# ON A CLASS OF FOREIGN SUFFIXES IN POLISH AND ENGLISH: SOME REMARKS ON +IZM AND +IST

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The present paper is an attempt to establish the formal and functional relationship among three classes of words in Polish and English: nouns of the form Xista, nouns of the form Xizm and adjectives of the form Xistyczny in Polish¹ (in English, respectively, Xist, Xism, Xistic). We will also discuss classes of words related to these. The theoretical framework and method are basically those of Aronoff (1976), although we will suggest some modifications.

Aronoff (1976) presents a brief analysis of the apparently analogous English case. Below we will repeat in brief the basic arguments of Aronoff's analysis, which, it seems to us, is inadequate. Aronoff derives his data from Walker's dictionary, which lists only 145 adjectives of the form Xistic, 119 nouns of the form Xism and 117 nouns of the form Xist. Brown's Normal and reverse English word list (1963) lists several hundred forms of each word class under consideration. Moreover, Brown gives a large number of forms which Aronoff's source fails to mention, leading Aronoff into the trap of claiming that these words are nonexistent in English. For him, they are significant, or systematic, gaps, whereas they are in fact not gaps at all.

Aronoff attempts to establish the derivation of the class of Xistic adjectives (imperialistic, socialistic, hedonistic), which seems transparently to be derived from the class of Xist nouns (imperialist, socialist, hedonist). If that were the

<sup>&</sup>lt;sup>1</sup> We will use the notation Xizm, etc. as a shorthand form for Xizm or Xyzm, where X may denote any sequence of segments. We discuss below the conditions determining the choice of -i- or -y-.

case, we would find a word Xist for almost every Xistic. Out of 145 adjectives of the form Xistic, he lists 28 forms without corresponding Xist nouns. In turn, he examines the class of Xism nouns as a possible base for the Xistic adjectives, and here he finds 26 lacunae. Thus the mere distributional evidence fails to provide any clear answer as to what is actually going on. Aronoff (1976:119) looks for a way out in the Unitary Base Hypothesis: "...the base of a given Word Formation Rule must comprise a unitary, positively specified syntacticosemantic class; there can be no disjunction or negation in the specification of the base. If a given class is hypothesized to be the base of a given WFR (Word Formation Rule-BN/JLF), then all members of that class must be possible token bases, and there must be no subclass of the hypothetical base class which cannot serve as a base". Following the above suggestion, Aronoff rejects the class of Xist nouns as a possible source of the Xistic adjectives on the grounds that out of about 700 words of the form Xist only 119 have corresponding Xistic adjectives. He also discovers that, with the exception of 17 cases, "for a given word Xist, there cannot exist a corresponding word Xistic unless there also exists a corresponding word Xism" (1976:120). Nothing of the sort, claims Aronoff, holds for Xism-whether or not one can form a word Xistic for a given word Xism is completely independent of Xist. Aronoff's conclusion is that Xism rather than Xist is the base of Xistic. There is no direct way to derive Xistic from Xism, so Aronoff postulates an allomorphy rule which converts /m/ to /t/ in front of the suffix +ic (1976:121):

(1) 
$$m \rightarrow t/s + ic$$

The rule as written appears to violate the principle of naturalness in phonology and even adherents of abstractness would not accept rule (1) without reservation. Aronoff claims that rules of morphology do not have to have phonological plausibility, so if (1) is a morphological rule, the feature composition of the segment which undergoes the change is irrelevant. Whether this principle should be accepted or not is a more general theoretical problem, and we will not attempt to solve it here. What we wish to remark is that allomorphy rules as

<sup>&</sup>lt;sup>a</sup> The rule as formulated would also affect words like cosmic, spasmic (cf. spastic), orgasmic, etc., so it should be formally restricted to the class of Xism nouns only.

i Firstly, with respect to the question of naturalness of morphological rules of allomorphy (and morphophonemic rules in general), we should point out that such rules are nearly always the historical detritus of phonological or even phonetic processes, and since the latter are expected to be 'natural', we expect the processes in question to be natural as well, although because of the vagaries of history, we may find occasional unnatural rules of this class. The latter, however, we should be able to account for as the end product of a series of plausible natural changes (keeping in mind that morphological and phonological naturalness may not always be compatible).

In this case, the admittedly unnatural rule (1) is in fact based on faulty analysis of the data, as we have indicated. Firstly, Brown (1963) lists many of the examples which

such may be too powerful a device if unrestricted (Aronoff's disclaimers to the contrary notwithstanding), and perhaps some sort of naturalness condition should be set up for morphology, too (cf. Mayerthaler 1978).

We do not reject Aronoff's conclusions concerning the derivation of the class of Xistic adjectives as necessarily false; however, it seems that the whole set of data must be reanalyzed before his solution could be accepted, or rejected and replaced by a better one (and see our comments below).

Aronoff's analysis of the processes under consideration was motivation to investigate the similar classes of words in Polish. Interestingly enough, Polish apparently makes use of the same nominal suffixes +ist(a) and +izm, and also possesses in its lexical store a class of adjectives (those of the form Xistyczny) which bear a formal and semantic resemblance to English words in Xistic. The suffixes +ist, +ism in English and +ist(a), +izm in Polish are obviously foreign ones, borrowed directly from Latin (+ismus), or from Latin through French (+iste, +isme), or in some cases from Italian—generally, they are of Romance origin. Polish has also borrowed some of the Xista and Xizm items from English (cf. Fisiak 1962: esp. 293, 294). In Polish, the source of a given item (whether it is Latin, French, Italian or English) is not always traceable without detailed etymological and lexicological studies; yet the question of how the items under consideration got into Polish is not of primary importance in our discussion here. What is more important is that both suffixes became highly productive (and this very early on) in Polish. Thus we find in the

Walker fails to list, and which therefore appear to Aronoff as lacunae. Indeed, if one considers the crucial cases for Aronoff's hypothesis, namely (a) Xistic, \*Xist, Xism on the one hand, and (b) Xistic, Xist, \*Xism on the other, we find that, according to Brown, class (a) has considerably fewer members than class (b), the exact numbers depending on which examples we exclude from consideration on various grounds. Furthermore, even in the data base Aronoff uses, class (a) has only 19 members, compared to 17 in class (b), which hardly confirms Aronoff's blithe statement that "nothing of the sort holds for Xism" (1976:120).

Below we make some suggestions about the formative structure of the +istic/+istyczny suffixes in English and Polish.

According to Moszyńska (1975), +izm/+ista borrowings first came into Polish in the 16th century from Greek and Latin. She gives numerous examples of 16th century loanwords belonging to these classes (aforyzm, barbaryzm, katechizm, sylogizm, ateizm, embolizm, epikureizm; katechista, psalmista, sofista, tomista, kanonista, etc.). Both suffixes became productive very early on in the language; for example, the word grecyzm used in a 16th century text has no lexical equivalent in Greek or Latin (nor in English or French). The words made up with the suffix +izm denoted abstract concepts on the one hand, and on the other were used as names of religious sects, while the newly-formed +ista's denoted either nomina agentis (kompanista, trybunalista), or members of religious sects and followers of religious and philosophical doctrines (anabaptysta, universalista). Both suffixes attached only to foreign bases. For current dialectal productivity of -ista and -izm, see Cyran (1977: 97) and Malec (1976: 52—53, 93).

language numerous examples of Xista and Xism words whose bases are not recognizable as independently existing Polish words, eg.:

(2) dentysta
sadysta
sadyzm
kubista
nudysta
nudyzm, etc.;

on the other hand, we find Xista and Xizm formations utilizing originally native Polish words (or borrowings functioning as independent words in Polish) as their bases, e.g.:

(3) szachista 'chess player'
czołgista 'tank driver'
wopista 'frontier guardsman'
wszystkoista — wszystkoizm
zamordysta — zamordyzm
kresowizm
gwaryzm, etc.

Laskowski (in press) makes an interesting observation concerning cases of rule-borrowing in word formation. He claims that a WFR is not, strictly speaking, borrowed by a given language from another (source) language, but is reconstructed in the borrowing language on the basis of the absorbed lexical material. This claim gives rise to the hypothesis that the new rule (in the borrowing language) can diverge in many ways from the corresponding rule in the source language. Its base, semantic function and productivity may be different from those in the source language. It is understandable that this can be the case, since the rule must adjust to a different morphological (and phonological) system. Thus the relationship among Xiste, Xisme, Xistique in French, Xist, Xism, Xistic in English and Xista, Xizm, Xistyczny in Polish may be three quite different sorts of relationships. Below we shall present an analysis of the Polish data and attempt to establish the nature of the processes underlying the surface distribution of the three suffixes in question. More particularly, we will try to show what sort of relationship holds between the Xista and Xizm words and how the class of adjectives of the form Xistyczny is derived. We will also make some suggestions about the English data....

First some distributional facts. According to *Indeks a tergo*, there are over 320 adjectives of the form Xistyczny in Polish. Out of these 320 items about 60 have no corresponding Xizm nouns, and for about 20 items the only corresponding forms are Xizm (i.e. there are no nouns of the form Xista or Xistyka—the latter yet another possible source of Xistyczny that could be formally and semantically related to the items in question). The rest (i.e. about 240 Xistyczny words) have both corresponding forms. There are about

800 nouns of the form Xista and about 950 nouns of the form Xizm. In each case only a relatively small subset (i.e. about 260 and 300, respectively) of the class actually allows the Xistyczny derivatives, and the two subsets overlap in 240 cases. We might point out here that the almost complete lack of cases fitting the pattern — Xistyczny, \*Xista, \*Xistyka, \*Xizm, \*X — suggests that all Xistyczny words are derived, leaving us the problem of determining from what.

The figures cannot determine which of the two classes is the source of the Xistyczny adjectives, but they can at least suggest where to look for a solution. It seems reasonable to investigate what the 240 overlapping Xizm — Xista pairs have in common. We will examine the semantic properties of the classes of words under discussion.

Semantically, the class of Xizm nouns falls into two major groups:

- (4) (A) Xizm nouns as scientific or technical terms denoting a phenomenon or feature (e.g. atawizm, rotacyzm, mazuryzm)<sup>5</sup>
  - (B) Xizm nouns denoting theories, in the broad sense of the word—i.e. ideologies, philosophical and artistic trends, religions, recognizable systems of thought (e.g. imperializm, platonizm, impresjonizm, luteranizm, pesymizm, egotyzm, freudyzm, etc.). Also in this category fall certain abstract nouns denoting a feature, such as tradycjonalizm, kretynizm, idiotyzm, konserwatyzm, patriotyzm, etc.
  - (C) There are also a few Xizm words which denote concrete objects, e.g. mechanizm, organizm, but such cases are exceptional. <sup>6</sup>

(F1) kataklizm kataklizmowy katechizm katechizmowy mechanizm mechanizmowy

paroksyzm paroksyzmowy, etc. (cf. plazmowy, spazmowy).

These terms in class (4A) are generally from the so-called 'hard sciences', as opposed to those of class (4B), among other differences. Our expression of the distinction between (4A) and (4B) is in part due to comments by B. Szymanek and E. Wayles Browne.

Aronoff (1976) suffers from having, in effect, only analyzed a relatively uninflected language like English. Thus he states (1976: 22), "...W[ord] F[ormation] R[ule]s do not operate on anything less than a word ..." In highly inflected languages like Polish, word formation is clearly based on stems—i.e. on the 'word' minus any inflectional endings—and in some cases this stem is different from any of the actually existing inflectional forms of the word, because of morphophonemic changes in various inflected forms. Thus, we find Xista forms from plural forms (organista < organy), from feminines in -a (walternista < walternia 'French horn'), and from masculines in surface -Ø (czolgista < czolg 'tank'), inter alia.

<sup>&</sup>lt;sup>5</sup> Notice that some Xizm nouns which belong to the subclass appear to form their related adjectives in a different way, e.g.:

The Xista class is also divisible into two subclasses on semantic grounds:

- (5) (A) Xista nouns denoting people performing the typical action associated with X (organista 'organ player' < organy 'organ', szablista 'swordsman' < szabla 'sabre', szantażysta 'blackmailer' < szantaż 'blackmail', klarnecista 'clarinettist' < klarnet 'clarinet', czolgista 'tank driver' < czolg 'tank', etc.); this class is traditionally called 'nomina agentis'. Cf. Zagrodnikowa (1978) and Grzegorczykowa (1979). The concrete/abstract distinction in this class (e.g. klarnecista < klarnet vs futbolista 'football player' < futbol or sabotażysta 'saboteur' < sabotaż 'sabotage') seems to be irrelevant for purposes of word formation.
  - (B) Xista nouns denoting adherents of particular theories, ideologies, religions and so on (e.g. imperialista, impresjonista, marksista, pesymista, etc.).

There is obviously a striking correlation between the (B) subclass of (4) and the (B) subclass of (5). If an Xizm item refers to a given theory, the corresponding Xista denotes its follower. At this point we take a tentative step against Aronoff's Unitary Base Hypothesis and put forward the claim that the (B) subset of (5) is derived from the corresponding (B) subset of (4) and can only be derived in this way. Thus the Unitary Base condition is violated. but only partly—the (B) subclass of (4) can be treated, in a sense, as a uniquely specified set—each member of the set possesses a feature which is not shared by other members of (4) (the items of the (A) subclass plus the exceptions—subclass (C)). The feature differentiating the items of group (B) from the rest of (4) is a semantic one, as only on semantic grounds can we divide (4) into subclasses. We will not attempt to give this feature a precise definition, as this particular detail is not very relevant in our discussion here. What we want to point out is that in word-formation processes meaning should be given no less consideration than form, and perhaps syntactic and morphological specification should not always be given priority. We claim, then, that insofar as it is not vacuous, the Unitary Base Hypothesis is not supported by the data we are examining.

Laskowski (in press) claims that in Polish the following generalization holds: "... nazwisko—oparty na tym nazwisku rzeczownik na -ista 'zwolennik teorii (ideologii) głoszonej przez posiadacza tego nazwiska'", that is, Xista nouns can be derived directly from proper nouns:

(6) Marks marksista
Bergson bergsonista
MacLuhan makluhanista
Franco frankista, etc.

The very formulation of the above statement implies the existence of a theory developed by the bearer of a given name, which the appropriate Xista follows. We do not make up an Xista noun based on someone's name unless there is reason to—i.e., unless that person has produced a recognizable system of thought, whose recognition is most naturally manifested by attaching +izm to the name in question. Thus for words like marksista, bergsonista, etc. there must also be corresponding nouns marksizm, bergsonizm, respectively. Indeks a tergo provides data showing that this is indeed the case: there are no examples of Xista nouns derived from proper names for which the corresponding Xizm forms are not listed. On the other hand, we find numerous examples of Xizm nouns without corresponding Xistas:

makiawelizm (7) Machiavelli Towiański towianizm luteranizm Luter(anin) hitleryzm Hitler miczurinizm Miczurin pawłowizm Pawłow wallenrodyzm Wallenrod walterskotyzm Walter Scott Platon platonizm parkinsonizm Parkinson stalinizm, Stalin

and the list could easily be doubled. If an Xista form could be directly derived from a name, we should find at least a few examples of name-based Xistas without corresponding Xizms. The data presented suggest the derivation of these Xista—Xizm pairs from the proper nouns:

### (8) $X [name] \rightarrow Xizm \rightarrow Xista$ .

There is also a phonological argument for deriving a relevant subclass of Xista nouns from their corresponding Xizm, which comes from the palatalization processes in Polish. The facts are simply that palatalization works differently in the native and foreign parts of the vocabulary. Roughly, in many cases the effects are more noticeable in native palatalization (see our detailed discussion in the Appendix). In particular, dentals are not palatalized when followed by a foreign suffix beginning with /+i/; rather, the underlying

Jonathan Kaye and others have pointed out that in English and French this generalization does not always hold. For example, we could get Jonesist (and NB Jonesite, ite being another type of formation in English, corresponding to ita in Polish, in the same general semantic sphere as the phenomena we are considering), but \*Jonesism\*. Similarly, in French, from e.g. P. Q. (Province de Québec) we get pequiste, but \*\*pequisme\*.

/i/ surfaces as [y]. Conversely, the dental obstruents are softened before native suffixes beginning with /+i/.

Among the Xista nouns we can find the effects of both the native and foreign palatalization processes-examples like plakacista, gwardzista, rowerzysta, manicurzysta, basista, etc., with native palatalization, versus egotysta, nudusta, purysta, etc., with lack of palatalization before a foreign suffix. However, the occurrences of one or the other is not accidental-native palatalization takes place in the (A) subclass of Xista items, while foreign palatalization affects the items of subclass (B). There is only foreign palatalization in the Xizm class and the same sort of palatalization in the Xista items corresponding to them (notice that for the exceptional Xizms-rasizm and parnasizm. e.g., in which the effects of native palatalization are found, we also have exceptional Xistas-rasista and parnasista, respectively; similary, we find clearly foreign words such as laburzysta—even pronounced [lejbužysta] seemingly undergoing native palatalization, but failing to have any related forms). There are no examples of Xistas related to Xizms which undergo rules of palatalization other than those affecting their bases. This observation clearly supports the hypothesis that the (B) subclasses of the Xista nouns are in fact derived from the corresponding Xizm items.

We can also claim that in the case of Xista nouns we are not dealing with two subclasses of one set of words but with two separate suffixes. Above we have shown the semantic distinctness of the two supposed subclasses as well as morphological differences in their derivation; now we also find support in phonology.<sup>8</sup>

We now consider Xistyczny forms.

In traditional Polish morphology, the class of Xistyczny adjectives is said to be doubly-motivated—i.e. they can be formed both from Xista and from Xizm nouns. Smółkowa and Tekiel (1977) point out that "... formacje typu: kapistyczny mają dwojaką motywację (od kapista i od kapizm)". Thus some Xistyczny derivatives are supposed to come from Xistas, some from Xizms, and where these two classes overlap there is no way whatsoever to decide which of the two possible forms was the source of a given Xistyczny adjective. If we accepted the idea of double-motivation, we would have to postulate two rules, each of them capable of deriving an Xistyczny form,

<sup>&</sup>lt;sup>8</sup> We can treat one + ista as foreign and the other as nativized; it is not fully native because it does not cause the palatalization of velars (for reasons yet unknown). E.g. czolgista, szachista. Plus there are a handful of Xista nouns which do not have corresponding Xizms and yet fail to undergo the native palatalization rules: żagarysta, melodysta, anestetysta, dentysta. A possible explanation of these exceptions might be that they were borrowed as such from other languages and preserved their phonological shape, while those which were formed in Polish (e.g. traktorzysta, plakacista, gwardzista) underwent the rules of native palatalization.

and both of them equally useless, since for the majority of cases we would not be able to tell which of the two rules has actually applied to derive a given Xistyczny form. With two rules deriving Xistyczny items, the base of any particular member of the class is unrecoverable; we would prefer to find evidence that it is actually one rule that does the job. Of the two possible sources, Xista is formally (phonologically) closer to Xistyczny than Xizm, but if Xista can be derived from Xizm, as we have suggested in at least some cases—i.e. we must postulate some sort of rule converting /zm/ into /st/ in any case (see discussion below) — there is apparently no reason why Xistyczny cannot. Still, there is a lot to be said against such a solution. First of all, we should notice that the suffix +istyczny is a composite one; it can be analyzed into +ist and +iczny, the latter being still divisible into two formatives. There are both morphological and phonological reasons for this split-up. +iczny (+yczny) can be easily recognized in formations such as (9):

(9) archeolog archeologiczny
cykl cykliczny
scena sceniczny
balsam balsamiczny
metal metaliczny
metr metryczny, etc.,

and there is no doubt that +ny itself is an independent adjectival suffix:

(10) wiatr wietrzny
pycha pyszny
śnieg śnieżny
wiek wieczny, etc.

That +ny of (9) is the same as +ny of (10) is manifested by its palatalizing effect on the preceding consonant. Gussmann (1978a) argues persuasively that phonologically +ny should be represented as /in+(y)/, the palatalizing vowel being deleted by a later rule. Only with this assumption can we explain the phonetic shape of the adjectives of (10), and we postulate the underlying string /+ik+in+(y)/ for the suffix +iczny (+yczny). Thus +istyczny should be phonologically represented as /+ist+ik+in+(y)/ and morphologically the first formative belongs to the base (cf. below). We have not yet presented any evidence indicating which of the two candidates, Xista or Xizm, actually is the source of the Xistyczny adjectives.

The hypothesis that the Xista nouns can be derived from the subset of Xizm items requires a tacit assumption that there is a rule converting +izm into +ist (see below). With Aronoff's claim that WFR's are not ordered and that each WFR derives words of one specific syntactic category (N, V, A or Adv), we would have to postulate two rules of exactly the same

form (changing X+izm into X+ist) but different functions — one working for the Xista nouns and the other for the Xistyczny adjectives. The derivation of Xistyczny from Xista would be simpler, consisting only of adding the suffix /+ik+in+(y)/ to an Xista item, which, as the data show, is a more general adjective-forming process in Polish, not necessarily restricted to one set of items. Let us see now if there is evidence in the data which would give us grounds for choosing the latter analysis rather than the first. The following hypothesis, which we will demonstrate is correct, would enable us to make the right choice:

For a given Xizm noun there cannot exist a corresponding Xistyczny adjective unless there also exists a corresponding Xista noun.

(Notice that the above hypothesis is the opposite of the one put forward by Aronoff—unconvincingly, we maintain—for the English case.)

First, let us examine those Xizm nouns which never allow corresponding Xista derivatives, i.e. those of the subclass (4A) (scientific and technical terms). With the exceptions which we shall discuss later in (15), the relevant adjectives are formed with the suffix +iczny rather than +istyczny:

(11)	metabolizm	metaboliczny
	chemotropizm	chemotropiczny
	polimorfizm	polimorficzny
	hybrydyzm	hybrydyczny
	traumatyzm	traumatyczny
	rachityzm	rachityczny
	monofagizm	monofagiczny
	sylabotonizm	sylabotoniczny
	dystrofizm	dystroficzny
	astygmatyzm	astygmatyczny.

Next, let us come back to the examples of (7). None of the cited Xizm nouns has an attested corresponding Xistyczny adjective, either. On the other hand, we find a handful of Xizm nouns based on proper nouns which have corresponding Xista nouns, and also Xistyczny adjectives:

(12)	Kalwin	kalwinizm	kalwinista	kalwinistyczny
	Darwin	darwinizm	darwinista	darwinistyczny
	Byron	byronizm	byronista	byronistyczny
	Chopin	szopenizm	szopenista	szopenistyczny
	Mendel	mendelizm	mendelista	mendelistyczny.

Finally, there is a large group of Xizm nouns which do not have corresponding Xista derivatives, but rather other nouns, already existing in the lexicon, performing the function of a related human nominal. Thus we have pairs like:

(13) patriotyzm patriota romantyzm romantyk demokratyzm demokrata dekadentyzm dekadent holszewizm bolszewik fizjokratyzm fizjokrata stoicyzm stoik cynizm cynik filomatyzm filomata, etc.

None of these allows an Xistyczny form for a corresponding adjective; the related adjectives turn out to be patriotyczny, romantyczny, dekadencki, bolszewicki, fizjokratyczny, etc., respectively. On the other hand, for the majority of Xizm-Xista pairs we find a corresponding Xistyczny derivative, or at least such an adjective sounds 'acceptable' to a native speaker (while formations like \*patriotystyczny, \*demokratystyczny, \*romantystyczny, \*stoicystyczny, \*dekadentystyczny, etc. are impossible).

The data of (13) appear to be another piece of evidence for the proposed, although not yet formulated, rule which derives the subset of Xista nouns from their Xizm bases. It seems that if the language already possesses in its store a nominal whose meaning fits into the slot characterized, roughly, as 'a follower of a certain theory', then there is no need for an Xista noun to be formed. According to Aronoff's theory, this is a case of blocking—the nonexistence of one form due to the existence of another form in the given meaning slot. If for a given Xizm item there is no corresponding human nominal already in the lexicon, the appropriate Xista may be derived.

One more significant observation follows from the examination of the examples given in (13)—in each case a relevant adjective is derived directly from the human nominal, not form the Xizm form. The adjective-forming suffix appears to be either +yczny (+iczny) or +ski (+cki). We do not know yet what governs the choice of one or the other suffix. What seems to be of significance here is that, with the assumption that it is Xista rather than Xizm which serves as the base of Xistyczny, there is no fermal difference in the derivation of items like patriotyczny, demokratyczny, romantyczny on the one hand and komunistyczny, komparatystyczny, imperialistyczny on the other. In both cases the bases of the derived adjectives bear the same semantic relationship to their corresponding Xizms. Thus, at least for the cases we have examined so far, the following generalization holds:

Given a pair of items: Xizm—a corresponding human nominal, a related adjective is derived from the latter.

Thus the hypothesis put forward above turns out to be a special

case of a more general regularity. One more observation should be made in connection with the suffix +iczny, namely, that it always attaches to items of foreign origin (cf. the examples of (9)), while native items are supplied with +ny alone. The Xistyczny class certainly falls into the category of foreign items. The affix +ik as such seems to be foreign (and there is, as we shall see, both morphological and phonological evidence for this). Also compare the discussion of the foreign suffix +ika below.

Saying the Xista nouns are capable of producing Xistyczny adjectives does not mean that the adjective derived from a given Xista must necessarily be of the form Xistyczny. There are numerous cases where the adjective derived from an Xista base assumes the form Xistowski:

(14)	(marksizm)	marksista	marksistowski
	(maoizm)	maoista	maoistowski
	(rewanżyzm)	rewanżysta	rewanżystowski (and rewanżys-
	Action to the second		tyczny)
	(faszyzm)	faszysta	faszystowski
	(kapizm)	kapista	kapistowski (and kapistyczny).

This, however, is a more general problem, namely that of +(icz)ny - +(ow)ski distribution in Polish, not necessarily restricted to adjectives derived from Xista (cf. romantyczny versus dekadencki). The suffix in (14) is basically +ski, and there are reasons to claim that in the examples cited the formative +ow is inserted between +ist and +ski for 'phonological' reasons. Phonologically, +ski (like +ny) contains as its first segment a palatalizing vowel which gets deleted in the process of phonological derivation. If attached directly to +ist, +ski (/+isk+(y)/) would cause palatalization of /t/; then the vowel would drop, which would result in a cluster which would undergo the very general rules of cluster simplification and then geminate reduction. Thus the phonological derivation would, in effect, delete most of the formative +ist from the phonetic form of the adjective, leaving +i+ski, so the base would no longer be recognizable, and therefore the meaning of the derivative would not be transparent.

There is one more problem which we have omitted from consideration so far, but which nevertheless calls for some explanation — the problem of converting +izm into +ist in the derivation of the Xista nouns from their Xizm bases. We have objected to Aronoff's rule of allomorphy converting /m/ to /t/ in the English case. No such rule could be proposed for Polish, either. In the Polish case such a rule turning Xzm+ into Xzt+ (or Xst+), at best restricted to morpheme-final position, would be too powerful—it would affect words such as plazma, pryzma, etc. Certainly we could constrain the rule by a morphological restriction to words of the form Xizm, but there would

still be trouble in formulating it (/zm/ changes into /st/ in front of what? and

why?).

Tokarski (1975;816) presents the following observation: "Nouns in -izm-(-yzm) ... in the locative ... take -izmie (-yzmie), (not -iźmie) ..." Since the palatalization assimilation rule is usually blocked by a morpheme boundary icf. zlecieć 'alight' and zle 'bad'), this might be construed as indicating a morpheme boundary after the z in +izm-presumably +iz+m. There are some problems here, however. First, words such as spazm, orgazm show the same behavior. Secondly, Tokarski's comment is true only of certain conservative styles and varieties of Polish-Karaś and Madejowa (1977), e.g., give palatalized locatives in [-źm'e] as the first entry for all words with stems ending in -zm, as opposed to Towarzystwo (1972), who implicitly agree with Tokarski. Thus, unless we analyze e.g. spazm also as spaz+m (not an entirely unmotivated analysis), our evidence here seems somewhat inconclusive. Still, if we accept the above reasoning, we would analyze the suffix +izm as +iz+m. This might then suggest analyzing +ista similarly as +is+ta (</+iz+ta/by the usual voicing assimilation rule). This is somewhat supported by the seeming independent existence of the suffix +ta in Polish (cf. kolegiata, Azjata; opereta; jehowita; glupota, starota, szarota, etc., although these may be different suffixes, and the last three are native). If we then had the underlying form +iz+m+ta. we could have a rule similar to Aronoff's for English changing the /m/ to /t/; a much better solution, it would seem, would be simply to truncate the +m+ in this environment.9 The latter solution is further supported by the virtual

<sup>&</sup>lt;sup>9</sup> An alternative analysis here would be to assume that the suffix +ist is added in toto to the word suffixed with +izm, and that the +izm+ is truncated before +ist. While we perhaps prefer the former solution, both suggested solutions require a rule of truncation. We cannot see any reason why such a rule of truncation should not be allowed in Polish. There are other spheres of Polish morphology, both native and foreign, where the truncation of a whole suffix is the only sensible solution; +um, another Latin suffix, gets deleted in several morphological contexts. Note that +ista can also attach to nouns of the form Xum, causing its truncation:

(F2)	seminarium	seminarzysta
	laudum	laudysta
	stypendium	stypendysta
	liceum	lice(al)ista
	monopolium	monopolista
	latyfundium	latyfundysta
	gimnazjum	gimnazista, etc.

Also, although this is more moot, the fact that the plural of nouns in +um is declined without it may be handled by a truncation rule. Otherwise such forms as muzeów (gen. pl. of muzeum) are very difficult to account for, since +ów is usually only added to consonant stems, and since vowel sequences across morpheme boundaries normally show deletion of the first vowel on the surface. Postulation of the form as underlying

nonexistence of verbs in \*+izmować from nouns in +izm (except for egzor-cyzmować discussed below). Instead, we regularly find +iz+ować from nouns in +izm (eg rewolucjonizować <rewolucjonizm), with truncation, so it seems, of the morpheme +m+ before +ować as well. English is problematical here, since, if -ism came from /iz+m/, we should expect -ist from /iz+m+t/

muze+um+ów, with the proposed rule of truncation, accounts for all the irregularities mentioned. Another clear case of truncation in Polish is the morpheme +k (</+ik/) in adjectives, which inevitably disappears in the comparative, if it is formed by means of a single word:

```
(F3) szybki
                szybszy 'quick'
                gładszy 'smooth' (of. gładzić 'smoothe')
     gładki
     predki
                predszy 'rapid' (cf. prąd 'current')
     daleki
                dalszy 'far' (cf. dal 'distance')
     miekki
                miększy 'soft' (cf. mięknąć 'soften')
     miałki
                (?) mielszy 'powdered' (cf. miał 'dust')
     cienki
                cieńszy 'thin' (cf. cienieć 'grow thin')
                głębszy 'deep' (cf. głąb 'abyss')
     głeboki
     szeroki
                szerszy 'wide' (cf. szerzyć 'spread')
                wyższy 'high'
     wysoki
     lepki
                (??)lepszy 'gluey' (cf. lep 'glue')
     krzepki
                (?)krzepszy 'vigorous' (cf. krzepa 'vim')
     cierpki
               cierpszy 'acrid'
               (?)płaższy 'flat'
     płaski
     waski
               weższy 'narrow'
     meski
               (?) meższy 'male'
     rześki
               (?)rześszy 'vigorous'
     gietki
               gietszy 'elastic' (cf. giętarka 'bending machine')
               (?)szorstszy 'rough'
     szorstki
     krewki
               (?*)krewszy 'hot-headed'
               (?)gorzszy 'bitter' (cf. gorycz 'bitterness')
     gorzki
               cięższy 'heavy' (cf. ciężarny 'weighty'), etc.
     cieżki
```

(A few comments on (F3): some of the related forms in parentheses clearly indicate the suffixal nature of +k+. Furthermore, the palatalization facts—cf. e.g. gorzki—indicate that it is underlying /ik/. The vowel in this suffix blocks the choice of the long form of the comparative, +iej+szy, which usually appears when the stem ends in a consonant cluster; thus, cf. cierpszy, szorstszy, but \*cierpiejszy, \*szorściejszy. The ż in wyższy, płaższy, węższy, grząższy and even in męższy seems to be due to a Polish spelling restriction against \*(-szsz-) sequences, since in each case the ż is due to assimilation of /s/ to the following palatal sz. The fact that this is a truncation rule is further proved by adjectives in Xki where the /k/ is demonstrably not a morpheme, and is therefore not deleted, e.g. dziki/dzik-szy 'wild'—this because truncation applies only to morphemes, and this thus must be a truncation rule, and not some sort of phonological rule. A small problem is seen in daleki, \*zzeroki, glęboki, wysoki, where a vowel is lost as well as +k+ (also blocking palatalization of the /r/ in, e.g., \*zzerszy\*). This ill-understood phenomenon may be related to the extra vowel frequently seen before the suffix +t(a).) These examples provide independent motivation for allowing rules of truncation in Polish morphology.

or /iz+t/, but the /-t/ does not seem to occur elsewhere in English in the same semantic realm.

To complete our discussion concerning the +ista and -izm suffixes in Polish and their corresponding adjectival derivatives, let us examine briefly the 27 exceptional Xistyczny forms (those which do not possess corresponding Xista bases, but do have corresponding Xizm forms):

heroizm heroistyczny (15)lamaistyczny lamaizm industrialistyczny industrializm truistyczny truizm atawistyczny atawizm synchronistyczny synchronizm eufemistyczny eufemizm narcystyczny narcyzm autyzm autystyczny bimetalistyczny, etc. bimetalizm

We note here that at least 7 of these nouns have colloquially occurring Xista forms, which for a variety of reasons failed to make it into Doroszewski's Slownik, and thus are not in Indeks a tergo. These are especially the Xizms which do not have an associated nomina agentis other than Xista to block the latter. A possible explanation of the remaining exceptions is that the adjectives were borrowed directly into Polish from French or English in the Xistique/Xistic form and only supplied with the native +ny suffix to fit into the pattern. Many Xista nouns, then, may be analogically coined within Polish, and (15) is simply the remaining cases which have yet to have their paradigms regularized. For each of the exceptional formations we can find a corresponding adjective in French or English. We must also remember that word formation processes are never one hundred percent regular and, especially in the case of borrowed lexical material, we should leave a margin for irregularities. Polish absorbs foreign words extremely easily, especially 'learned' ones (cf. recent borrowings like multilateralny, bilateralny, ampelologiczny, nefrologiczny, agenturalny, etc.); for more examples of recent lexical borrowings see Smółkowa and Tekiel (1977).

We hope to have shown that, contrary to Aronoff's (1976) analysis of English, in Polish, adjectives in +istyczny derive from nouns in +ista by a regular word formation rule. The latter in turn often derive from nouns in +izm by a word formation rule, rather than vice versa. Likewise, we maintain, +istyczny does not regularly derive from +izm. It should be pointed out that many of our strongest arguments for the Polish analysis are based on types of formations which have precise analogues in English. This, together with the criticisms of Aronoff (1976) which we have presented above, strongly

suggests that the correct analysis of the English data is the one precisely parallel to our analysis of the Polish case; that is, that the superficially most plausible analysis, that +istic is derived from +ist, is also the proper one, just as is true for the analogous case in Polish.<sup>10</sup>

#### APPENDIX

## Palatalization in native and foreign words in Polish

There are several rules of palatalization in Polish (see Gussmann 1978); the ones which concern us here are the rules of anterior palatalization and velar palatalization.

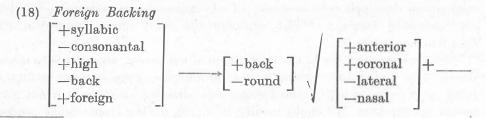
The effects of the anterior palatalization (all glosses are diminutives unless otherwise indicated):

There are reasons to claim that apart from the rules of palatalization discussed by Gussmann there is a set of rules of palatalization operating only within the system of foreign lexical items.<sup>11</sup> The effects of the 'foreign' palatalization:

<sup>11</sup> Here we are interested mainly in palatalization across boundaries, i.e. in front of suffixes, not within a morpheme.

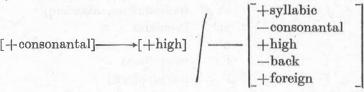
<sup>&</sup>lt;sup>10</sup> We thank J. Kaye, J. Rubach, E. Gussmann, E. Górska, E. Chwalibóg, B. Szymanek, E. W. Browne, P. Neubauer, O. Swan, E. Riddle, and C. Greene for their comments on the paper.

(Apropos of (17G), we note that underlying hard and soft palatals are extremely rare in this environment, but seem to remain unchanged.) There is no difference in the quality of the palatalized consonant for p, b, f, w, m, n, l, and I (compare (16A) and (17D)—also (17G): š, ž and č show no change). There is no palatalization at all in the examples of (17E), and we can see that in those cases the vowel of the suffix turns up as [y], not [i]. The same vowel turns up in the cases in (17G). In the examples of (17G), the velars are softened (made [+high]), without any change in place or manner of articulation (cf. (16C)). The above examples show that suffixes like +izm or +ika cause a different sort of palatalization from native palatalization, which we will refer to as foreign palatalization. (Cf. the examples of +ika: fotografika, rytmika, sylabika; but matematyka, melodyka, metaforyka, klasyka, etc.) The most plausible way to account for the processes of foreign palatalization is to postulate a rule which would retract the front high vowel of the suffixes in question when preceded by [t, d, s, z, r] - we will call this the Foreign Backing Rule - and a rule of Foreign Palatalization, which would raise the consonants unaffected by the Backing Rule to their [+high] counterparts. The rules would be as. follows:



<sup>&</sup>lt;sup>11</sup> A complete list of exceptions for the suffix +izm: rasizm, parnasizm, tumiwisizm, marksizm, nazizm, awangardzizm. There are no such exceptions for +ika.

#### (19) Foreign Palatalization



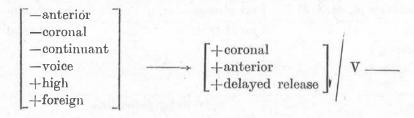
The Backing Rule (18) blocks palatalization in items like egotyzm, matematyka, etc.; but, as it is restricted to the vowel in a suffix only, it does not prevent foreign palatalization within a morpheme in words like sinus, butik, diwa, tartinka and riposta.

A small problem with rules (18) and (19) arises with the segment /k/. In foreign words we sometimes find the expected 'foreign' [k'] (e.g. lamarkizm), and sometimes a 'semi-native' [c] (as in grecyzm-cf. Grek). In fact, unless the /k/ is preceded by another consonant (trockizm, blankizm, frankizm, lamarkizm, klerkizm—an exhaustive listing), in which case the foreign rule regularly applies, the /k/ is palatalized to [c] (about 23 examples having a related form with [-k]). Thus: laicyzm (laik), taktycyzm (taktyk(a)), gotycyzm (gotyk/got), sceptycyzm (sceptyk), attycyzm (attyk), etc. The only case at all problematical is turcyzm, but the form Turek (cf. Gussmann 1978a: ch. II) shows that there is indeed an underlying vowel before the /k/, which makes this case also regular. There are about 10 cases in Xcyzm which have no alternating forms, and thus might suggest the [c] as a kind of spelling pronunciation based on the language borrowed from (e.g. rotacyzm, solecyzm, narcyzm, egzorcyzm, rusycyzm). Of these cases, only narcyzm and egzorcyzm have a consonant before the -c-, and the former appears not to have a morpheme boundary after the [c] (cf. narcyz). The latter has no related shorter forms (just egzorcysta and egzorcyzmować-the latter and pryzmować being the only verbs ending in -yzmować; since pryzm seems to be monomorphemic, these facts suggest that egzorcyzm as well is monomorphemic). Furthermore, in a case like mechanicyzm 'mechanistic materialism' (cf. mechanik 'mechanic'), there is apparently no direct 'spelling pronunciation' source for it in any of the languages from which the word might have been borrowed. That is, bearing out Laskowski's (in press) contention, this appears to be a case of a formation by rules generated within the borrowing language, Polish, although the exact source is not clear. Cf. also footnote 4 above.

The problem here, given the correctness of the above analysis, is to incorporate these facts into the rules. Under our analysis, grecyzm must be underlying /grek+izm/. Clearly, the foreign palatalization as given will not give proper results here. We could modify rule (19), a very cumbersome process in this case; perhaps a more reasonable alternative (since native palatalization

will also give the wrong result, except for the clearly inappropriate Second Velar Palatalization—cf. Gussmann 1978b) is to have a separate rule (before the surface velar palatalization rule, however, to allow lakier instead of \*lacer) turning [k'] in foreign words into [c] after a vowel. This is not, we might note, a particularly natural rule, though it does have counterparts in the history of various languages:

#### (20) Special k-palatalization



In addition to rule (18), there is a much more general rule of backing in Polish (seen e.g. in alternations like wielki 'great, n. sing. msc.' / wielcy' id., masc. pers. pl.', etc.), which must follow rule (20) and must also not be restricted only to native stems. This rule then converts the /i/ in outputs of rule (20), e.g. /grec+izm/, into /y/ ([grecyzm]). For details of this rule, see Gussmann (1978b, Chap. 2 § 13; 1978a: 22, rule 17). Apparently, however, we must change Gussmann's rule by adding the feature [—foreign] to the rule to stop backing in forms such as Dżindża, dżinsy, etc. But if we do that, the rule could not apply to grecyzm.

We give below a table illustrating the results of various palatalizations for different Polish underlying segments.

A few comments on this table are in order. The segments ć, dź, ś, ź seem to be excluded from foreign words (cf. e.g. Dżindża=Jinja, Uganda). Thus there are no such examples for 'foreign palatalization' to apply to. We would, of course, expect no change. Fidelholtz (1979) discussed the suffix +ika/+yka,

UNDERLYING SEGMENT	i-anterior palatalization (native pal.)		foreign palatalization
labials (p, b, f, v, m)	(p', b'	', f', v', m')	the same
dental nonflapped sonorants (n, l, l)	(n', l', l')		the same
hardened palatals (č, dž, š, ž, c, dz)	(no change)*		(no change)*
soft palatals (ć, dź, ś, ź)	no change		no change
vowels	no change		no change
dentals: t, d	ć, dź	1 1	t*, d*
s, z r	ś, ź ž*		s*, z*
velars:		lst velar palataliza- tion	(c* (/V_yzm))
k	c*	č*	$\begin{cases} c^* (/V_{yzm}) \\ k' (/C_{izm}) \end{cases}$
g	dz*	ž* (via dž)	g'
x	š*, ś	š*	x'

<sup>\*</sup> Also -Ci- -- -Cy-

and suggested a principle of 'keeping as close to the base form as possible'. Rule (18) is an indirect way of accomplishing this. Nevertheless,  $l(\to 1)$  and  $k(\to c, k')$  are contrary to this principle—fortuitously, neither segment ever occurs before +ika/+yka (because of phonological rules in the languages such words were borrowed from which would always convert /k/ into [ $\delta$ ] or [s] in this environment, coupled with the lack of productivity of this suffix in Polish, so that no new formatives ending in /k/ have been placed before this suffix).

A few comments are appropriate here on the ordering of the rules. Clearly, since native palatalization affects foreign stems in such words as rektorze (<rektor), we must order Foreign Backing (rule (18)) before native palatalization to stop palatalization in such words as purysta. (The alternative of claiming an underlying back vowel in e.g. grecyzm would have the unacceptably unnatural consequence that /k/ would palatalize to [c] before a back vowel.) But native palatalization obviously precedes native backing. Thus the two backing rules cannot be combined into one. (The combination in any case would be quite forced, as the environments are not readily collapsible.) We might, however, complicate the Surface Velar Palatalization rule somewhat by including in it what we have called the Foreign Palatalization Rule (19). We would have to change rule (20) slightly as well.

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