

Aural images

RICHARD RHODES

19.1. Introduction

In Rhodes and Lawler 1981 (henceforth R&L) we sketched an analysis of English monosyllables which involved dividing them into initial consonant(s) versus the vowel nucleus plus final consonant(s). Following one of the traditional terminologies of syllable analysis, we called the initial consonant(s) the *assonance* and the remainder of the syllable the *rime* (cf. Bolinger 1950). We argued that the resulting parts fall into systems which are sound-symbolic in the sense that they participate in sound-meaning correspondences even though they are, by traditional analysis, submorphemic entities.

Many of the entities that we concentrated on in R&L have semantics that are based on vision. For example, we proposed that there is a rudimentary classifier system like that in (1) and a system of path shapes like that in (2) both of which primarily depend on the shape of objects or paths referred to.

(1) Classifiers

- st-* [1 dimensional] (*stick, staff, stem, etc.*)
str- [1 dimensional, flexible] (*string, strand, strip, etc.*)
f- [2 dimensional] (*flap, flat, floor, etc.*)
ʃ-/sk- [2 dimensional, flexible] (*sheet, scarf, skin, etc.*)
n- [3 dimensional] (*knob, knot, node, nut, etc.*)
sp- [cylindrical] (*spool, spine, spike, etc.*)
dr-/tr- [liquid] (*drink, drain, trickle, trough, etc.*)
et al.

(2) Paths

- tr-/dr-* [simple] (*track, trip, drive, drag, etc.*)
p-/b- ["anchored"] (*push, pop, bump, bounce, etc.*)
j-/t- [short] (*jerk, jiggle, jagged, chop, etc.*)
w- [back and forth] (*wag, wiggle, wobble, etc.*)
et al.

In this paper we will refer to the mental entities which these assonances label as *image schemata* or, for the sake of brevity, *images*.¹ Single perceptions are both image schemata in their own right and analyzable into subordinate image schemata, and some of those schemata are analyzable into subordinate schemata, and so on. The words we use to label perceptions often do not refer to the perceptions as wholes, but refer rather to a subset of the image schemata that make them up. This view is similar to the one Langacker (1987) takes in his cognitive grammar. It also parallels Whorf's (1940) gestalt approach, in which his term *figure* corresponds to our *image* (*schemata*). There is, however, one crucial way in which we disagree with Whorf. He was so taken by the discovery of the figure-ground aspect of visual perception that, following the psychologists of his day, he dumped all other perceptions into a single catch-all "egoic field."² In our approach, single perceptions may be comprised of images from all modes of perception – visual, aural, tactile, taste, and/or smell. I will discuss some implications of this below.

What is important to the immediate discussion is that there is also a set of forms with meanings based in aural images which are also susceptible to submorphemic analysis. The assonances in (3) were identified in R&L.³

- (3) *p-* [abrupt onset] (*pop, ping, peep, etc.*)
b- [abrupt, loud onset] (*boom, bang, beep, etc.*)
bl- [loud, air-induced sound] (*blat, blast, blab, etc.*)
kl- [abrupt onset] (*clank, click, clip clap, etc.*)
r- [irregular onset] (*rip, roar, roll, etc.*)
ɣ- [loud, vocal tract noise] (*yell, yap, yak, etc.*), and so on.

That visual and aural images are of two separate kinds can be seen most clearly in the existence of forms which are ambiguous between the two.

- (4) *crack* visual — *A crack appeared in the wall.*
 aural — *He heard the crack of a whip.*
pop visual — *He suddenly popped up.*
 aural — *It popped loudly.*
rip visual — *There is a rip in his coat.*
 aural — *The fabric split with a loud rip.*

In this paper I will explore the range of English simplex words⁴ referring to aural images. This represents a piece of groundwork which is necessary to build a full theory on which to base submorphemic analysis. Forms labeling aural images are mapping sound onto sound. An analysis of them should circumvent the unknowns of synesthesia. Therefore a thorough examination of words which label aural images should, we expect, allow us to see in relatively direct ways what sorts of transformations (in the intuitive sense) take place in reducing an image to a string of phonemes. Of particular interest are the linearization of simultaneously perceived events, and the imposition of discreteness on analog phenomena.

19.2.2. Sound symbolism

Sound symbolism in aural image labels is different from true onomatopoeia in that the submorphemic pieces in question have some measure of paradigmatic support, i.e. they occur in groups sharing a correlation between structural parts and acoustic reference, as in (10), and occasionally even in minimally contrasting pairs, as in (11).

- (10) a. assonances
 r- [irregular]
 rattle, roll [of thunder], rip, racket
 θ- [low pitch, slow onset]
 thump, thwack, thunk, thud
 b- [abrupt, (relatively) loud onset]
 bang, beep, boing, bellow
 p- [abrupt onset]
 pop, peep, ping, pow, pitter, patter, peal
- b. rimes
 -ek [abrupt decay]
 clack, crack, whack, smack
 -ɪŋ [extended decay]
 ring, ding, ping, boing
- (11) high pitch vs. unmarked pitch
 click vs. clack
 (relatively) loud vs. unmarked
 beep vs. peep
 abrupt irregular onset vs. abrupt smooth onset
 crack vs. clack

I will call the type of sound symbolism found in aural image labels *structured sound symbolism*.

19.2.3. Arbitrary forms

There also exist some words used to refer to sounds that have no basis in acoustics, at least not synchronically. These all appear to be generic terms as, for example, the forms in (12).

- (12) noise, sound, din

One might also argue that adjectives such as *loud* and *quiet* should be in this set.

Occasionally a cartoonist like Johnny Hart (*B.C.*) will even use the labels for actions based on visual images to express the sound associated with those action(s).

- (13) clamp, nab, bump, squeeze, munch, suck (all from J. Hart)

Of necessity these must be classified as arbitrary names for sounds when they are used in this manner.

19.3. Structured sound symbolism

Now let us turn to a preliminary analysis of the words involved in structured sound symbolism. In R&L we divided words into assonances and rimes, splitting the form between the initial consonant(s) and the vowel. While that approach works quite well for visual images, the words labeling aural images are immediately susceptible to a different though related analysis, one in which every phoneme has its own individual role. As shown in the preceding sections, the class of words that could be taken to refer in some way to aural images constitutes a rather diverse set. For the first level of analysis here I will concentrate on forms that can appear in the syntactic context “go_____ (locative adverbial),” like those in (14).

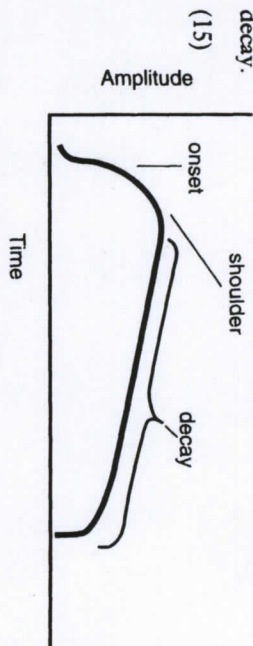
- (14) a. go_____
- It goes ping.*
It went ping.
It goes crack, crack.
- b. go_____ + locative adverbial
It went smack against the wall.
It went wham on the floor.
It went zip through the window.

I choose this set because it allows only wild forms, cf. the weirdness of *go rattle, *go groan, *go smash. This means that if we restrict ourselves to forms that consist of tame phonology, they will be at the wild end of tame as forms, the fewest possible other conventions will apply, and we are less likely to run into competing pressures. I will call these forms *semi-wild*.

19.3.1. Semi-wild words

The most important set of distinctions made in the semi-wild segment of the vocabulary of aural images relates to aspects of the amplitude of the sound represented. We will treat the amplitude as consisting of an *onset*, a *decay*, and sometimes a *shoulder*. The onset is the initial rise in amplitude. The decay is the final fall in amplitude. Some sounds have as the final part of their initial rise a transition of some length between the onset and the decay that has a different slope from either. This distinct part of the amplitude rise I will call the *shoulder*. A sample graphic representation is laid out in (15). In the semi-wild forms, the

phonological parts of words correspond to the amplitude envelope iconically. The initial consonant represents the onset. If there is a resonant clustered with the initial consonant, it represents the shoulder. The final consonant represents the decay.

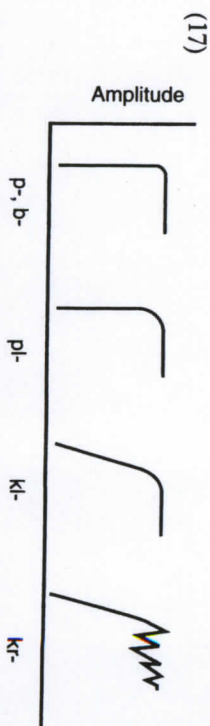


19.3.1.1. Onsets in semi-wild words

The assonances most widely used in the semi-wild sound vocabulary are exemplified in (16).

- (16) a. abrupt onsets
- p-* peep, ping, pitter patter, pop, pow
 - b-* beep, bang, boing
 - pl-* plink, plopp, phunk
 - kl-* click, clank, clang, clunk
 - kr-* creak, crack, crunch
- b. irregular onset
- č-* chirp, cheep, chitter chatter
- c. poorly resolvable onsets
- θ-* thwack, thump, thunk, thud
 - W-* whiz, whack, wham, whap, whosh
 - z-* zip, zing, zap, zak, zot, zoom

The assonances referring to images with abrupt onsets distinguish instantaneous-onset types, *p-*, *b-*, and *pl-*, from steep-onset types, *kl-* and *kr-*.⁸ The single-consonant assonances, *p-* and *b-*, both representing instantaneous onsets, differ in that *b-* represents (relatively) loud sounds, while *p-* represents (relatively) small sounds, cf. *bang*, *beep* with *pop*, *peep*. *pl-* represents sounds which are both (relatively) small and have an instantaneous onset with a following shoulder, e.g. *plop*, *plink*. *kl-* and *kr-* are distinguished in that *kr-* has an irregular shoulder, cf. *clack* with *crack*. These distinctions are sketched in (17), where the amplitude curves are gross representations of the amplitude rise in the signified sounds. The *kl-* and *kr-* exist without a corresponding *k-* precisely because the angle of the onsets they represent entails the existence of a shoulder. On the other hand the vertical onsets that *p-* and *b-* represent may or may not have a shoulder, hence the contrast of *p-* vs. *pl-*.



Signified sounds with onsets that are not monotonically increasing in amplitude we call *irregular*. *č-* represents sounds with irregular onsets, e.g. *chirp*.

The poorly resolvable onsets are hard to describe precisely because they are not readily resolvable by our aural apparatus. They are best described individually. *θ-* represents sounds with a class of slowly increasing onsets involving a burst of white noise, e.g. *thump*. Such sounds are generally described as 'dull.' *w-* or *w-* (spelled *wh-*) represents sounds which arise through air turbulence, e.g. *whiz*. *z-* represents sounds which are, for want of a better term, the sound of speed; most frequently this includes both air turbulence and some additional component which is resolvable by the human aural apparatus, giving the impression of a white noise overlaid on a periodic component, i.e. a pitch, e.g. *zoom*.

There are a few additional onsets which have a preceding *s-*, *spl-*, *spr-*, *skr-*, and *sw-*. These all seem to refer to sounds that are acoustically complex, with a white noise component at onset, or have an initial small amplitude before the big jump.

- (18) *slash*, *splat*, *sproing*, *screech*, *scrunch*, *swish*

19.3.1.2. Vowels in semi-wild words

Vocalic nuclei mark several distinctions in the resonance of aural images. The neutral vowel seems to be *-ə-*. Forms containing *-ə-* are not semantically marked as referring to aural images that have high or low pitch, except by virtue of an opposition, as in (19b). Nor do they represent images that are either marked as loud or soft, except as other parts of these words entail loudness as in (19c).

- (19) a. *crack*, *smack*, *jangle*, *snap*
 b. (i) *clack* (cf. *click*)
 (ii) *clank* (cf. *clink* and *clunk*)
 c. *whap*, *bang*

Examples of *-ə-* stand as the unmarked member in sets which differ only in the nucleus. Forms with *-ə-* contrast with forms with *-r-* on the one hand and with *-m-* on the other.

- (20) a. *clink*, *clank*, *clunk*
 b. *jingle*, *jangle*
 c. *click*, *clack*

Forms with *-r* signify high-pitched and/or low-amplitude sounds. Generally they have a diminutive sense.

- (21) a. *clink* (from *clank* or *clunk*)
 b. *jingle* (from *jangle*)
 c. *click* (from *clack*)
 d. *plink* (from *plunk*)
 and possibly also
 e. *bing* (from *bang*)

Forms with *-t* signify high-pitched sounds unmarked for loudness.

- (22) *peep, beep, creek, squeak, tweet, screech*

Forms with *-a*, as in (23), signify distinctively low-pitched sounds, while the few forms in *-a* (Brit. *-ɔ*), listed in (24), signify sounds that are distinctively not high-pitched.

- (23) *clunk, plunk, thunk, thump, whump, (s)crunch*

- (24) *pop, plop, whomp, bong, tick, tock, clip clp, ding dong*

What the difference is between the simple forms in *-a* (Brit. *-ɔ*) and those containing *-a* I do not know at the present time. In reduplications it looks like there are factors relating to the degree of wildness governing the choice. Comparing *jingle jangle*, *chitter chatter*, and *pitter patter* with *tick tock*, *clip clp*, and *ding dong*, the distinction seems to be that reduplications in *-a* (Brit. *-ɔ*) are semi-wild but reduplications in *-a* are tame. Unfortunately there are not sufficient numbers of forms to be able to tell for sure that this is not just a coincidence.

19.3.1.3. Decays in semi-wild words

The remaining part of the syllable is the final consonant. Final consonants refer to the decay of a sound. The final consonants of primary concern are *-p*, *-t*, *-ʃ*, *-s*, *-k*, and *-ŋ*. They mark whether or not the decay is extended, and if it is irregular.

- (25) a. extended decays
-ŋ *ding, clang, bong, bang*
-m *boom, wham, blam*
-ʃ *crunch, screech*
-s *crash, splash, whoosh*
 b. abrupt decays
-p *pop, plop, thump, whap*
-t *tweet, zot, splat*
-k *clack, thwack, thunk, zak*

The easiest of these to characterize is *-ŋ*. It represents an image with an extended decay. In contrast, *-m* represents an image with a slow, generally muffled decay. Of this pair *-m* is the marked form. It is associated with a relatively low-pitched sound, cf. *bang* vs. *boom*.

- (26) a. *ping, bing, ding, bang, clang, boing, sproing, bong*
 b. *blam, wham, boom, ka-bam*

This use of *-m* is probably also related to the tame initial *m*-, which has aural meanings of indistinctness and low pitch (27a) and visual meanings of indistinctness (27b).

- (27) a. *mumble, mutter, murmur, moan, muffle*
 b. *murk, mist, mess, muddle*

The *-ʃ* and *-s* represents images with an extended irregular decay. The difference between *-ʃ* and *-s* appears to be that the extension of the decay is greater with *-ʃ*.

- (28) a. *crunch, scrunch, screech*
 b. *crash, slash, whoosh*

Final *-t* represents images that have a steep but not precipitous decay.

- (29) *tweet, zot, splat, blat*

Final *-p* and *-k* refer to images that have an instantaneous decay. As a first approximation, they differ in that *-p* is associated with "hollow" sounds, while *-k* is unmarked. This hollowness is probably associated with the pitch drop in the second formant that labials induce.

- (30) a. *whap, thump, pop*
 b. *whack, thunk, clack*

After *i* or *r* it is less clear what the difference is between *-p* and *-k*.

- (31) a. *cheep, beep, zip*
 b. *creak, squeak, click*

19.3.2. Tame words

Let me conclude this preliminary overview of the vocabulary of aural images by taking a brief digression into some tamer forms. Because these forms are tamer, they are more difficult to explain completely, and have weirdnesses associated with them. For example, *-r-* is used as part of the assonance to represent an irregular shoulder, as we noted above. It also appears post-vocally in an analogous meaning in at least one small group of semi-wild forms, *chirp* and its variants.

relationships are between acoustic events; the articulations required to achieve the acoustic events on the linguistic side are in some very important sense merely incidental. On the other hand to the extent that it exists, the iconicity in assonance-time analysis of non-aural vocabulary may be based on articulation or, more accurately, on the proprioception of articulation or in acoustics, but either way the iconic connection is synesthetic.

19.4.1. The morphology question

But what light does the vocabulary of aural images shed on the question of whether assonance-time analysis is morphology or not? There are three kinds of evidence in this vocabulary that assonance-time analysis is morphology. First there is evidence of a taxis in these words, second the evidence of combinability of assonances with rimes, and lastly the existence of morphologic processes operating on both assonances and rimes.

19.4.1.1. Tactics

There is no argument that English monosyllables are organized in accordance with a set of phonotactic constraints. But in R&L we argued that there were also semantic-syntactic constraints, such that rimes are the heads of constructions and assonances are subordinate, representing either modifiers or modifiers of arguments. In the aural-image vocabulary there is some evidence that this is true. The phonotactic constraints of English frequently require that forms referring to aural images of complex acoustic structure have the phonological material representing simultaneous parts of such aural images linearized. When this happens the "basic" part of the aural image is represented in the rime, while the "attendant" properties appear in the assonance. The basic part of a sound consists of the part which is most salient, often by virtue of its relative duration and/or amplitude. Attendant properties include onset, less salient properties, and decay. Of these attendant properties only decay is represented in the assonance, and that only for iconic reasons. Thus in forms like *buzz* the white noise represented by the *z* in the rime is the most salient part of the naturally occurring sound. In contrast, the *Star Wars* light saber, which has a complex acoustic structure consisting of a hum with white noise only when it moves, is represented in the *Star Wars* comics by forms like *zzzzzzt*. Here the attendant white noise over the hum is represented by a *z* in the assonance while the salient hum is represented by the vowel of the rime.¹⁰ A similar kind of argument for a modifier-head taxis can be made for the forms with prefix extensions in (39) below.

The existence of a taxis is what is important. Since a taxis is a requirement for morphology, and is in fact the one most often pointed to as the reason why assonance-time analysis cannot be morphology, the existence of a taxis governing

forms of both the simple assonance-time type and this semi-wild aural-image type constitutes a strong argument in favor of the position that assonance-time analysis should simply be considered a special case of morphology.

19.4.1.2. Productivity

The next argument that assonance-time analysis is morphology concerns the fact that assonances and rime never combine productively. Although we sometimes recognize that productivity is scalar, it is more generally treated as a matter of two extremes. Either a process is productive or it isn't. There is, however, a discernible midpoint on the scale – an intermediate level of combinatory possibility between productive and non-productive. Let me use the term *active*. A construction is productive if all or nearly all combinations of relevant morphemic units can combine up to the limits of semantic compatibility. In contrast, a construction is active if, of all the possible combinations of relevant morphemes, only a few are grammatical, but new instances of the construction can be formed. For example verb-object compounding was productive, particularly in the sixteenth century. Now it is active, giving rise to only occasional new forms, as suggested in (38).

- | | |
|--|---|
| (38) Surviving forms from
the productive period | Forms of more recent origin |
| <i>cuthroat</i> (1535) | <i>tattletale</i> (unlisted, <i>OED</i> , |
| <i>pickpocket</i> (1591) | no date, <i>Webster's Third</i>) |
| <i>scarerow</i> (1592) | <i>kiljoy</i> (1776) |
| etc. | |

The point is that just because a construction is not productive doesn't mean that it is frozen. The assonance-time combination never reaches the level of productivity. The most it can be is active. A quick glance through the etymologies of English monosyllables, most of which read "origin uncertain," "prob. akin to . . ." and the like, should convince one that monosyllables must be being innovated continuously, but at a slow rate. This is active combination. The reality of this is further underscored by the reinterpretation of forms of varied historical sources as new instances of assonances, e.g. the largely Germanic *sl*-liquid classifier (*stop*, *slush*, *shurry*, etc.) also includes the *sl*- in Latin *sluice* (< Vulgar Latin **exclusa*) and the largely Germanic *fl*-liquid classifier (*flow*, *flush*, *food*, etc.) also includes the *fl*- in Latin *fluid* (< L. *fluidus*). These assonances have the meanings they now do as part of a convention of modern English, regardless of the original source. The semi-wild aural image forms come as close to being productive as anything among monosyllables. Aural-image forms are made up quite freely by some speakers, although such forms generally enjoy only limited success. A small sample from Johnny Hart's *B.C.* is given in (39).

- (39) *splang* "the sound of a type of forceful collision"
 (cf. *splat, splash; bang, clang*)
gronk "the sound a dinosaur makes"
 (cf. *growl, groan; honk, bonk*)
*boink!*¹¹ "the sound of a small collision (with a rebound)"
 (cf. *bounce, bump; sprong; clink*)

19.4.1.3. Process morphology

The last argument that assonance-rime analysis is morphology is that there exist processes which operate on the morphological units that appear in such analyses. Processes are substitutions for, or additions to, those units, or parts of those units, carrying a corresponding and systematic adjustment in meaning. The forms in (21) (repeated here as (40)) reflect a substitution of an *r* for the vowel of the basic form with a corresponding adjustment of meaning.¹²

- (40) a. *clink* (from *clank* or *clank*)
 b. *jingle* (from *jangle*)
 c. *click* (from *clack*)
 d. *plink* (from *plank*)
 and possibly also
 e. *bing* (from *bang*)

There is also a process on semi-wild forms that expands them with an initial *ka-* (or *ker-* before *s, pl*, and for some speakers, before *W*), meaning (approximately) "extra loud and/or acoustically complex."

- (41) a. *pow* *ka-pow*
bang *ka-bang*
thump *ka-thump*
 b. *splash* *ker-splash*
smack *ker-smack*
plop *ker-plop*

Thus it seems this type of sound symbolism, also known as phonesthematic or submorphemic analysis, while interesting in its own right, is really just a special case of derivational morphology.

NOTES

1 Note that these image schemata are *not* Peircian images. Images, in the sense that we are using the term here, are not only hierarchical but also recursive.

- 2 Treating visual perception as specially privileged is a mistake of the same sort as the assumption that writing is "real" language, i.e. what can be reduced to a tangible form is more real than what can't. What is missed by treating visual perception as specially privileged is that there is just as much figure and ground in the other modes of perception as there is in the visual (cf. Langacker 1987). For example, consider the background noise of daily life in an urban setting, or the crickets of a rural spring evening. When we talk over these noises they are one layer of ground against which our speech is a figure. And even within speech itself, voice quality stands as a perceptual ground against which contrastive material is a figure. And similarly for the other senses. Clothing provides the most common tactile ground. Brushing against something or stepping on something is commonly a tactile figure contrasting with this normally unperceived ground.
- 3 The analysis that lies behind (3) is a significant improvement over that presented in R&L for assonances referring to aural images.
- 4 Following the practice in R&L, I will treat disyllables with primary stress on the initial syllable and an unstressed final syllable as belonging to the same class as monosyllables, a class I will call *simplex words*. This is warranted for English because the only process known that distinguishes monosyllables from polysyllables, the comparative *-er* vs. *more*, treats this class of disyllables with the monosyllables, e.g. *happier, simpler, yellower*, but **naicer, *nighter, *chartrouser*.
- 5 *Ojibwa* is spelled with *h* representing /ʃ/ except in the combinations *ch, sh, and zh*, which are palatals, and in word final *nh* which represents nasalization of the preceding vowel.
- 6 Zoque is spelled in a system with Spanish conventions. *j* represents /h/; *qu* represents /k/ before /i/ or /e/; and ' represents /ʔ/.
- 7 The unusual symbols used here are *v* to represent a laryngealized vocoid, *γ* to represent a pharyngealized vocoid or sonorant, *v_r* to represent a raised vocoid, and superscript numbers to represent pitch contours with 5 representing a low pitch ca. in the middle of the second octave below middle C and 1 representing a high pitch ca. middle C.
- 8 It may not be immediately obvious why *pl-* differs from *kl-* and *kr-* in the rate of increase in amplitude. But consider that *k-* in aspirated positions is regularly a near affricate [k^h] while *p-* in the same positions is always a simple aspirate [p^h].
- 9 It is completely possible, and even likely, that the question is not black and white, but rather that there are degrees of iconicity between the articulatory content of a form and its meaning. In the synchronic analysis of single languages the degree of this type of iconicity is generally very low. But it is likely that there do exist quite subtle iconic pressures toward associating certain types of images with certain types of articulations – pressures of a strength that can easily be washed out by sound change, borrowing, or other incidental factors. If this is the case that these factors can only be seen as statistical tendencies over large bodies of data extending over time and across unrelated languages. Attempts to explore very remote relationships among languages must take into account the possibility of such a factor.
- 10 Cf. the discussion of the onset *z-* in (16c) above.
- 11 Of course, this word has now been taken over in another meaning due to its use in the recently popular TV series *Moonlighting* as a euphemism for the *f*-word. Although I don't want to be too explicit here, I would not rule out the possibility that this word was chosen for this euphemistic use on sound-symbolic grounds.

12 The same process operates on forms based on visual images yielding diminutives (R&L, p. 335). There are other processes operating in visual image forms (but only rarely in aural image forms) that were not noticed in R&L. For example, there is a process that flips the voicing of obstruents in assonances, yielding a semantically specialized version of the assonance. This is the reason why some of the assonances in (1) and (2) are given in voicing pairs. Consider the path classifier *p-/b-*. The voiceless version (*push, pull, pop* [in/out/up], *plounce, poke, et al.*) refers to paths with respect to one end-point. The voiced variant (*bump, bound, bounce, bob, et al.*) refers to paths that are (or appear to be) rebounding.

REFERENCES

- Bolinger, D. 1950. Rime, assonance, and morpheme analysis. *Word* 6: 117–136.
 Langacker, R. 1987. *The Foundations of Cognitive Grammar*, Vol. 1. Stanford: University Press.
 McCune, K. 1985. *The Internal Structure of Indonesian Roots*. Badan Penyelenggara Seri Nusa, Universitas Katolik Indonesia Atma Jaya.
 Reddy, M. 1979. The conduit metaphor. In A. Ortony (ed.) *Metaphor and Thought*. Cambridge: University Press.
 Rhodes, R. A. and J. M. Lawler. 1981. Athematic metaphors. *Chicago Linguistic Society* 17: 318–342.
 Whorf, B. L. 1940. Gestalt technique of stem composition in Shawnee. In Carl F. Voegelin (ed.) *Shawnee stems and the Jacob P. Dunn Miami Dictionary*. Indiana Historical Society Prehistory Research Series 1: 393–406. Indianapolis.

Inanimate initiatives in English

ROBERT L. OSWALT

20.1. Introduction

There is in English an indistinctly delineated class of words described variously as onomatopoeic, echoic, and imitative. As used here, an *initiative* is a word based on an approximation of some non-linguistic sound but adapted to the phonemic system of the language. If the modeled sound is one produced vocally by an animate creature – human, mammal, bird – the adapted form, as a working procedure, is classified as an *animate initiative* (abbreviated AI); if the sound is emitted by an inanimate object (although often through manipulation by some animate creature) then it is an *inanimate initiative* (abbreviated II). A third related class, concerned mainly with the expression of emotional states and attitudes, is the *exclamation* (abbreviated EI for *exclamatory interjection*). In certain of their syntactically detached uses, dictionaries refer to all three of these semantic classes as *interjections*.

20.1.1. Sources of data

Comic strips: Examples of IIs, AIs, and EIs have been systematically clipped from comic strips on a daily basis, out of from one to three different newspapers, over the period 1978–1990. What is found from these sources is a mixture of words in different stages of acceptance: idiosyncratic innovations used only by their individual creators; innovations whose use has spread to several comic strips; forms which may be common in colloquial speech but which are not in standard dictionaries; and standard words contained in standard dictionaries. The meanings of these comic-strip occurrences have been inferred from the situations in which they are pictured.

Dictionaries: Each form discussed in this paper has been checked in the Oxford English Dictionary (OED) for citation therein, for definition, and for history. Since the first draft of this paper was written in 1986, the second edition of the Oxford