 years (SD = 9.55) and ranges between 24-57 years. Seven subjects were of South Asian descent and 13 were of Creole origin. All participants were born in Surinam and are successive bilingual speakers of Sranan and Dutch. The term "successive bilinguals" is used here as defined by Meisel (2004: 105). He defines successive bilingualism as child L2 acquisition, occurring between the ages of 5 and 10. Three of the subjects were exposed to Sranan from birth and learned Dutch⁷ as an L2 in early elementary school. The remaining 17 subjects had Dutch⁷ as their L1 and acquired Sranan as an L2 between the ages of 5-7. All subjects reported speaking Sranan and Dutch actively, with "active" defined as having competence in both comprehension and production. Moreover, subjects reported using Dutch every day and Sranan either daily or weekly. Only 2 subjects admitted to speaking Sranan on a monthly basis, and 1 subject acknowledged to using Sranan on a yearly basis. Dutch was the dominant language for all participants, with "dominant" defined as most frequently used. The shortest and longest LOR in the Netherlands are 2 years and 47 years, respectively. The mean LOR of the group is 25.2 years (SD = 12.03). The amount of exposure to English (AEE) ranged from 0–77 hours per week on average. The mean AEE added up to 34 hours per week (SD = 23.55).

4.3 Materials

The Sranan and Dutch production tasks were comprised of 104 sentences in total. Each task contained 15 English loanwords starting with the target phoneme /g/, 15 English loanwords containing a /g/ in word-medial position, and 7 English loanwords with a /g/ in coda position. Fifteen arbitrary English loanwords were added as fillers. All the loans used in the experiments were taken from Koenen & Smits (1992), a publication in which the authors provide an overview of the English loanwords that are used in Dutch. The selected English loanwords are classified according to "phoneme position" in Appendix A. Subsequently, they are arranged based on "loanword type" in Appendix B. Considering the context of this thesis and the practical time span of its writing, I used a practical working definition of the distinction between direct and indirect loanword by categorizing each test item as a specific

⁷ Dutch here is the variety spoken in Surinam, i.e. Surinamese-Dutch.

loanword type on the basis of their pronunciation specified in the Standard Dutch $Van\ Dale$ dictionary (2005), rather than doing the undoable and tracing the history of each loanword used in my experiments. For example, words such as grip and golf, which the $Van\ Dale$ (2005) indicates are pronounced with a $[\gamma]$ in Dutch, were classified as indirect/integrated loanwords. Conversely, words such as goal and game, which are produced with a [g] according to $Van\ Dale$ (2005), were categorized as direct/on-line loanwords. The loanwords were incorporated in relatively short and simple sentences. Examples of each experimental condition are presented in (8) – (10). An example of a filler item is given in (11). A Sranan sentence is given first (SR), followed by a Dutch sentence (DU). The target word is underlined, and the English translation is written below each sentence in italics.

- (8) English loanword with word-initial /g/
- SR: James Bond abi wan nyun gadget. *James Bond has a new gadget.*
- DU: Mijn nieuwe telefoon heeft een leuke gadget.

 My new phone has a fun gadget.
- (9) English loanword with word-internal /g/
- SR: Mi lobi luku a kino <u>Bogus</u>. *I love watching the movie Bogus*.
- DU: Het verhaal dat ik op het nieuws heb gehoord is echt <u>bogus</u>. *The story I heard on the news is really bogus*.
- (10) English loanword with word-final /g/
- SR: Mi wagi abi wan <u>airbag</u>.

 My car has an airbag.
- DU: In nieuwe auto's is een <u>airbag</u> verplicht. *In new cars, an airbag is mandatory*.
- (11) Filler
- SR: Den <u>cowboy</u> e rei asi. *The cowboys are riding horses*.
- DU: Kevin kijkt vaak <u>cowboy</u> films. *Kevin often watches cowboy movies*.

In both experiments, the items were arranged in two pseudo-randomized orders, order A and reverse order B. This was done to control for any ordering effects. The items were sequenced in 7 sets of 4 and 8 sets of 3 because there were only 7 test items with word-final /g/. For the Sranan sentences, Order A was composed as follows:

7x Set 1: filler – initial $\frac{g}{-}$ internal $\frac{g}{-}$ final $\frac{g}{-}$

8x Set 2: filler – initial /g/ – internal /g/.

The corresponding order B was reversed for the Dutch sentences. In other words, it began with 8 sets of 3 and ended with 7 sets of 4.

All Sranan target sentences follow the spelling rules of the Sranan-Dutch dictionary created by Pinas et al. (2007) and are presented in Appendix C. The Dutch test sentences are listed in Appendix D.

4.4 Procedure

The subjects received a set of three sheets of paper. Page one contained the Sranan test items and page two listed the Dutch target sentences. The questionnaire was presented on page three. As discussed in section 4.3, the items were sorted in two pseudo-randomized orders. The material was distributed in such a way that two subsequent subjects did not get the same order. Thus, half of the subjects received Sranan order A and Dutch order B, and the other half were given Sranan order B and Dutch order A. Subjects were presented with the Sranan test sentences first and the Dutch target items second. Since the sentences were presented in written form, which differs from Sranan spoken language, subjects were explicitly instructed to produce the sentences as they would during discourse. In addition, they were told that each sentence contained one English word in order to avoid confusion about any unknown words. All instructions were given in Dutch. A liberal translation of the instructions is provided in (12).

(12) First, read each sentence carefully and silently to yourself. If you are done, say the sentence aloud and pronounce it as you would when speaking to another Sranan speaker. Mind that every sentence contains one English word.

Finally, subjects were asked to fill in the questionnaire on the last page.

The sessions took place at various locations, in a quiet and isolated room. For both production tasks, the experimenter had an answer sheet which was used to register the perceived pronunciation of each loanword (see Appendix G and H). Aside from the target items drug and drugstore (see section 5 below), the perception of the speech sounds by ear alone was not difficult because the phonemes g/g, k and k differ enough from one another.

Unfortunately, for the same reason, it was decided beforehand that recording of the sessions was not necessary. In hindsight, this was a mistake, since the recordings would have made it possible to listen to the production of the test items again. This would have been especially useful for the two loanwords whose perception proved to be troublesome.

5. Results

The data will be analyzed quantitatively based on the group results. First we consider the data from experiment 1, the Sranan experimental condition. Recall that in this experiment the English loanwords were embedded in short Sranan sentences, with the aim to examine the pronunciation of the voiced velar plosive /g/ in three different word positions and two different loanword types, namely, "direct" and "indirect". Subsequently, I describe the results from experiment 2, the Dutch experimental condition. Recall that in this experiment the same set of English loanwords were incorporated in Dutch sentences, with the intention to observe the pronunciation of the target phoneme /g/ in three different word positions and two different loanword types, namely, "on-line" and "integrated". Finally, the data from both experiments are compared with each other.

For the "phoneme position" variable, the results were calculated by dividing the occurrence of [g], [k], and $[\gamma]$ by the total number of possible occurrences in each category. The data for the "loanword type" variable were obtained by calculating the occurrence of [g], [k], and $[\gamma]$ in percentages for the total amount of loans in the "direct" and "indirect" category separately.

Before moving on to the results, it has to be mentioned that the test items *drugstore* in the 'word-internal' category and *drug* in the 'word-final' category had to be excluded from the analysis. An unambiguous pronunciation of the former was difficult to perceive by ear alone. The latter was transformed by some of the subjects into its English plural form, that is, *drugs*, presumably, because this is the more likely everyday form of the word. In both cases, the experimenter could not make a categorical decision regarding the target phoneme's pronunciation as [g], [k], or [γ]. Consequently, the analysis was performed with 35 test items in total, instead of the original 37.

5.1 Experiment 1: Sranan

In this section, I present the data from the Sranan experimental condition. The group results for the within-subjects variable "phoneme position" in the Sranan sentences are presented in Table 3. In the "word-initial" category, nearly 95% of the English loans were pronounced

with a [g], while the remaining 5% were produced with a [γ]. Approximately 60% of the loans in the "word-internal" class were realized with a [g], whereas almost one third of the loanwords were articulated with a [γ]. In 43.33% of the cases in the "word-final" category, final devoicing occurred. That is to say, roughly 45% of the words in this class were pronounced with a [k]. In contrast, 30.83% and a little over 25% of the English loanwords in this category were produced with a [g] and a [γ], respectively.

Category	Frequency [g]	SD	Frequency [k]	SD	Frequency [y]	SD
	(%)		(%)		(%)	
Word-initial	94.67	2.28	-	-	5.33	2.28
Word-internal	60.67	8.02	-	-	32.67	8.02
Word-final	30.83	5.53	43.33	5.50	25.83	5.85

Table 3. The frequency of [g], [k], and [y] in Sranan in percentages, with the standard deviation.

Next, let us look at the group data for the within-subjects variable "loanword type" in Sranan. These results are displayed in Fig. 2 below. As Fig. 2 shows, well over 90% of the "direct" loanwords were produced with a [g] in Sranan, whereas only around 3% of the test items in this class were pronounced with a [γ]. Approximately 10% of the "direct" loans were articulated with a [k] as a result of final devoicing. Somewhat more than half of the "indirect" English loanwords were realized with a [g] in Sranan, while 44% were pronounced with a [γ]. In addition, final devoicing occurred in 5% of the cases in this category.

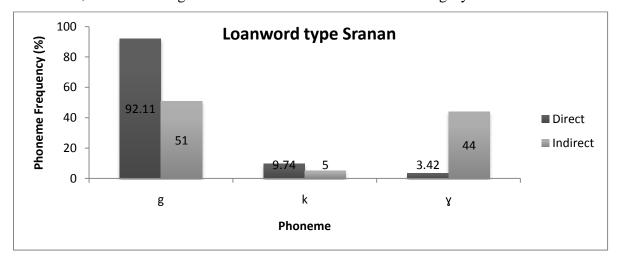


Fig. 2 Group results in Sranan in percentages according to "loanword type".

5.2 Experiment 2: Dutch

This section provides an account of the results obtained from the Dutch experimental condition. The group data regarding the within-subjects variable "phoneme position" in Dutch

are summarized in Table 4. As this table indicates, around 80% of the English loanwords in the "word-initial" category were produced with a [g], whereas 19.67% of the loans were realized with a [γ]. The frequency of [g] and [γ] in the "word-internal" group equaled 53.67% and 39.67%, respectively. In almost 50% of the instances, the phoneme /g/ in word-final position was devoiced and pronounced as [k]. Conversely, in nearly 13% of the cases, the target phoneme [g] remained voiced in coda position. Around 40% of the English loanwords in the "word-final" category were produced with a [γ].

Category	Frequency [g] (%)	SD	Frequency [k]	SD	Frequency [ɣ]	SD
Word-initial	80.33	6.45	-	-	19.67	6.45
Word-internal	53.67	9.46	-	-	39.67	9.46
Word-final	12.50	2.59	49.17	4.79	38.33	6.41

Table 4. The frequency of [g], [k], and [γ] in Dutch in percentages, with the standard deviation.

Turning to the group results for the within-subjects variable "loanword type" in Dutch, we can see in Fig. 3 below that approximately 90% of the on-line English loanwords were pronounced with a [g], while merely 5% of the loans in this category were produced with a [γ]. Twenty-four percent of the test items in the "integrated" loanword group were realized with a [g], whereas almost 70% of the loans in this class were pronounced with a [γ]. Final devoicing occurred in 7.67% and 9.47% of the cases in the categories "integrated" and "online" loanwords, respectively.

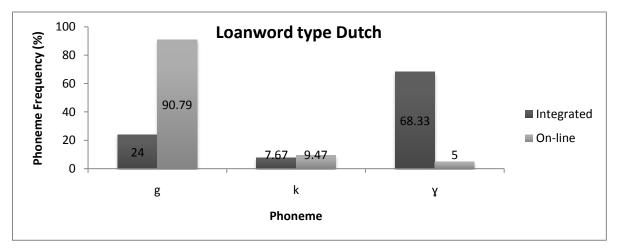


Fig. 3 Group results in Dutch in percentages according to "loanword type".

5.3 Sranan and Dutch Compared

The group results of experiments 1 and 2 are compared with each other in Fig. 4-6. As Fig. 4 shows, the use of [g] in word onset position in English loanwords was common in both Sranan and Dutch. However, with 94.67%, the frequency of [g] in Sranan was higher, compared to 80.33% in Dutch. Conversely, in the Dutch experimental condition, the occurrence of [γ] in word-initial position was much higher than in Sranan: nearly 20%, as opposed to 5.33% in the Sranan experimental condition.

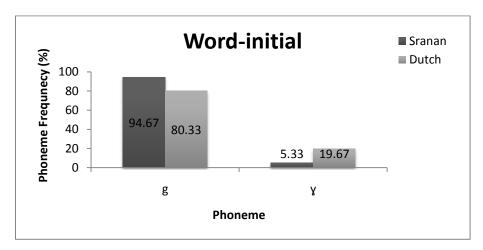


Fig. 4 Group results of "word-initial" category in Sranan and Dutch in percentages.

Fig. 5 indicates that the occurrence of [g] and [γ] in loanwords belonging to the "word-internal" category was almost equal in Sranan and Dutch. Although once again, the use of [g] was more frequent in Sranan than in Dutch, 60.67% and 53.67%, respectively. In Dutch, the selected English loans in this class were more often pronounced with a [γ] in comparison with Sranan: 39.67% versus 32.67%.

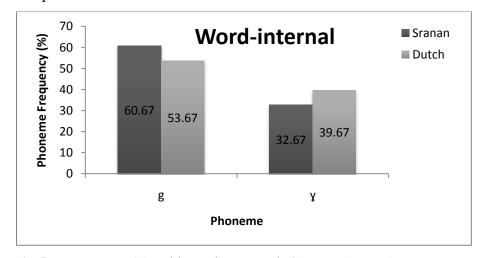


Fig. 5 Group results of "word-internal" category in Sranan and Dutch in percentages.

As is evident from Fig. 6, the target phoneme /g/ was most often pronounced as [k] in English loanwords with the velar consonant in coda position. Final devoicing occurred in Sranan in 43.33% of the cases and in 49.17% of the instances in Dutch. Nearly one third of the test items in the "word-final" category were produced with a [g] in Sranan, compared to 12.50% in Dutch. The use of [χ] in this class of loans was more frequent in Dutch than in Sranan, 38.33% versus 25.83%, as was the case in the other categories.

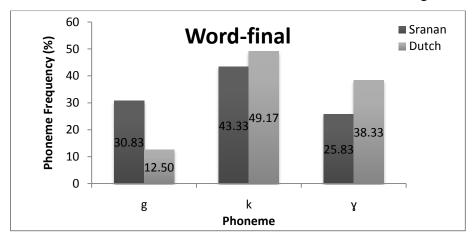


Fig. 6 Group results of "word-final" category in Sranan and Dutch in percentages.

6. Discussion

6.1 Experiment 1: Sranan

It was claimed in section 3 that the pronunciation of the target phoneme /g/ in English loanwords in Sranan relies on two factors, namely, *phoneme position* and *loanword type*. The former was said to distinguish between the different locations of the target phoneme in the loanword: word-initial, word-internal, and word-final. The latter, on the other hand, was said to differentiate between directly and indirectly imported loans.

The data obtained in experiment 1 largely support the predictions made by H1. That is to say, directly imported English loanwords with /g/ in the word onset or in word-medial position were predominantly produced with the voiced velar stop consonant [g] in Sranan, as predicted. What is more, the target phoneme /g/ was devoiced in Sranan in word-final position in the majority of the test sentences. The second prediction, however, was not borne out because a little over 50% of the English loans in the "indirect" category were pronounced with a [g] in Sranan. Although still a considerable portion of the test items (44%) were produced with the velar fricative [γ]. This unexpected outcome could be due to erroneous categorization of the loanwords. As was stated in section 3, the import source of the loanword, direct or indirect, cannot be determined with absolute certainty. In this study, the

choice was made to use the pronunciation specified in the Standard Dutch Van Dale dictionary (2005). Another possibility is that the high occurrence of [g] in test items classified as "indirect" loans was the result of their pronunciation in Surinamese-Dutch. Recall that all subjects speak this variety of Dutch. Even though these loans could have been indirectly imported from Dutch, personal experience has shown that certain English loans starting with /g/ such as graffiti and grizzly are pronounced with the velar stop consonant [g] instead of the velar fricative [y] in Surinamese-Dutch, in contrast to Standard Dutch. The results underpin the latter interpretation. In both Sranan and Dutch, grizzly was articulated with a [g] by all subjects (20/20), and graffiti was pronounced with a [g] by virtually all participants (19/20). The latter explanation is also supported by the psycholinguistic model of loanword adjustment proposed by Peperkamp & Dupoux (2001). With respect to production, they claim that a phonological encoding module exists which connects the phonological deep structure of words with their surface realizations. In addition, a phonetic encoding module transforms the surface realizations into phonetic information, which in turn allows for the production of a word. Peperkamp & Dupoux (2001: 9) assert that "production assimilations are phonologically based regularizations that arise gradually through several generations. They apply to all underlying forms alike, i.e. both native forms and foreign forms that are legalized through perception". Thus, according to this theory, English loanwords such as grizzly and graffiti were passed on through the generations unaltered in Surinamese-Dutch, which is why they are realized with a [g] in this variety of Dutch, instead of the [y], which is used in Standard Dutch. However, in order to provide a more conclusive explanation the Dutch experiment would have to be repeated with a group of Standard Dutch native speakers acting as a control group.

6.2 Experiment 2: Dutch

The two factors that were presumed to determine the pronunciation of /g/ in Dutch were *loanword type*, distinguishing "integrated" and "on-line" loanwords, and *phoneme position*. All three predictions generated by H2 proved to be true. As expected, most of the test items in the "integrated" category were realized with the velar fricative $[\gamma]$. Additionally, in accordance with P5, the vast majority of the "on-line" loans were pronounced with a [g]. Final devoicing also occurred, as predicted, in most of the loans with /g/ in coda position. However, the velar fricative $[\gamma]$ was frequently used as well, which is a common adjustment made in Dutch regarding these kinds of loanwords. The English loans *blog* and *plug*, in particular, were pronounced as $[blo\gamma]$ and $[plu\gamma]$ in 10/20 and 18/20 times, respectively.

Behavior that is well-known for bilinguals and that was also mentioned by several of the subjects in this study is the adaptation of speech during discourse depending on the addressee (Grosjean, 2004: 40-43). For instance, loanwords such as *golf* and *grip* were produced in Dutch with a $[\gamma]$ by 15/20 and 10/20 subjects, respectively. However, many of the participants stated that their pronunciation would normally differ in favor of [g], if their conversational partner was Surinamese. This presents further evidence for the second interpretation of the results regarding "indirect" loanwords in Sranan mentioned above.

6.3 Sranan and Dutch Compared

As the data show, the use of [g] in English loanwords with the target phoneme in word-initial position was common in Sranan as well as in Dutch. There was not a very large difference between Sranan and Dutch in the pronunciation of the test items in the "word-internal" category. However, in Sranan, subjects preferred [g] over [y], while subjects favored [y] a little more than [g] in Dutch. Noticeably, one of the exceptions in this category is the English word *burger*. Twelve out of 20 subjects pronounced this word in Sranan as [burgər], and 16/20 subjects produced it in Dutch as [buryər]. Similarly, in the "word-initial" group, the English loan *grill* was realized as [gril] 14/20 times in Sranan, but as [yril] 14/20 times in Dutch. These deviating results might have come about due to the arbitrariness of the choice between two possible phonetic realizations of one particular lexical item in a language. The subjects might have simply opted for the realization that is most 'natural' or common in each respective language considering their phonological system, that is to say, the use of [g] in Sranan versus [y] in Dutch.

As predicted, /g/ was devoiced in a majority of the loans in the "word-final" category in Sranan and Dutch. The relatively high percentage of [g] in this class of loanwords in Sranan is in large part due to the pronunciation of the test item *gig*. This was the only English loan that occurred in a Sranan sentence in which it was followed by a word starting with a vowel. As discussed in section 1.4, voicing is usually maintained in such cases. Surprisingly, the word *gig* was produced as [gɪk] in Dutch 14/20 times, contrary to expectations kindled by its realization as [γɪx] described in the Standard Dutch *Van Dale* dictionary (2005). Perhaps this is also one of the words whose pronunciation varies depending on the variety of Dutch in which it occurs (recall the case of *graffiti* and *grizzly* discussed in section 6.1).

Since the sentences were presented in written form, spelling may also have affected the pronunciation of the loanwords that were unfamiliar to the participants. Five of the 37 English loans, namely, *bogus*, *gig*, *gravel*, *blog*, and *bug* were reported as "unknown" by

several subjects. Interestingly, these subjects generally tended to pronounce the unknown loanwords both in Sranan and Dutch with the velar fricative [γ]. In the Sranan experiment, these participants probably relied on Dutch orthography (consciously perceived and used as such) and not on linguistic instinct, otherwise they would have preferred [g] in Sranan instead of [γ]. Evidence for orthographic influence on the adaptation of loanwords comes from Vendelin & Peperkamp (2006). They studied the production of English vowels by French-English bilingual speakers. The authors provided 50% of the test items orally and 50% in written as well as spoken form. They observed that the results varied based on the presentation of the stimuli. The vowels presented in loanwords that were provided orally and graphically reflected the French pronunciation more frequently than when they were only provided verbally, demonstrating, in the words of the authors, "the sensitivity of loanword adaptations to the presence versus absence of a written representation" (Vendelin & Peperkamp, 2006: 996) .

7. Conclusion

In the Introduction to this thesis, I formulated my aim as an attempt to find the answers to two research questions:

- a) How does Dutch affect the pronunciation of /g/ in English loanwords in Sranan speech?
- b) Is there a difference in pronunciation between word-initial, word-internal, and word-final position of the /g/ in English loanwords?

Two production experiments were run in parallel to discover the answers to these questions.

For the Sranan experimental condition, the claim was that the realization of the voiced velar stop consonant /g/ would be affected by the position of the target phoneme in the English loan and by the source of the loanword. Nearly all predictions of this experimental hypothesis were borne out. In directly imported English loanwords with a /g/ in the onset or word-medially, the target phoneme remained unchanged in Sranan (e.g. *goal*, *trigger*). English loans containing a /g/ in coda position were devoiced and, for the most part, pronounced with a [k] in Sranan (e.g. *bull dog*, *airbag*). The category of indirectly imported English loanwords presented some surprising data. Around half of the items in this class were realized with a [g], instead of the expected velar fricative [γ] (e.g. *grill*, *grip*).

It was also proposed that, in Dutch, the pronunciation of the target phoneme /g/ was dependent on whether or not the English loan was already incorporated into the Dutch phonological system, as well as on phoneme position. In the Dutch experiment, the

Surinamese subjects performed as predicted. English loanwords in the "integrated" category were predominantly realized with a [γ]in their Dutch (e.g. *glitter*, *megabyte*). Final devoicing occurred in word-final position (e.g. *airbag*), and "on-line" English loanwords with /g/ in word-medial or word-initial position were pronounced most often with a [g] (e.g. *airbag*, *global*, *buggy*).

To conclude, the realization of the voiced velar stop consonant /g/ in English loanwords in Sranan spoken language seems to be influenced both by the source of the loan as well as the location of the phoneme in the loanword. For loans that are imported directly from English, Sranan speakers exhibit a preference for [g]. In contrast, "indirect" English loanwords imported from Dutch tend to be pronounced with the voiced velar fricative [γ]. Taking possible orthographic effects into account, a replication of this study with an additional control group of native speakers of Standard Dutch should yield interesting results.

Experience with loanwords has taught us that foreign speech sounds are adapted to the native phoneme inventory by replacing the foreign input with the closest representation present in the native system. The minimal amount of alterations are made to the input in order to get the optimal output (Yip, 1993). What we have seen in this study is that current English loanwords containing the voiced velar plosive /g/ that have been directly imported into Sranan are indeed pronounced with a [g]. Sranan speakers are able to do this simply because this phoneme is part of the consonant inventory of Sranan. However, English loanwords containing the velar stop consonant /g/ that have been integrated into Dutch and have undergone a change of this sound to [y], in accordance with the psycholinguistic model of loanword adaptation advanced by Peperkamp & Dupoux (2001), and are subsequently imported into Sranan language use, are treated as Dutch loans and are produced with the voiced velar fricative [y]. This occurs even though this speech sound is not present in the native phonological system of Sranan. An interpretation of this phenomenon as Dutch-Sranan lexical code switching, something that is very common for Dutch-Sranan bilinguals, seems reasonable, or, perhaps, Dutch-English-Surinamese colonial history is repeating itself on a linguistic battlefield.

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APPENDIX A. Tokens Categorized According to Phoneme Position

15 English loanwords with word-initial /g/

gadget golf** gift shop game graffiti** goal gate gravel glitter* grapefruit grill* Greenpeace global grip** grizzly**

15 English loanwords with word-internal /g/

bogus burger* background reggae drugstore buggy bodyguard logo* megabyte* single login* pentagon* trigger rugby** legging

7 English loanwords with word-final /g/

airbag plug*
blog* gig*
bug
bull dog
drug

15 Fillers

cowboy finish manager club flyer meeting coach jackpot royalty event link service fan cruise show

APPENDIX B. Tokens Categorized According to Loanword Type

15 English loanwords: Indirect/Integrated

golf**	grizzly**	megabyte*
graffiti**	burger*	pentagon*
grill*	logo*	blog*
grip**	login*	plug*
glitter*	rugby**	gig*

^{*} According to the Standard Dutch *Van Dale* dictionary (2005), these words are pronounced with a $[\gamma]$ in Dutch.

22 English loanwords: Direct/On-line

gadget bodyguard single game trigger gate drugstore grapefruit background global gravel buggy gift shop legging airbag goal Greenpeace bug bull dog bogus reggae drug

^{**}According to the Standard Dutch *Van Dale* dictionary (2005), these words are generally pronounced with a [y] in Dutch, although a [g] is also possible.

APPENDIX C. Sranan Sentences

Test Sentences

15 English loanwords with word-initial /g/

1. Gadget

James Bond abi wan nyun gadget.

James Bond has a new gadget.

2. Game

Jason e prei wan game.

Jason is playing a game.

3. Gate

Sanderij abi feifi gate.

Sanderij has five gates.

4. Grapefruit

Mi lobi nyan grapefruit.

I love eating grapefruit.

5. Global

Pina na wan global problema.

Poverty is a global problem.

6. Golf

Tiger Woods kan prei golf falek bun.

Tiger Woods can play golf really well.

7. Graffiti

A tafra abi graffiti na en tapu.

The table has graffiti on it.

8. Gravel

Williams e prei tennis tapu gravel.

Williams plays tennis on gravel.

9. Grill

Mi pa lobi grill meti.

My father loves to grill meat.

10. Grip

Den nyun banti abi wan bun grip.

The new tires have a good grip.

11. Gift shop

Justin bai wan kado na wan gift shop.

Justin bought a present at a gift shop.

12. Goal

Seedorf meki wan goal.

Seedorf made a goal.

13. Glitter

Dora abi glitter tapu en fesi.

Dora has glitter on her face.

14. Greenpeace

Mi wan tron memre fu Greenpeace.

I want to become a member of Greenpeace.

15. Grizzly (bear)

Glen sji wan grizzly in a busi.

Glen saw a grizzly in the woods.

15 English loanwords with word-internal /g/

1. Bogus

Mi lobi luku a kino Bogus.

I love watching the movie Bogus.

2. Reggae

Bob Marley ben meki Reggae.

Bob Marley made Reggae.

3. Bodyguard

Sharon luku a kino Bodyguard dri lesi.

Sharon watched the movie Bodyguard three times.

4. Single

Mi omu de single ete.

My uncle is still single.

5. Trigger

Pus a trigger.

Push the trigger.

6. Burger

Mi bai wan burger tide.

I bought a burger today.

7. Drugstore

Debby o go na drugstore tamara.

Debby is going to the drugstore tomorrow.

8. Logo

Mi musu meki wan <u>logo</u> gi mi wroko.

I have to make a logo for work.

9. Login

Mi abi mi login nen fa nodu.

I need my login name.

10. Rugby

Jason no sabi prei rugby.

Jason doesn't know how to play rugby.

11. Background

A prenki abi wan moi background.

That picture has a beautiful background.

12. Buggy

A buggy owru.

That buggy is old.

13. Megabyte

A singi na tu megabyte.

That song is two megabyte.

14. Pentagon

A Pentagon de in Amerkankondre.

The Pentagon is in the USA.

15. Legging

Mi ma bi wan redi legging.

My mother bought a legging.

7 English loanwords with word-final /g/

1. Airbag

Mi wagi abi wan airbag.

My car has an airbag.

2. Blog

Nancy abi wan eigi blog.

Nancy has her own blog.

3. Bug

A computer abi wan bug.

The computer has abug.

4. Bull dog

Mi pa lobi en bull dog.

My father loves his bull dog.

5. Drug

Marihuana na wan drug.

Marijuana is a drug.

6. Plug

Mi abi wan <u>plug</u> fanowdu.

I need a plug.

7. Gig

Delano ben abi wan gig esde.

Delano had a gig yesterday.

15 Fillers

1. Cowboy

Den cowboy e rei asi.

The cowboys are riding horses.

2. Club

Danny o bai wan club.

Danny is going to buy a club.

3. Coach

Mi pa na wan coach.

My father is a coach.

4. Event

Mi brada mus go na wan event tamara.

My brother has to go to an event tomorrow.

5. Fan

Tom na wan fan fu Michael Jackson.

Tom is a fan of Michael Jackson.

6. Finish

Mi no sji a finish.

I didn't see the finish.

7. Flyer

RET gi mi wan flyer.

RET gave me a flyer.

8. Jackpot

Mi ma wan wini a jackpot.

My mother wants to win the jackpot.

9. Link

Yu no seni mi a <u>link</u>.

You didn't send me the link.

10. Cruise

Noiti mi go tapu wan <u>cruise</u>. *I have never been on a cruise*.

11. Manager

Mi mati na wan <u>manager</u>. *My friend is a manager*.

12. Meeting

Kenneth ben abi wan <u>meeting</u> esde. *Kenneth had a meeting yesterday.*

13. Royalty

Sranan no abi <u>royalty.</u>
Surinam doesn't have royalty.

14. Service

Mi mati gi mi wan bun <u>service</u>.

My friend gave me a good service.

15. Show

Ala dei mi e luku wan <u>show</u>. *Every day, I watch a show.*

APPENDIX D. Dutch Sentences

Test Sentences

15 English loanwords with word-initial /g/

1. Gadget

Mijn nieuwe telefoon heeft een leuke gadget.

My new phone has a fun gadget.

2. Game

Peter heeft een dure game gekocht.

Peter bought an expensive game.

3. Gate

De vliegtuigen naar Suriname vertrekken meestal van gate veertien.

The airplanes going to Surinam usually depart from gate fourteen.

4. Grapefruit

Marijke vindt grapefruit lekker.

Marijke likes grapefruit.

5. Global

Global warming is een groot probleem.

Global warming is a big problem.

6. Golf*

Mijn vader speelt vaak golf.

My father often plays golf.

7. Graffiti*

Iemand heeft graffiti gespoten op de deur.

Someone sprayed graffiti on the door.

8. Gravel*

Tennis kun je op gravel spelen.

Tennis can be played on gravel.

9. Grill*

Jamie Oliver gebruikt vaak een grill als hij kookt.

Jamie Oliver often uses a grill when he cooks.

10. Grip*

Fietshandschoenen geven je meer grip om het stuur vast te houden.

Bike gloves give you more grip to hold the handlebars.

11. Gift shop*

Natasha heeft pafrum gekocht in een gift shop.

Natasha bought perfume at a gift shop.

12. Goal

Kluivert heeft een goal gemaakt.

Kluivert made a goal.

13. Glitter*

Het meisje heeft glitter op haar handen.

The girl has glitter on her hands.

14. Greenpeace

Lisa is lid van Greenpeace.

Lisa is a member of Greenpeace.

15. Grizzly (bear)*

Ik heb nog nooit een grizzlybeer gezien.

I have never seen a grizzly bear.

15 English loanwords with word-internal /g/

1. Bogus

Het verhaal dat ik op het nieuws heb gehoord is echt bogus.

The story I heard on the news was really bogus.

2. Reggae

Brian luistert vaak naar Reggae muziek.

Brian often listens to Reggae music.

3. Bodyguard

De president heeft altijd een bodyguard bij zich.

The president always has a bodyguard with him.

4. Single

Mark is nog single.

Mark is still single.

5. Trigger

Een val heeft altijd een trigger nodig.

A trap always needs a trigger.

6. Burger

Ik heb gister een burger gegeten.

I ate a burger yesterday.

7. Drugstore

Etos is een drugstore.

Etos is a drugstore.

8. Logo

Mercedes heeft een mooi logo.

Mercedes has a beautiful logo.

9. Login

Mijn moeder vergeet vaak haar login informatie.

My mother often forgets her login information.

10. Rugby

Hij speelt <u>rugby</u> sinds hij klein was.

He has been playing rugby since he was little.

11. Background

Ik heb een mooie background op mijn telefoon.

I have a beautiful background on my phone.

12. **Buggy**

Ze heeft onlangs een nieuwe buggy gekocht.

She recently bought a new buggy.

13. Megabyte

Het document is tien megabyte groot.

The document is ten megabyte.

14. Pentagon

Het Pentagon is in de Verenigde Staten.

The Pentagon is in the United States.

15. Legging

In de winter draagt mijn moeder altijd een legging.

In winter, my mother always wears a legging.

7 English loanwords with word-final /g/

1. Airbag

In nieuwe auto's is een <u>airbag</u> verplicht.

In new cars, airbags are mandatory.

2. Blog*

Tommy heeft zijn eigen blog.

Tommy has his own blog.

3. Bug

Dat nieuwe spel heeft een bug.

That new game has a bug.

4. Bull dog

De buurvrouw heeft een bull dog.

The neighbor has a bull dog.

5. Drug

Wiet is een drug.

Cannibis is a drug.

6. Plug

Wim slaat een plug in de muur.

Wim is hitting a plug in the wall.

7. **Gig**

Ik had gisteren een gig.

I had a gig yesterday.

15 Fillers

1. Cowboy

Kevin kijkt vaak cowboy films.

Kevin often watches cowboy movies.

2. Club

Jessica gaat morgen met vriendinnen naar een club.

Jessica is going to a club tomorrow with her friends.

3. Coach

De coach heeft ons gezegd om harder te trainen.

The coach told us to train harder.

4. Event

Er was gisteren een belangrijk event op mijn werk.

There was an important event at my work yesterday.

5. Fan

Michael is fan van Beyoncé.

Michael is a fan of Beyoncé.

6. Finish

Het zwarte paard kwam als eerste over de finish.

The black horse crossed the finish first.

7. Flyer

Mijn zus heeft een flyer gekregen over de verkiezingen.

My sister got a flyer about the elections.

8. Jackpot

De buren hebben de jackpot gewonnen.

The neighbors have won the jackpot.

9. Link

De rechercheur kon geen <u>link</u> leggen tussen de twee slachtoffers.

The detective couldn't find a link between the two victims.

10. Cruise

Mijn tante is al vaak op een cruise geweest.

My aunt has already been on a cruise many times.

11. Manager

Sandra is manager bij een groot bedrijf.

Sandra is a manager at a big company.

12. Meeting

Peter heeft een belangrijke meeting morgen.

Peter has an important meeting tomorrow.

13. Royalty

Prinses Diana was royalty.

Prinses Diana was royalty.

14. Service

In vijfsterren hotels krijg je uitstekende service.

In five-star hotels, you get excellent service.

15. Show

Vanavond is mijn favoriete show op tv.

Tonight, my favorite show is on TV.

APPENDIX E. Order A Sranan

- 1. Den cowboy e rei asi.
- 2. James Bond abi wan nyun gadget.
- 3. Mi lobi luku a kino Bogus.
- 4. Mi wagi abi wan airbag.
- 5. Danny o bai wan club.
- 6. Jason e prei wan game.
- 7. Bob Marley ben meki Reggae.
- 8. Nancy abi wan eigi blog.
- 9. Mi pa na wan coach.
- 10. Sanderij abi feifi gate.
- 11. Sharon luku a kino Bodyguard dri lesi.
- 12. A computer abi wan bug.
- 13. Mi brada mus go na wan event tamara.
- 14. Mi lobi nyan grapefruit.
- 15. Mi omu de single ete.
- 16. Mi pa lobi en bull dog.
- 17. Tom na wan fan fu Michael Jackson.
- 18. Pina na wan global problema.
- 19. Pusu a trigger.
- 20. Marihuana na wan drug.
- 21. Mi no sji a finish.
- 22. Tiger Woods kan prei golf kfalek bun.
- 23. Mi bai wan burger tide.
- 24. Mi abi wan plug fanowdu.
- 25. RET gi mi wan flyer.
- 26. A tafra abi graffiti na en tapu.
- 27. Debby o go na drugstore tamara.
- 28. Delano ben abi wan gig esde.
- 29. Mi ma wan wini a jackpot.
- 30. Williams e prei tennis tapu gravel.
- 31. Mi musu meki wan logo gi mi wroko.
- 32. Yu no seni mi a link.
- 33. Mi pa lobi grill meti.
- 34. Mi abi mi login nen fanowdu.
- 35. Noiti mi go tapu wan cruise.
- 36. Den nyun banti abi wan bun grip.
- 37. Jason no sabi prei rugby.
- 38. Mi mati na wan manager.
- 39. Justin bai wan kado na wan gift shop.
- 40. A prenki abi wan moi background.
- 41. Kenneth ben abi wan meeting esde.
- 42. Seedorf meki wan goal.

- 43. A buggy owru.
- 44. Sranan no abi royalty.
- 45. Dora abi glitter tapu en fesi.
- 46. A singi na tu megabyte.
- 47. Mi mati gi mi wan bun service.
- 48. Mi wan tron memre fu Greenpeace.
- 49. A Pentagon de in Amerkankondre.
- 50. Ala dei mi e luku wan show.
- 51. Glen sji wan Grizzly in a busi.
- 52. Mi ma bai wan redi legging.

APPENDIX F. Order B Dutch

- 1. In de winter draagt mijn moeder altijd een legging.
- 2. Ik heb nog nooit een Grizzlybeer gezien.
- 3. Vanavond is mijn favoriete show op tv.
- 4. Het Pentagon is in de Verenigde Staten.
- 5. Lisa is lid van Greenpeace.
- 6. In vijfsterren hotels krijg je uitstekende service.
- 7. Het document is tien megabyte groot.
- 8. Het meisje heeft glitter op haar handen.
- 9. Prinses Diana was royalty.
- 10. Ze heeft onlangs een nieuwe buggy gekocht.
- 11. Kluivert heeft een goal gemaakt.
- 12. Peter heeft een belangrijke meeting morgen.
- 13. Ik heb een mooie background op mijn telefoon.
- 14. Natasha heeft parfum gekocht in een gift shop.
- 15. Sandra is manager bij een groot bedrijf.
- 16. Hij speelt rugby sinds hij klein was.
- 17. Fietshandschoenen geven je meer grip om het stuur vast te houden.
- 18. Mijn tante is al vaak op een cruise geweest.
- 19. Mijn moeder vergeet vaak haar login informatie.
- 20. Jamie Oliver gebruikt vaak een grill als hij kookt.
- 21. De rechercheur kon geen link leggen tussen de twee slachtoffers.
- 22. Mercedes heeft een mooi logo.
- 23. Tennis kun je op gravel spelen.
- 24. De buren hebben de jackpot gewonnen.
- 25. Ik had gisteren een gig.
- 26. Etos is een drugstore.
- 27. Iemand heeft graffiti gespoten op de deur.
- 28. Mijn zus heeft een flyer gekregen over de verkiezingen.
- 29. Wim slaat een plug in de muur.
- 30. Ik heb gister een burger gegeten.
- 31. Mijn vader speelt vaak golf.
- 32. Het zwarte paard kwam als eerste over de finish.
- 33. Wiet is een drug.
- 34. Een val heeft altijd een trigger nodig.
- 35. Global warming is een groot probleem.
- 36. Michael is fan van Beyoncé.
- 37. De buurvrouw heeft een bull dog.
- 38. Mark is nog single.
- 39. Marijke vindt grapefruit lekker.
- 40. Er was gisteren een belangrijk event op mijn werk.
- 41. Dat nieuwe spel heeft een bug.
- 42. De president heeft altijd een bodyguard bij zich.

- 43. De vliegtuigen naar Suriname vertrekken meestal van gate veertien.
- 44. De coach heeft ons gezegd om harder te trainen.
- 45. Tommy heeft zijn eigen blog.
- 46. Brian luistert vaak naar Reggae muziek.
- 47. Peter heeft een dure game gekocht.
- 48. Jessica gaat morgen met vriendinnen naar een club.
- 49. In nieuwe auto's is een airbag verplicht.
- 50. Het verhaal dat ik op het nieuws heb gehoord is echt bogus.
- 51. Mijn nieuwe telefoon heeft een leuke gadget.
- 52. Kevin kijkt vaak cowboy films.

APPENDIX G. Sranan Answer Sheet

	MITENDIA G. Stand	
1.	Den cowboy e rei asi.	
2.	James Bond abi wan nyun gadget.	/g/ - /x/
3.	Mi lobi luku a kino Bogus.	/g/ - /x/
4.	Mi wagi abi wan airbag.	/g/ - /x/ - /k/
5.	Danny o bai wan club.	
6.	Jason e prei wan game.	/g/ - /x/
7.	Bob Marley ben meki Reggae.	/g/ - /x/
8.	Nancy abi wan eigi blog.	/g/ - /x/ - /k/
9.	Mi pa na wan coach.	
10.	Sanderij abi feifi gate.	/g/ - /x/
11.	Sharon luku a kino Bodyguard dri lesi.	/g/ - /x/
12.	A computer abi wan bug.	/g/ - /x/ - /k/
13.	Mi brada musu go na wan event tamara.	
14.	Mi lobi nyan grapefruit.	/g/ - /x/
15.	Mi omu de single ete.	/g/ - /x/
16.	Mi pa lobi en bull dog.	/g/ - /x/ - /k/
17.	Tom na wan fan fu Michael Jackson.	
18.	Pina na wan global problema.	/g/ - /x/
	Pusu a trigger.	/g/ - /x/
20.	Marihuana na wan drug.	/g/ - /x/ - /k/
21.	Mi no sji a finish.	
22.	Tiger Woods kan prei golf kfalek bun.	/g/ - /x/
	Mi bai wan burger tide.	/g/ - /x/
	Mi abi wan plug fanowdu.	/g/ - /x/ - /k/
	RET gi mi wan flyer.	
	A tafra abi graffiti na en tapu.	/g/ - /x/
	Debby o go na drugstore tamara.	/g/ - /x/
	Delano ben abi wan gig esde.	/g/ - /x/ - /k/
	Mi ma wan wini a jackpot.	
	Williams e prei tennis tapu gravel.	/g/ - /x/
31.	Mi musu meki wan logo gi mi wroko.	/g/ - /x/
	Yu no seni mi a link.	
33.	Mi pa lobi grill meti.	/g/ - /x/
	Mi abi mi login nin fanwodu.	/g/ - /x/
	Noiti mi go tapu wan cruise.	
	Den nyun banti abi wan bun grip.	/g/ - /x/
37.	Jason no sabi prei rugby.	/g/ - /x/
	Mi mati na wan manager.	
39.	Justin bai wan kado na wan gift shop.	/g/ - /x/
	A prenki abi wan moi background.	/g/ - /x/
	Kenneth ben abi wan meeting esde	-
	Seedorf meki wan goal.	/g/ - /x/
	A buggy owru.	/g/ - /x/
		-

44. Sranan no abi royalty.	
45. Dora abi glitter tapu en fesi.	/g/ - /x/
46. A singi na tu megabyte.	/g/ - /x/
47. Mi mati gi mi wan bun service.	
48. Mi wan tron memre fu Greenpeace.	/g/ - /x/
49. A Pentagon de in Amerkankondre.	/g/ - $/x/$
50. Ala dei mi e luku wan show.	
51. Glen sji wan Grizzly in a busi.	/g/ - /x/
52. Mi ma bai wan redi legging.	/g/ - /x/

APPENDIX H. Dutch Answer Sheet

1.	In de winter draagt mijn moeder altijd een <u>legging</u> .	/g/ - /x/	
2.	Ik heb nog nooit een <u>Grizzly</u> beer gezien.	/g/ - /x/	
3.	Vanavond is mijn favoriete show op tv.		
	Het <u>Pentagon</u> is in de Verenigde Staten.	/g/ - /x/	
	Lisa is lid van Greenpeace.	/g/ - /x/	
6.	In vijfsterren hotels krijg je uitstekende <u>service</u> .		
7.	Het document is tien <u>megabyte</u> groot.	/g/ - /x/	
8.	Het meisje heeft glitter op haar handen.	/g/ - /x/	
	Prinses Diana was <u>royalty</u> .		
10.	Ze heeft onlangs een nieuwe <u>buggy</u> gekocht.	/g/ - /x/	
11.	Kluivert heeft een goal gemaakt.	/g/ - /x/	
12.	Peter heeft een belangrijke <u>meeting</u> morgen.		
13.	Ik heb een mooie <u>background</u> op mijn telefoon.	/g/ - /x/	
14.	Natasha heeft pafrum gekocht in een gift shop.	/g/ - /x/	
15.	Sandra is <u>manager</u> bij een groot bedrijf.		
16.	Hij speelt <u>rugby</u> sinds hij klein was.	/g/ - /x/	
17.	Fietshandschoenen geven je meer grip om het stuur vast t	e houden.	/g/ - /x/
18.	Mijn tante is al vaak op een <u>cruise</u> geweest.		_
19.	Mijn moeder vergeet vaak haar <u>login</u> informatie.	/g/ - /x/	
	Jamie Oliver gebruikt vaak een grill als hij kookt.	/g/ - /x/	
21. De rechercheur kon geen <u>link</u> leggen tussen de twee slachtoffers			
22.	Mercedes heeft een mooi <u>logo</u> .	/g/ - /x/	
23.	Tennis kun je op gravel spelen.	/g/ - /x/	
24.	De buren hebben de jackpot gewonnen.		
25.	Ik had gisteren een gig.	/g/ - /x/ - /k/	
26.	Etos is een <u>drugstore</u> .	/g/ - /x/	
27.	Iemand heeft graffiti gespoten op de deur.	/g/ - /x/	
28.	Mijn zus heeft een flyer gekregen over de verkiezingen.		
29.	Wim slaat een <u>plug</u> in de muur.	/g/ - /x/ - /k/	
30.	Ik heb gister een <u>burger</u> gegeten.	/g/ - /x/	
31.	Mijn vader speelt vaak golf.	/g/ - /x/	
32.	Het zwarte paard kwam als eerste over de <u>finish</u> .		
33.	Wiet is een <u>drug</u> .	/g/ - /x/ - /k/	
34.	Een val heeft altijd een <u>trigger</u> nodig.	/g/ - /x/	
35.	Global warming is een groot probleem.	/g/ - /x/	
36.	Michael is <u>fan</u> van Beyoncé.		
37.	De buurvrouw heeft een <u>bull dog</u> .	/g/ - /x/ - /k/	
38.	Mark is nog <u>single</u> .	/g/ - /x/	
39.	Marijke vindt grapefruit lekker.	/g/ - /x/	
40.	Er was gisteren een belangrijk event op mijn werk.		
41.	Dat nieuwe spel heeft een <u>bug</u> .	/g/ - /x/-/k/	
42.	De president heeft altijd een bodyguard bij zich.	/g/ - /x/	

43. De vliegtuigen naar Suriname vertrekken meestal van gate veertien.	/g/ - /x/
44. De <u>coach</u> heeft ons gezegd om harder te trainen.	
45. Tommy heeft zijn eigen <u>blog</u> .	/g/ - /x/ - /k/
46. Brian luistert vaak naar Reggae muziek.	/g/ - /x/
47. Peter heeft een dure game gekocht.	/g/ - /x/
48. Jessica gaat morgen met vriendinnen naar een <u>club</u> .	
49. In nieuwe auto's is een <u>airbag</u> verplicht.	/g/ - /x/ - /k/
50. Het verhaal dat ik op het nieuws heb gehoord is echt bogus.	/g/ - /x/
51. Mijn nieuwe telefoon heeft een leuke gadget.	/g/ - /x/
52. Kevin kijkt vaak cowboy films.	

APPENDIX I. Questionnaire

Geslacht (Gender): m/v*
Leeftijd (Age):
Afkomst (Descent):
Moedertaal/-talen (Native languages):
Gebruik Nederlands (<i>Use Dutch</i>): • Actief – passief** (<i>Active-passive</i>) • Dagelijks – wekelijks – maandelijks - jaarlijks* (<i>Daily-monthly-weekly-yearly</i>)
Gebruik Sranan Tongo (<i>Use Sranan</i>): • Actief – passief** • Dagelijks – wekelijks – maandelijks jaarlijks*
Gebruik andere talen (<i>Use other languages</i>):
Blootstelling aan Engels (gemiddeld aantal uren/week): Exposure to English (average number of hours/week):
TV:
Internet:
Werk (Work):
Muziek (Music):
Anders (Other),
Lengte verblijf in Nederland (jr): (Length of residence in the Netherlands)

^{*}Streep door wat niet van toepassing is. (Strike through what is not applicable)

^{**} Actief = spreken & verstaan (Active = production & comprehension)

Passief = alleen verstaan (Passive = only comprehension)