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ADAPTATION OF POLYMORPHEMIC LOANWORDS

The case of words ending in *-asi* in Indonesian*

1. Introduction

This article deals with the grammatical interference of loanwords which are polymorphemic in the source language. It will be shown how new morphological rules may be developed as a consequence of the awareness of the polymorphemic character of these words in the source language on the part of bilinguals, combined with the fact that in some cases a polymorphemic word and its monomorphemic counterpart are both transferred into the recipient language, a fact which enables even monolinguals to analyse the polymorphemic word.

In particular, this article deals with the phonology and morphology of loanwords in Indonesian, especially of those loans which in the source languages, Dutch and English, belong to the Romance lexicon. I am restricting myself to the Indonesian words ending in *-asi*, inspired by Takdir. He observes that after the end of the Japanese occupation in 1945, everybody in Indonesia spoke of *proklamasi kemerdekaan* 'the proclamation of independence', and also that the Dutch verb *proclameren* 'to proclaim' has been adapted in Indonesian as *memproklamlirkan*. The acceptance of both words, *proklamasi* and *proklamir*, 'will make the Indonesian language needlessly complicated and difficult' (Takdir 1976:89). For the borrowing of the noun *proklamasi* from Dutch *proclamatie* in accordance with the morphological rules of Indonesian would lead to creation of the verb *memproklamasikan*, and the borrowing of the verb *proklamir* would give rise to the noun *pemproklamiran* 'proclamation'.

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The data for this paper have been taken from Grijns, De Vries and Santa Maria (1983), whose list of loanwords is based on existing dictionaries and some private lists. Because in most cases it is unknown according to what criteria the data have been selected for the dictionaries, there will be some uncertainty in the conclusions which we will draw from them. Moreover, we have to keep in mind that the Indonesian standard language represents a vague, ideal norm which has to be aspired to rather than a set of concrete rules which can be deduced from the speech of a specific group of users. Often it is difficult to determine whether a particular foreign element has been accepted as standard usage, or is only characteristic of some individual or group of individuals.

I shall discuss in succession the adoption of words ending in *-asi*, both phonologically and morphologically, the developing awareness of their internal structure in some cases, the productivity of a new morphological rule by reference to the suffix *-isasi*, and its place in the Indonesian lexical morphological system.

2. *Adaptation*

An affix is seldom transferred direct from one language to another as a separate unit (Weinreich 1974⁸:31-32). borrowed elements mostly have the status of words: they are autonomous signs, uniting a particular form with an independent meaning. A polymorphemic word in the source language in general becomes monomorphemic in the recipient language. However, some bilingual speakers may be conscious of the motivated character of loanwords which were polymorphemic in the source language. This creates the possibility of analogical extension of specific categories with foreign affixes. A short exposition of Dutch nouns ending in *-atie* is therefore justified here.

Alongside verbs ending in *-eren*, belonging to the non-native lexicon of Romance origin, are found nouns ending in *-atie*, also belonging to the non-native lexicon, as in (1):

(1)	<i>informer</i>	'to enquire'	<i>informatie</i>	'information'
	<i>aksentueren</i>	'to emphasize'	<i>aksentuatie</i>	'accentuation'
	<i>organiseren</i>	'to organize'	<i>organisatie</i>	'organization'

The situation as regards these words in Dutch is rather complicated. In the first place, we must account for the morphological relation between these verbs and nouns. The nouns have a meaning in common which can be roughly described as 'process or result of the activity denoted by the corresponding verb'. This definition could easily be interpreted as being directional in the sense that it suggests that the noun is derived from the verb. However, the formal relation between these nouns and verbs is not as transparent as the semantic relation. Although the verb *informer* and the noun *informatie* have the formal part *inform* in common, there is no independent word *inform* in Dutch. On the other hand, alongside the verb *aksentueren* the noun *aksent* 'accent' does exist as an independent

word. Several solutions for this problem have been proposed, such as the application of a root-based morphology for non-native polymorphemic words, truncation rules as developed by Aronoff (1976) whereby the element *-eer* is deleted in such forms as *informeer-atie*, or lexical redundancy rules accounting for the formal and semantic relation between a verb and noun, without forcing the researcher to choose between two hypotheses (Kooij 1979, Van Zonneveld 1981).

In the second place, in Dutch there is a native suffix *-ing* available with which nouns are derived from verbs, even if the verb belongs to the non-native lexicon, as is demonstrated in (2):

(2) *aksentueren* 'to emphasize' *aksentuering* 'accentuation'
In these cases no root-based rules, no truncation rules and no redundancy rules are needed: both in a semantic and in a formal respect the nominalizations are completely transparent. A rule which belongs in all respects to the core of the Dutch morphological system derives these nouns from verbal bases.

Although the number of forms with *-ing* from a Romance base is considerable in Dutch, they have rarely been transferred to Indonesian. I have only found the words listed in (3):

(3) <i>detasering</i>	'detachment'	<i>detachering</i>
<i>herordening</i>	're-arrangement'	<i>herordening</i>
<i>reklasering</i>	'after-care of discharged prisoners'	<i>reclassering</i>
<i>riolering</i>	'sewerage'	<i>riolering</i>

In one case, both the form with *-ing* and that with *-asi* occur:

(4) *sanering/sanitasi* 'reorganization' *sanering*

In Indonesian approximately 350 loanwords ending in *-asi* are found, either with one Dutch counterpart with *-atie* (such as *declaratie* 'declaration, voucher'), or with two Dutch counterparts, namely one ending in *-atie*, and one in *-ing* (as *nominalisatie* and *nominalisering*, both meaning 'nominalization'). All these forms are listed in the Appendix; in (5) some examples are given:

(5) <i>arestasi</i>	'arrest'	<i>arrestatie</i>
<i>deklarasi</i>	'declaration, voucher'	<i>declaratie</i>
<i>nominalisasi</i>	'nominalization'	<i>nominalisatie/</i> <i>nominalisering</i>
<i>sublimasi</i>	'sublimation'	<i>sublimatie/sublimering</i>

In addition to these 350 cases, there are many more Indonesian borrowings ending in *-asi*. The cases listed in (6) are of a totally different kind; in no respect can they be considered as 'nominalizations', and, as a result, they have a different common meaning. Moreover, their Dutch models bear the main stress on the final vowel, while the Dutch models discussed above have the main stress on the prefinal vowel, as in *arrestá-*

tie. Furthermore, most of these words are Greek, not Romance, in origin.

(6) aristokrasi	'aristocracy'	aristocratie
autokrasi	'autocracy'	autocratie
birokrasi	'bureaucracy'	bureaucratie
demokrasi	'democracy'	democratie
diplomasi	'diplomacy'	diplomatie
fantasi	'fantasy'	fantasie
farmasi	'pharmacy'	farmacie
plutokrasi	'plutocracy'	plutocratie
supremasi	'supremacy'	suprematie
teokrasi	'theocracy'	theocratie

In what follows, these foregoing words will be left out of consideration.

There are other Indonesian words ending in *-asi* that are comparable with those listed in the Appendix, of which some examples are given in (5), which, however, cannot originate from Dutch models, because only the regular derivatives with *-ing* are current in Dutch. Counterparts with *-atie*, if they occur at all now, have been only recently introduced into Dutch under English influence. In any case, the source is almost certainly Dutch, but the Dutch source words ending in *-ing* have been adopted in Indonesian with *-asi*. These words are listed in (7):

(7) aklimatisasi	'acclimatization'	acclimatisering
alternasi	'alternation'	alternering
birokratisasi	'bureaucratization'	bureaucratisering
demokratisasi	'democratization'	democratisering
dramatisasi	'dramatization'	dramatisering
formulasi	'formulation'	formulering
instrumentasi	'instrumentation'	instrumentering
investasi	'investment'	investering
karakterisasi	'characterization'	karakterisering
konstataasi	'ascertainment'	constatering
modernisasi	'modernization'	modernisering
motorisasi	'motorization'	motorisering
otomatisasi	'automation'	automatisering
periodisasi	'periodization'	periodisering
reservasi	'reservation'	reservering
eksperimentasi	'experimentation'	
kalibrasi	'calibration'	
lamendasi	'lamination'	

In the last three cases, Dutch dictionaries do not even list the words ending in *-ing*. These may, however, be productively derived from the verbs *experimenteren* 'to experiment', *kalibreren* 'to calibrate', and *laminieren* 'to laminate'.

In the following examples, listed in (8), there can be no question of

Dutch origin, since no counterparts with *-ing* occur (at least in the dictionaries, though some are possible words), while counterparts with *-atie* are even today excluded in Dutch usage altogether. They are all of English origin, but have been adopted with *-asi*:

(8) afiksasi	affixation
afirmasi	affirmation
deeskalasi	de-escalation
defoliasi	defoliation
denuklirisasi	denuclearization
depolitisasi	depolitization
disosiasi	dissociation
efeminasi	effemination
ekstensifikasi	extensification
intensifikasi	intensification
matrikulasi	matriculation
persuasi	persuasion
sanitasi	sanitation, also 'reorganization'

The loanwords ending in *-asi* have been more or less adapted to Indonesian morphology. The suffix *-nya*, for example, denoting a possessive relation or bearing an individualizing meaning comparable with that of the definite article in languages such as English, can always be added to words with *-asi*: *komunikasinya* 'his/her/its/the communication'. In general, transposition to the verb class is possible: beside *komunikasi* the intransitive verb *berkomunikasi* 'to communicate' and the transitive verb *mengkomunikasikan* 'to communicate something' occur. In the same way *berkonsolidasi* and *mengkonsolidasikan* 'to consolidate' are found beside the noun *konsolidasi* 'consolidation'.

However, not all potential verbal derivatives are indeed listed as actual words. For example, in Indonesian dictionaries the form *be(r)rekreasi* 'to take some recreation' is found beside the noun *rekreasi* 'recreation', but the form *merekreasi* or *merekreasikan* is not. Alongside *restorasi* 'restoration' the verbal form *direstorasi* 'to be restored' is listed, and in consequence the agent-directed verbal form *merestorasi*, although not listed, seems possible (it is quite common for loanwords to have only the listed *di*-form, and not the *meN*-form); but *merestorasikan* does not occur. On the other hand, the intransitive verb *be(r)restorasi* is listed. In addition to *konfirmasi* 'confirmation' the verb *dikonfirmasikan* 'to be confirmed' is found, and in consequence *mengkonfirmasi*, the agent-directed verbal counterpart, seems possible; but *berkonfirmasi* is lacking. Gaps seem to be accidental, in the sense that the Indonesian morphological system accepts the loanwords ending in *-asi* just as if they were native words. Whether the resultant forms are actually used (and admitted to the dictionaries) depends on the communicative needs of the Indonesian community. On this point, further research is needed.

In one respects, however, the loanwords have not been completely integrated.

In native Indonesian words the phonological shape of the prefix *meN-* varies in accordance with the initial phoneme of the base to which it is attached.

The alternant *meng-* /mən/ occurs before a vowel, and before /h/, /g/, and /x/; for example, *ikut/mengikut* 'to follow'.

The alternant *men* /mən/ occurs before /d/, /d/, and /t/; for example, *cari/mencari* 'to look for'.

The alternant *mem* /məm/ occurs before /b/ and /f/; for example, *balas/membalas* 'to answer'.

The situation is essentially different with regard to words containing /p/, /t/, /k/, and /s/ in initial position. They not only undergo prefixation – with the alternant *me-* /mə/ – but moreover their own forms are modified. The initial consonant is replaced by its homorganic nasal: *pukul/memukul* 'to hit', *tulis/menulis* 'to write', *karang/mengarang* 'to compose', *salin/menyalin* 'to change, to copy'.

Now, it appears that many loanwords with initial /p/, /t/, /k/, and /s/ do not obey this rule: they retain their original consonants, and so remain unmodified after one of the alternants /məm/, /mən/, or /mən/: *portret/memportret* (but also *memotret*) 'to photograph' (from Dutch *portret*), *teror/menterorkan* 'to terrorize' (from Dutch *terreur* or English *terror*), *keristen/mengkeristenkan* 'to christianize' (from Dutch *christen*), and *sistem/mensistemkan* 'to systematize' (from Dutch *systeem*).

Other loanwords do follow the nasalization rule: *pelopor/memelopori* 'to lead' (from Dutch *voorloper*), *telepon/menelepon* 'to telephone' (from Dutch *telefoon*), *kontrol/mengontrol* 'to control' (from Dutch *controle*), and *seterika/menyeterika* 'to iron' (from Dutch *strijken*).

None of the loanwords with *-asi* conforms to the nasalization rule: they retain their initial consonants: *mempersonifikasikan* 'to personify', *mentelekomunikasikan* 'to communicate by telecommunication system', *mengkomunikasikan* 'to communicate', and *mensinkronisasikan* (but also *mengsinkronisasikan*) 'to synchronize', instead of *memersonifikasi-sikan*, *menelekomunikasikan*, *mengomunikasikan*, and *menyinkronisasikan*.

All the borrowings referred to have entered Indonesian as unmotivated signs. In Haugen's terminology (1950), they are importations of forms with meanings, the former being adapted to the system of the borrowing language where necessary. The most striking substitution is that of the Dutch affricate /ts/ in *-atie* /a.tsi/, also pronounced with /s/, by the sibilant /s/ in *-asi* /asi/. The combination of /a/, /s/ and /i/ in /asi/ obeys the canonical structure of the Indonesian word, which imposes the regular alternation of vowels and consonants.

The effectiveness of *-asi* is confirmed by the fact that it can occur even without a Dutch model ending in *-atie*. We have already seen indirect

borrowings such as *aklimatisasi* (Dutch *acclimatisering*). The effectiveness is also confirmed by borrowings like *autokrasi* from a differently stressed Dutch *autocratie*. Especially striking are two cases of Dutch words ending in hushing /ʒ/ plus schwa: *bagage* 'luggage' and *garage* 'garage', which in Indonesian also conform to the *-asi* pattern: *bahasi* or *begasi* and *garasi*.

However, the crowning achievement of *-asi* is its occurrence in words which since the fifties have been borrowed not from Dutch, but from English, such as *afiksasi* from *affixation*. These English models have been modified according to the *-asi* pattern set by the older borrowings from Dutch. From the point of view of Indonesian, it is hardly relevant whether an *-asi* word has come from Dutch or from English: they all belong to the international Romance-based vocabulary which is an indispensable part of the lexicons of many modern languages.

3. Internal structure and productivity

In the preceding section we started from the assumption that words but not affixes are borrowed. However, it is possible that bilingual speakers will be aware of the motivated character of the loanwords which are polymorphemic in the source language, and consequently it is also possible that this awareness will create new affixes in the recipient language, especially after particular loanwords have become numerous. This latter condition has been realized in this case: a large number of words ending in *-asi* has been borrowed. Therefore, we must now consider the possibility of *arestasi* c.s. being polymorphemic words in Indonesian.

A word is polymorphemic if some aspect of its form corresponds systematically with an aspect of its meaning, and/or an aspect of its syntactic valence. Morphological categories therefore are sets of words between which there exists formal, semantic, and/or syntactic proportionality (Uhlenbeck 1956).

The words ending in *-asi* all have a formal aspect in common, namely /asi/. This formal aspect corresponds with a systematic feature in their syntactic valence: all of these words are nouns, mostly abstract nouns. There is also a correspondence with a systematic semantic aspect: all these words – though of course with the exception of those of the *autokrasi* type – have the semantic characteristics of 'process', 'action', 'state', and 'result of an activity' in common, characteristics possessing a verbal character, or, at least, a verbal origin.

However, one important property of polymorphemic words is lacking here. A morphological category never exists on its own; it always forms part of a system including at least one other category having as members either monomorphemic words, or words that are polymorphemic but are motivated to a lesser degree. In the cases under discussion so far, a monomorphemic counterpart seldom exists. In, for instance, *abdikasi* 'abdication', the formal part /asi/ contributes its semantic and syntactic

characteristics to the meaning and syntactic valence of the word as a whole, but /abdik/ does not. This formal part lacks an independent meaning, for it does not exist as a word. The formal part /asi/ can therefore at best be considered a quasi-suffix. By means of this quasi-suffix words like *kalibrering* 'calibration' can be adapted as *kalibrasi*, and English models like *affixation* can be adapted as *afiksasi*.

In some cases, Dutch verbs ending in *-eren* have been borrowed together with a corresponding noun ending in *-atie* or *-ing*. In the introduction we already mentioned *proklamir* 'to proclaim'; more examples are given in (9):

(9) aneksasi/aneksir	'to annex'	annexeren
alokasi/alokir	'to allocate'	alloceren ¹
generalisasi/generalisir	'to generalize'	generaliseren
organisasi/organisir	'to organize'	organiseren

Words like *alokir* have been integrated into Indonesian morphology, as appears from the existence of *mengalokir* 'to allocate'. So here we do have an independent word distinct from *alokasi*, namely a verb. Also, the noun and the verb are semantically related to each other in a systematic manner: the noun has a categorial meaning which can be defined as 'process, action, or state, consisting in, or resulting from the activity to which the verbal correlate refers'. In a paradigmatically based morphology, in which words are not just considered as being composed of smaller parts, but are systematically related to other complete words, a rule can be formulated involving the replacing of the formal part /ir/ by the formal part /asi/. Of course, the relation between *alokasi* and *alokir* has to be accounted for in a nondirectional way, like the relation between *allocatie* and *alloceren* in the source language, as we have shown in the preceding section. How this is done, e.g. by some form of redundancy rule, is irrelevant for our present purpose.

This is not sufficient, however, to establish a morphological correlation between the two borrowings. After having entered the Indonesian language separately, *alokir* and *alokasi* at once became members of two different morphological systems: that of the verb and that of the noun. Hereby *alokir* became the basis for the potential derived nouns *alokiran* and *pengalokiran*, as rivals of *alokasi*, and *alokasi* became the basis for the derived verbs *mengalokasi* and *mengalokasikan*, as rivals of (*meng-*) *alokir*. The latter in its turn produced a derived noun *pengalokasian* 'allocation', which is a strong rival for the shorter, but less obviously Indonesian form *alokasi*, as is illustrated in (10):

Many of the nouns with *-isatie* have been transferred to Indonesian, such as *demoralisasi* 'demoralization' and *depolitisasi* 'depolitization'.

If in Indonesian a noun occurs beside the word ending in *-isasi*, the word can be analysed as a noun to which a suffix *-isasi* has been attached. From the Dutch point of view, the suffix *-atie* is re-analysed in Indonesian as *-isasi*. But this is not the case from an Indonesian point of view. It has been made clear in the foregoing that *-asi* must be considered a quasi-suffix, or at most can be considered a suffix in rare cases like *segmentasi*. However, the quasi-morphological status of *-asi* has facilitated the development of a real suffix *-isasi*. Examples of borrowings which could be analysed thus are given in (11):

(11)	amerikanisasi	americanization	amerikanisatie
	indonesianisasi	indonesianization	
	komputerisasi	computerization	
	kristenisasi ²	christianization	
	westernisasi	westernization	

The suffix *-isasi* is strong on two points: it has a clear semantic value, and it is relatively invariant from a formal point of view. These properties make the suffix suitable for use in analogous cases, whereby new words can be added to the vocabulary, as in (12):

(12)	belandanisasi	'netherlandization'	Belanda
	betonisasi	'the covering with concrete'	beton
	jetisasi	'the introduction of jet aircraft'	jet
	kader(n)isasi	'cadre formation'	kader
	komporisasi	'the introduction of furnaces in
brickyards'	kompor
	kondomisasi	'the popularizing of the use condoms'	kondom
	pinusisasi	'encouraging the planting of pine-trees'	pinus
	spiralisasi	'the introduction of IUDs in family
planning'	spiral
	pompanisasi	'the introduction of pumping systems'	pompa
	traktornisasi	'the introduction of tractors'	traktor

The properties of the word formation rule must now be discussed.

The phonological shape of the suffix is predictable. The allomorph /*nisasi*/ occurs after vowels, the allomorph /*isasi*/ after other preceding phonemes. After a preceding /*r*/ both variants are possible, viz. *kaderisasi* and *kadernisasi*. The phonological shape of the base is also predictable: it does not alter.

The base is always a noun. Although most of the bases are of foreign origin, they have all been subjected to complete phonological adaptation. With the exception of *jet*, of English origin, and *pinus*, of Latin origin, the bases are commonly used; a non-native suffix is attached to a totally accepted loanword.

The product of the rule is a noun. The categorial meaning is 'the

However, it is not possible to create new forms unrestrictedly according to this rule, and therefore the rule is not productive in every respect. Most of the forms mentioned in (12) have been introduced in Jakarta government campaigns aimed at the introduction of typically modern devices or techniques. The terms are restricted to the language of the government and its servants, and of newspapers, radio and television. The introduction of such forms is obviously provoking psychological and perhaps also socio-cultural resistance, as witness puristic formations like *pengkaderan* 'cadre formation', in addition to *kaderisasi*. The occurrence of *pengkondoman* beside *kondomisasi* shows clearly the delicateness of the data: *kondomisasi* means 'the popularization of the use of condoms within the framework of birth control', which is a policy of the government, while *pengkondoman* means 'the utilization of condoms', and therefore lacks administrative connotations.

(13) noun verb action nominal
daftar —————→ (men)daftar(kan) ———→ pendaftaran
Belanda —————→ belandanisasi

(14) racun 'poison' meracun 'to poison'
daftar 'register' mendaftarkan 'to register'

From denominal verbs like *meracun* and *mendaftarkan* action nominals may be derived by means of the discontinuous affix *peN--an*; hereby the prefix *peN-* replaces the verbal prefix *meN-*, and the suffix *-an* replaces the verbal suffix *-kan*, if present, as in (15):

The categorial meaning of the nominalizations is wholly comparable to the categorial meaning of formations like *belandanisasi*. However, there is an important reason why forms like *belandanisasi* may be preferred to the native forms: the detour via the denominal verb is not necessary (see (13)).

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However, in this respect, too, the forms with *-isasi* behave like native Indonesian forms. A verb like *mendaftarkan* may be followed by a patient and preceded by an agent, as in (16):

- (16) Guru mendaftarkan murid
'the teacher registers the pupil(s)'

The action nominal *pendaftaran* may be accompanied by the patient *murid*, and possibly also by the agent *guru*, though the latter only with the preceding preposition *oleh* 'by', as in (17):

- (17) pendaftaran murid (oleh guru)
'the registration of the pupil(s) (by the teacher)'

It is almost impossible in Indonesian to add only the agent, with or without the preposition, to the action nominal, as in (18):

- (18) *pendaftaran (oleh) guru

The nominal phrase *pendaftaran guru* would mean that it was the teacher who was being registered. The action nominal retains the possibility of combination with a patient; that with an agent is only possible together with a patient, and if accompanied by the preposition *oleh*. From this we may conclude that the relation between the verb and agent is a weaker one than that between the verb and patient, or, alternatively, that the nominalization has lost a specific semantic-syntactic property of its verbal base.

Syntactically forms with *-isasi* behave like forms such as *pendaftaran*. If a patient is added, an agent preceded by *oleh* may also be added, as in (19):

- (19) kondomisasi Sumatera (oleh pemerintah)
'the condomization of Sumatra (by the government)'

It is not possible to add only an agent, as in (20):

- (20) *kondomisasi (oleh) pemerintah
'the condomization by the government'

4. Concluding remarks

We have shown in the above how a large number of Dutch, and later on English, words containing a nativized Romance suffix have entered the Indonesian language. We demonstrated the analogical expansion of *-asi* to other loanwords, and the birth of a suffix *-isasi*. Finally, we discussed the restricted productivity of a new morphological category, its place within the Indonesian morphological system, and the syntactic possibilities of the forms with *-isasi* alongside those of the related native nominalizations. We hope to have made it clear that language contact may change not only the vocabulary, but also aspects of the grammar of a given language.

NOTES

- 1 The verb *alloceren*, formed at the end of the seventies on the nominal basis *allocatie*, analogously to *annexatie/annexeren* etc., does not occur in Dutch dictionaries. However, in Schmidgall-Tellings and Stevens (1981) the Indonesian verb *mengalokir* is listed. This means that either a bilingual Indonesian introduced the new Dutch form into the Indonesian language, or that the form *alokir* has been created in Indonesian, on the basis of *alokasi*, following the pattern of *aneksasi/aneksir*. The second possibility is supported by the pronunciation, for the Dutch letter *c* in *alloceren* should be pronounced as a sibilant /s/, and not as a stop /k/.
- 2 In *kristenisasi* the base agrees with the phonological form of the Dutch borrowing *kristen* (Dutch *kristen*, *christen*). *Kristenisasi*, however, has been borrowed from English.

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APPENDIX

abdikasi	'abdication'	abdicatie
aberasi	'aberration'	aberratie
adaptasi	'adaptation'	adaptatie
afiliasi	'affiliation'	affiliatie
agitasi	'agitation'	agitatie
aglomerasi	'agglomeration'	agglomeratie
aklamasi	'acclamation'	acclamatie
akomodasi	'accommodation'	accommodatie
akselerasi	'acceleration'	acceleratie
aksentuasi	'accentuation'	accentuatie
akumulasi	'accumulation'	accumulatie
alimentasi	'alimentation'	alimentatie
aliterasi	'alliteration'	alliteratie
alokasi	'allocation'	allocatie
amerikanisasi	'Americanization'	amerikanisatie
amortisasi	'amortization'	amortisatie
amputasi	'amputation'	amputatie
aneksasi	'annexation'	annexatie
anotasi	'annotation'	annotatie
antisipasi	'anticipation'	anticipatie
aplikasi	'application'	applicatie
arestasi	'arrest'	arrestatie
argumentasi	'argument; argumentation'	argumentatie
artikulasi	'articulation'	articulatie
asimilasi	'assimilation'	assimilatie
asosiasi	'association'	associatie
aspirasi	'aspiration'	aspiratie
debarkasi	'debarkation'	debarkatie
dedikasi	'dedication'	dedicatie
deflagrasi	'deflagration'	deflagratie
deformasi	'deformation'	deformatie
degenerasi	'degeneration'	degeneratie
degradasi	'degradation'	degradatie
dehidrasi	'dehydration'	dehydratie
deklamasi	'declamation'	declamatie
deklarasi	'declaration'	declaratie
deklinasi	'declination'	declinatie
dekolonisasi	'decolonization'	dekolonisatie
dekonsentrasi	'deconcentration'	deconcentratie
dekorasi	'decoration'	decoratie
delegasi	'delegation'	delegatie
demarkasi	'demarcation'	demarcatie

demilitarisasi	'demilitarization'	demilitarisatie
demobilisasi	'demobilization'	demobilisatie
demonstrasi	'demonstration'	demonstratie
demoralisasi	'demoralization'	demoralisatie
denominasi	'denomination'	denominatie
denotasi	'denotation'	denotatie
depaluasi, devaluasi	'devaluation'	devaluatie
deportasi	'deportation'	deportatie
depresiasi	'depreciation'	depreciatie
deputasi	'deputation'	deputatie
derivasi	'derivation'	derivatie
derogasi	'derogation'	derogatie
desentralisasi	'decentralization'	decentralisatie
desintegrasi	'disintegration'	desintegratie
desorganisasi	'disorganization'	desorganisatie
destilasi	'distillation'	destillatie
destinasi	'destination'	destinatie
determinasi	'determination'	determinatie
deviasi	'deviation'	deviatie
diferensiasi	'differentiation'	differentiatie
disertasi	'dissertation'	dissertatie
disimulasi	'dissimilation'	dissimilatie
diskriminasi	'discrimination'	discriminatie
diskualifikasi, diskwalifikasi	'disqualification'	diskwalificatie
dislokasi	'dislocation'	dislocatie
dispensasi	'dispensation'	dispensatie
diversifikasi	'diversification'	diversificatie
dokumentasi	'documentation'	documentatie
dominasi	'domination'	dominatie
donasi	'donation'	donatie
duplikasi	'duplication'	uplicatie
edukasi	'education'	educatie
egalisasi	'equalization'	egalisatie
ejakulasi	'ejaculation'	ejaculatie
eksklamasi	'exclamation'	exclamatie
ekspirasi	'expiration'	expiratie
eksploatasi, eksploitasi	'exploitation'	exploitatie
eksplorasi	'exploration'	exploratie
elaborasi	'elaboration'	elaboratie
elektrifikasi	'electrification'	elektrificatie
eliminasi	'elimination'	eliminatie
emansipasi, imansipasi	'emancipation'	emancipatie
embarkasi	'embarkation'	embarkatie
emigrasi	'emigration'	emigratie
epakuaasi, evakuasi	'evacuation'	evacuatie

eskalasi	'escalation'	escalatie
federasi	'federation'	federatie
fermentasi	'fermentation'	fermentatie
fluktuasi	'fluctuation'	fluctuatie
fondasi	'foundation'	fondatie
formasi	'formation'	formatie
frustrasi	'frustration'	frustratie
fumigasi	'fumigation'	fumigatie
generalisasi	'generalization'	generalisatie
generasi	'generation'	generatie
gestikulasi	'gesticulation'	gesticulatie
gradasi	'gradation'	gradatie
gratifikasi	'gratuity'	gratificatie
gravitasi	'gravitation'	gravitatie
halusinasi	'hallucination'	hallucinatie
herorientasi	'reorientation'	heroriëntatie
herregistrasi	're-registration'	herregistratie
identifikasi	'identification'	identificatie
iluminasi	'illumination'	illuminatie
ilustrasi	'illustration'	illustratie
imajinasi, imajinasi	'imagination'	imaginatie
imigrasi	'immigration'	immigratie
imitasi, mitasi	'imitation'	imitatie
implementasi	'implementation'	implementatie
implikasi	'implication'	implicatie
impropisasi	'improvization'	improvisatie
inaugurasi	'inauguration'	inauguratie
indikasi	'indication'	indicatie
industrialisasi	'industrialization'	industrialisatie
infiltrasi	'infiltration'	infiltratie
inflamasi	'inflammation'	inflammatie
inflasi	'inflation'	inflatie
informasi	'information'	informatie
inhalasi	'inhalation'	inhalatie
inkarnasi	'incarnation'	incarnatie
inklinasi	'inclination'	inclinatie
inkorporasi	'incorporation'	incorporatie
inkubasi	'incubation'	incubatie
inokulasi	'inoculation'	inoculatie
inovasi	'innovation'	innovatie
inseminasi	'insemination'	inseminatie
inspirasi	'inspiration'	inspiratie
instalasi	'installation'	installatie
insubordinasi	'insubordination'	insubordinatie

insuflasi	'insufflation'	insufflatie
integrasi	'integrasi'	integratie
interogasi	'interrogation'	interrogatie
interpelasi	'interpellation'	interpellatie
interpolasi	'interpolation'	interpolatie
interpretasi	'interpretation'	interpretatie
intimidasi	'intimidation'	intimidatie
intoksikasi	'intoxication'	intoxicatie
intonasi	'intonation'	intonatie
inventarisasi	'inventory'	inventarisatie
irigasi	'irrigation'	irrigatie
iritasi	'irritation'	irritatie
isolasi	'isolation'	isolatie
kalkulasi	'calculation'	calculatie
kanalisasi	'canalization'	kanalisatie
kapitulasi	'capitulation'	capitulatie
kasasi	'cassation'	cassatie
kastrasi	'castration'	castratie
katekisasi	'confirmation class'	catechisatie
koagulasi	'coagulation'	coagulatie
koedukasi	'co-education'	coëducatie
kolaborasi	'collaboration'	collaboratie
kolektivisasi	'collectivization'	collectivisatie
kolonisasi	'colonization'	kolonisatie
kombinasi	'combination'	combinatie
komersialisasi	'commercialization'	commercialisatie
kompensasi	'compensation'	compensatie
kompilasi	'compilation'	compilatie
komunikasi	'communication'	communicatie
kondensasi	'condensation'	condensatie
konfederasi	'confederation'	confederatie
konfigurasi	'configuration'	configuratie
konfirmasi	'confirmation'	confirmatie
konfrontasi	'confrontation'	confrontatie
kongregasi	'congregation'	congregatie
konjugasi	'conjugation'	conjugatie
konotasi	'connotation'	connotatie
konsekrasi	'consecration'	consecratie
konsentrasi	'concentration'	concentratie
konsignasi, konsinyasi	'consignment'	consignatie
konsolidasi	'consolidation'	consolidatie
konspirasi	'conspiracy'	conspiratie
konstelasi	'constellation'	constellatie
konstipasi	'constipation'	constipatie
konsultasi	'consultation'	consultatie

kontaminasi	'contamination'	contaminatie
kontemplasi	'contemplation'	contemplatie
koperasi, kooperasi	'cooperation'	coöperatie
kordinasi, koordinasi	'coordination'	coördinatie
korporasi	'corporation'	corporatie
kremasi	'cremation'	crematie
kristalisasi	'crystallization'	kristallisatie
kualifikasi, kwalifikasi	'qualification'	kwalificatie
kulminasi	'culmination'	culminatie
legalisasi	'legalization'	legalisatie
legasi	'legation'	legatie
legislasi	'legislation'	legislatie
legitimasi	'legitimation'	legitimatie
liberalisasi	'liberalization'	liberalisatie
likuidasi, likwidasi	'liquidation'	liquidatie
lokalisasi	'localization'	localisatie
lokasi	'location'	locatie
manifestasi	'manifestation'	manifestatie
manipulasi	'manipulation'	manipulatie
masturbasi	'masturbation'	masturbatie
mediasi	'mediation'	mediatie
meditasi	'meditation'	meditatie
mekanisasi	'mechanization'	mechanisatie
menstruasi	'menstruation'	menstruatie
migrasi	'migration'	migratie
miskalkulasi	'miscalculation'	miscalculatie
mobilisasi	'mobilization'	mobilisatie
modifikasi	'modification'	modificatie
modulasi	'modulation'	modulatie
moralisasi	'to render moral'	moralisatie
motivasi	'motivation'	motivatie
multiplikasi	'multiplication'	multiplicatie
mutasi, mitasi	'mutation'	mutatie
nasionalisasi	'nationalization'	nationalisatie
naturalisasi	'naturalization'	naturalisatie
navigasi	'navigation'	navigatie
negosiasi	'negotiation'	negotiatie
netralisasi	'neutralization'	neutralisatie
normalisasi	'normalization'	normalisatie
obligasi	'debenture'	obligatie
observasi	'observation'	observatie
oksidasi	'oxidation'	oxidatie
okulasi	'inoculation'	oculatie
okupasi	'illegal occupation'	occupatie
operasi	'operation'	operatie

organisasi	'organization'	organisatie
orientasi	'orientation'	oriëntatie
orkestrasi	'orchestration'	orkestratie
osilasi	'oscillation'	oscillatie
oskultasi	'auscultation'	auscultatie
ostentasi	'ostentation'	ostentatie
otorisasi	'authorization'	autorisatie
ovulasi	'ovulation'	ovulatie
pakasi, vakasi	'attendance-fee'	vacatie
palatalisasi	'palatalization'	palatalisatie
partisipasi	'participation'	participatie
pasifikasi	'pacification'	pacificatie
penetrasi	'penetration'	penetratie
pentilasi	'ventilation'	ventilatie
personifikasi	'personification'	personificatie
polarisasi	'polarization'	polarisatie
pondasi	'foundation'	fundatie
populasi	'population'	populatie
presentasi	'presentation'	presentatie
proklamasi	'proclamation'	proclamatie
proliferasi	'proliferation'	proliferatie
provokasi, propokasi	'provocation'	provocatie
publikasi	'publication'	publikatie
pulasi	'value tax'	valuatie
pumigasi	'fumigation'	fumigatie
pungtuasi	'punctuation'	punctuatie
radiasi	'radiation'	radiatie
rasionalisasi	'rationalization'	rationalisatie
ratifikasi	'ratification'	ratificatie
realisasi	'realization'	realisatie
reboisasi, reboasasi	'reafforestation'	reboisatie
reduplikasi	'reduplication'	reduplicatie
reedukasi	're-education'	reëducatie
reflasi	'reflation'	reflatie
reformasi	'reformation'	reformatie
regenerasi	'regeneration'	regeneratie
registrasi	'registration'	registratie
rehabilitasi	'rehabilitation'	rehabilitatie
reinkarnasi	'reincarnation'	reïncarnatie
rekapitulasi	'recapitulation'	recapitulatie
reklamasi	'reclamation'	reclamatie
rekomendasi	'recommendation'	recommendatie
rekreasi	'recreation'	recreatie
rektifikasi	'rectification'	rectificatie
relaksasi	'relaxation'	relaxatie

relasi	'connection'	relatie
renovasi	'renovation'	renovatie
reorganisasi	'reorganization'	reorganisatie
reorientasi	'reorientation'	reoriëntatie
reparasi	'repairs'	reparatie
representasi	'representation'	representatie
reputasi	'reputation'	reputatie
resosialisasi	're-socialization'	resocialisatie
restorasi	'restoration'	restauratie
revaluasi	'revaluation'	revaluatie
rotasi	'rotation'	rotatie
sedimentasi	'sedimentation'	sedimentatie
segmentasi	'segmentation'	segmentatie
sekularisasi	'secularization'	secularisatie
sensasi	'sensation'	sensatie
sentralisasi	'centralization'	centralisatie
simplifikasi, simplikasi	'simplification'	simplificatie
sinkronisasi	'synchronization'	synchronisatie
sirkulasi	'circulation'	circulatie
situasi	'situation'	situatie
sosialisasi	'socialization'	socialisatie
spekulasi	'speculation'	speculatie
spesialisasi	'specialization'	specialisatie
spesifikasi	'specification'	specificatie
stabilisasi	'stabilization'	stabilisatie
stagnasi	'stagnation'	stagnatie
standarisasi	'standardization'	standaardisatie
sterilisasi	'sterilization'	sterilisatie
stimulasi	'stimulation'	stimulatie
stratifikasi	'stratification'	stratificatie
sublimasi	'sublimation'	sublimatie
subordinasi	'(in)subordination'	subordinatie
telekomunikasi	'telecommunication'	telecommunicatie
tipifikasi	'typification'	typificatie
transfigurasi	'transfiguration'	transfiguratie
transliterasi	'transliteration'	translitteratie
transpirasi	'transpiration'	transpiratie
transportasi	'transportation'	transportatie
transmigrasi	'transmigration'	transmigratie
transplantasi	'transplantation'	transplantatie
triangulasi	'triangulation'	triangulatie
unifikasi	'unification'	unificatie
urbanisasi	'urbanization'	urbanisatie
usurpasi	'usurpation'	usurpatie
vaksinasi	'vaccination'	vaccinatie

validasi	'validation'	validatie
variasi	'variation'	variatie
vegetasi	'vegetation'	vegetatie
ventilasi	'ventilation'	ventilatie
verifikasi	'verification'	verificatie
vulgarisasi	'vulgarization'	vulgarisatie
vulkanisasi	'vulcanization'	vulkanisatie