



THE AMERICAN INTRUSIVE *l*

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THE WELL-KNOWN SANDHI PHENOMENON known as intrusive *r* has been one of the longest-standing problems in English phonology. Recent work has brought to light a uniquely American contribution to this discussion: the intrusive *l* (as in *draw*[l]ing for *drawing* and *bra*[l] is for *bra is* in southern Pennsylvania, compared to *draw*[r]ing and *bra*[r] is, respectively, in British Received Pronunciation [RP]). In both instances of intrusion, a historically unattested liquid consonant (*r* or *l*) intervenes in the hiatus between a morpheme-final nonhigh vowel and a following vowel, either across or within words. Not surprisingly, this process interacts crucially with the well-known cases of /r/-vocalization (e.g., Kurath and McDavid 1961; Labov 1966; Labov, Yaeger, and Steiner 1972; Fowler 1986) and /l/-vocalization (e.g., Ash 1982a, 1982b), which have been identified as important markers of sociolinguistic stratification in New York City, Philadelphia, and elsewhere. However, previous discussion of the intrusive *l* (Gick 1999) has focused primarily on its phonological implications, with almost no attempt to describe its geographic, dialectal, and sociolinguistic context. This study marks such an attempt. In particular, it argues that the intrusive *l* is an instance of phonological change in progress.

Descriptively, the intrusive *l* parallels the intrusive *r* in many respects. Intrusive *r* may be viewed simplistically as the extension by analogy of a historically attested final /r/ to words historically ending in a vowel (generally this applies only to the set of non-glide-final vowels: /ə, a, ɔ/). Thus, in dialects with intrusive *r*, normally word-final *r* and zero alternate, depending on whether the following word is vowel-initial, as in (1). This is generally known as LINKING and will be discussed in more detail below.

1. *R* ~ Ø alternation in historically *r*-final words (e.g., E Mass.)
 - a. *tuner* [tunə] → *tuner is* [tunər ɪz]
 - b. *spar* [spa:] → *spar is* [spar ɪz]
 - c. *pore* [pɔ:] → *pore is* [pɔr ɪz]

Likewise, in some dialects, this process has extended to all words ending in /a/, /ɔ/, and /ə/, as shown in (2). This is commonly known as INTRUSION.



2. *R* ~ \emptyset alternation in historically vowel-final words (e.g., E Mass.)
 - a. *tuna* [tunə] → *tuna is* [tunər ɪz]
 - b. *spa* [spa:] → *spa is* [spər ɪz]
 - c. *paw* [pɔ:] → *paw is* [pɔr ɪz]

In most dialects, this alternation never occurs following other vowels. For example, one could never say **The bee[r] is buzzing* or **I won't allow[r] it* (though see below for discussion of an intrusive *l* pattern following the diphthong /aw/).

As with intrusive *r*, dialects with intrusive *l* can show an alternation between word-final /l/ and zero, most commonly following the vowel /ɔ/, as shown in (3).

3. *L* ~ \emptyset alternation in historically *l*-final words (e.g., SE Pa.)

Paul [pɔ:] → *Paul is* [pɔl ɪz]

As with the *r* in (2) above, some dialects may extend *l* intrusion to all words ending in the vowel /ɔ/, as in (4):

4. *L* ~ \emptyset alternation in historically vowel-final words (e.g., SE Pa.)

paw [pɔ:] → *paw is* [pɔl ɪz]

The intrusive *l* interacts with a large number of other phonological processes in dialects of English, including vocalization, /a/-/ɔ/ merger, and others. This article argues that the intrusive *l* is currently at an earlier stage in its development than the intrusive *r*.

INTRUSIVE *R* AND *L*: STAGES OF DEVELOPMENT

Linguists have long been interested in intrusive *r* for a variety of reasons. The importance of early descriptions of the phenomenon as it appeared in early British RP, such as that provided by Jones (1917), will be discussed later in this paper. Intrusive *r* was first recognized as relevant to phonological theory by a group composed mostly of American Structuralists, who identified it as bearing crucially on contemporary discussions of the phonemicization of low vowels and glides (Bloomfield 1935; Trager 1943; Whorf 1943; Swadesh 1947). Although somewhat later, and with a more dialectological focus, Kurath's (1964) analysis should also be included in this category. Interest was renewed by the Generativists and following generations, beginning with Kahn's (1976) dissertation on syllable structure and continuing to the present day (e.g., Mohanan 1985; Vogel 1986; Broadbent 1991; McCarthy 1991, 1993; Harris 1994, chap. 5; McMahon,



Foulkes, and Tollfree 1994; McMahon and Foulkes 1995; Giegerich 1997; Halle and Idsardi 1997; Gick 1999).

However, agreement on a single analysis of intrusive *r* has been stymied by a number of problems, most of which can be reduced to two issues: the uniqueness of the phenomenon and its age. First, as to its uniqueness, prior to intrusive *l* only one segment (*r*) was known to undergo intrusion in English. This has made it difficult for linguists to identify more general patterns or causes of the phenomenon and has caused many to dismiss the process altogether as a quirky and inexplicable property of the already unusual English /*r*/ (e.g., McCarthy 1993, 191). Second, the English intrusive *r* is a relatively well-established phenomenon, probably having stabilized into its present patterns in the early twentieth century (see, e.g., Bloomfield 1935, 134 for an early discussion of British RP, and Whorf 1943 for eastern Massachusetts; see also Jones 1989, secs. 5.3.2–5.4 for a good retrospective analysis of the historical development of *r*-loss, linking, and intrusion in British dialects). Because of its age and because of a relative lack of evidence about its early development, it remains unclear exactly what caused the intrusive *r* to emerge in the first place.

The emergence of an intrusive *l* allows us to address both of these longstanding problems. On the first point, of course, the very existence of intrusive *l* shows that intrusion is not a unique property of /*r*/, but rather the result of more general tendencies in English phonology (a point which was shown in detail in Gick 1999 and will not be addressed further here). On the second point, if indeed the development of intrusive *l* is still in progress, as is argued in this paper, an improved understanding of this process will help to clarify many facets of the development of intrusion in general (see Sudbury and Hay 2001 for a study of the development of linking and intrusive /*r*/ in New Zealand English).

Gick (1999) points out that the historical development of intrusive *r* followed an identifiable and necessary sequence of linguistic events: VOCALIZATION, LINKING, MERGER (OR NEAR MERGER), REANALYSIS (INTRUSION), and GENERALIZATION. This same pattern is reflected in existing dialect typologies as well (as discussed below). Such an ordering is valuable in pinpointing the present stage of development of the highly parallel intrusive *l*. This sequence proceeds historically as follows.

First, postvocalic liquids undergo VOCALIZATION. Philadelphia (S Pa.) is well known for this behavior: “In Philadelphia, word-final /*l*/ is vocalized with great frequency” (Ash 1982b, 162). This process, by definition, applies only to liquids (and possibly glides). Vocalization may be thought of as one instantiation of a more general phonetic process known as FINAL REDUC-



TION (or, conversely, INITIAL STRENGTHENING), which may apply to any consonant. Final reduction is a property of apparently all consonants in all dialects of English studied to date, whereby the articulatory movements of postvocalic allophones tend to be “reduced,” or less constricted, compared with those of prevocalic allophones (Browman and Goldstein 1995; Gick forthcoming a). Liquid consonants, however, are unusual in that they involve multiple lingual articulations (e.g., the tongue front raising gesture and tongue root retraction for /r/; Delattre and Freeman 1968). When liquid consonants undergo final reduction, it is only the anterior articulations (i.e., the coronal constriction for /l/ and the tongue front raising for /r/) that are affected (Giles and Moll 1975; Ash 1982a, 1982b; Hardcastle and Barry 1989, 15; Sproat and Fujimura 1993; Gick 1999, forthcoming a). However, the posterior articulations, that is, the tongue dorsum retraction for /l/ and the tongue root retraction for /r/, remain more or less unaffected (see Gick forthcoming b and Gick, Kang, and Whalen forthcoming for further evidence in support of this analysis of liquid vocalization in English). The result is that final allophones tend perceptually to have a stronger “vocalic” component (Sproat and Fujimura 1993) than initial allophones (hence the term VOCALIZATION). In its most extreme manifestation, vocalization may result in a complete loss of the anterior articulation. Ash (1982a) describes this phenomenon as it occurs in some Philadelphia area dialects: “The vocalization of /l/ results from the loss of contact between the tongue and the palate.” A good diagnostic for testing the vocalization of /l/, previously mentioned by Kahn (1976, 58, 104–5), involves its interaction with /t/-flapping: in dialects where /l/ is vocalized, a following /t/ will surface as a flap, as if it were in intervocalic position (the flap allophone normally appears only following /r/, glides, and vowels). Thus, while flapping is found in most “standard” American dialects only in words like *butter* (following a vowel), *pouter* (following a glide), and *porter* (following /r/), speakers of the dialect of York (SE Pa.) or Pittsburgh (SW Pa.), for example, will often produce flaps in words like *melter* [mɛɫrɾ] and *boulder* [boɫrɾ], and such homophonous pairs as *altar/alder* [ɔɫrɾ] and *welter/welder* [wɛɫrɾ].¹ Liquid vocalization happens to a greater or lesser degree in all dialects of English. However, some dialects are well known for particularly extreme vocalization of /l/ (e.g., S Pa., Bristol, the Inland South U.S., etc.) and/or /r/ (Cockney, Australian, RP, E New England, etc.).

The second process leading to intrusion is LINKING. This term simply refers to cases where the postvocalic liquid is not vocalized when it is followed by another vowel (thus “linking” to the following vowel and avoiding hiatus). By definition, then, linking can occur only in vocalizing



dialects, providing the next step in the development of intrusion. Vocalization in most dialects occurs only in prepausal or preconsonantal position. Thus, while a word such as *doll* might come out as [dɔ:] in isolation, most vocalizing dialects would “link” this to a following vowel-initial word using the /l/, *doll is* [dɔ:lɪz]. Despite the prevalence of linking among vocalizing dialects, a number of dialects do show vocalization but without linking. In York, Pennsylvania, for example, it is quite common to hear pronunciations like [dɔ:ə] *dollar*, with the /l/ vocalized even between vowels. This pattern of across-the-board vocalization has also been recorded in the speech of some Philadelphians (Ash 1982a, 1982b) and is not uncommon in Southern states (McDavid 1958, 521). This lack of linking /l/, however, is about as rare, relatively speaking, as the lack of linking /r/ in /r/-vocalizing dialects. One such exceptional case involving /r/ is found in some Southern U.S. (Kurath 1964) and AAVE (Fasold 1981) dialects, where a phrase such as *Mister Adams* shows no linking *r*: [mɪstə(ɾ)ædəmz].

The third stage, MERGER OR NEAR MERGER (Labov, Yaeger, and Steiner 1972; Labov 1994) can occur when the final vocalic sound remaining after vocalization of a final /r/ or /l/ is incidentally very similar to a final vowel already present in the phonemic inventory. According to Gick (1999), this vowel is usually schwa in the case of a vocalized /r/ (e.g., *tuna* ≈ *tuner*), and /ɔ/ in the case of /l/ (e.g., *Saul* ≈ *saw*). (See Gick forthcoming b and Gick, Kang, and Whalen forthcoming for further evidence for these liquid-vowel correspondences; also see, e.g., Costa and Mattingly 1981 for a study of a supposed near merger between vocalized /r/ and final vowels in eastern New England.) As with previous stages, this process takes place only in a subset of those dialects with vocalization and linking (i.e., it is quite common for a vocalized final liquid not to resemble closely any vowel in the inventory).

In the fourth stage, REANALYSIS (INTRUSION) takes place. Once a merger or near merger has occurred between a final vocalized liquid and a final vowel, when and if a phonological neutralization results, it may take one of two possible directions: Either both the liquid and the vowel can be reinterpreted (presumably by the next generation of language learners) as vowel-final, or both can be reinterpreted as /r/- or /l/-final. The former type of reanalysis results in dialects such as the *Mister Adams* [mɪstə(ɾ)ædəmz] case discussed above, where there exists no synchronic surface evidence for the existence of postvocalic /r/ in any environment. In the latter type of reanalysis, on the contrary, all instances of the final merged vowel become reinterpreted as having a final underlying liquid. Thus, for example, in this type of dialect, once the final /r/ in a word like *tuner* has vocalized and



merged with the final schwa of a word like *tuna* (both resulting in pronunciations like [t^(j)unə]), the underlying forms of both of these words may be reinterpreted either as /tunə/ or /tunr/. It is important to note that, in either type of reanalysis, *tuna* and *tuner* would be realized identically in all environments, regardless of their historical forms. This was apparently the stage of intrusive *r* at the time when Jones (1917) was writing his description of RP English, where he reports that “a considerable proportion” of London speakers insert *r* not only in linking environments, but “also at the end of every other word terminating with «ə».” These pronounce *the idea of it* «ðiai'diəəvit».” An example of a dialect where this step has not taken place is South African English (e.g., Lanham and MacDonald 1979), where pairs such as *tuna* and *tuner* are supposedly both pronounced with final schwa ([t^hunə]) in final positions, but where only *tuner* receives the *r* in intervocalic environments. The intrusion stage follows similarly with intrusive *l*. However, as described above, the final vowel that most frequently overlaps with vocalized /l/ is not schwa, but /ɔ/ (see example 3 above). Evidence for reinterpretation of vowel-final forms by new generations of speakers may be seen in spelling mistakes among learning spellers in these areas. Lutz (1984) describes a survey of the Ohio/West Virginia/Kentucky tristate area, where teenage respondents returned spellings such as <falcet> and <falsit> for *faucet*, <papal> for *papaw* ‘grandfather’, and <seasowl> for *see-saw*. Likewise, I have myself collected dozens of similar examples from Philadelphia area learning spellers.² In one survey in 1992 in a northwestern suburb of Philadelphia, the majority of first-grade students (6–7-year-old, both black and white) produced spellings of <sal>, <sall>, or <sol> for *saw*, as well as matching “sounding out” pronunciations.

The fifth and final stage in the development is GENERALIZATION. Here, the reanalysis of vowel-final forms extends to the set of all possible word-final (nonglide) vowels. For most dialects with intrusive *r*, this set contains the vowels /ə, a, ɔ/. The generalization stage is evident in early RP in Jones’s (1917, xvii) comment that “a few [RP speakers] extend the practice to all words ending in «a:» and «ɔ:».” In the case of intrusive *l*, however, no dialect has completed this generalization stage: no dialect has yet completely phonologized the generalization of intrusive *l* to include the environments following /a/ and schwa. This is partly the result of obscurement by the well-known merger of /a/ and /ɔ/ in many of the relevant dialects (this interaction will be discussed below). However, some speakers sometimes extend *l*-intrusion to words ending in /a/ (e.g., *my bra*[l] *is coming undone*) or schwa (e.g., *a whole plethora*[l] *of ’em*). Cases such as these will be further discussed below.



Based on this sequence of events, the current stage of the development of intrusive *l* lies somewhere between the fourth and fifth stages (the farthest along of all of the dialects recorded to date).

One additional environment where an apparent intrusive *l* may be heard in some dialects is following the diphthong /aw/, as in *how is* [hæɹɪz], as in (5):

5. Post-/aw/ “intrusion”
 - a. Vocalization: *Hal* [hæɪ]
 - b. Linking: *Hal* [hæɪ] → *Hal is* [hæɹɪz]
 - c. Intrusion: *how* [hæɪ] → *how is* [hæɹɪz]

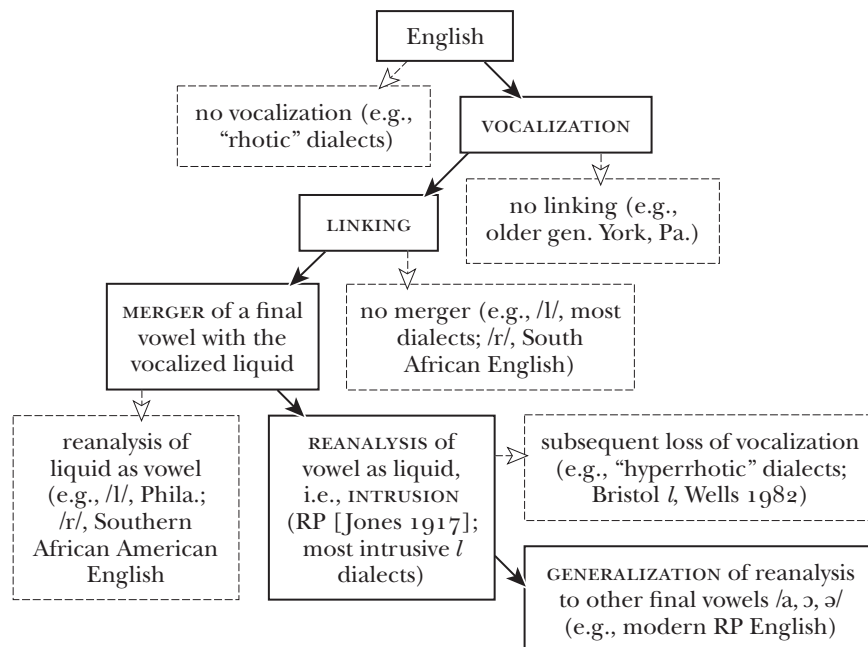
I liken this phenomenon to a similar *r*-insertion in Australian English, whereby the final glide of /aw/ can sometimes be “replaced” by an [ɹ], resulting in forms such as the often heard “How are you?” [hæ:ɹə]. Apparently similar phenomena have been cited by Wells (1982, 227) for Cockney English and by Lanham and McDonald (1979) for South African English (in the latter dialect, following /ej/ in *they are*). Likewise, similar replacements of the glide element of diphthongs with *r* or *l* have been well documented in the literature on speech errors (e.g., Shattuck-Hufnagel 1986, 126–29). I propose that these cases of intrusion following diphthongs is distinct from that following the vowels /a, ɔ, ə/ in that all of the postglide intrusions appear only after a glide that has been reduced by a vocalization process similar to that of /l/ or /r/. Thus, no speaker of any dialect of English would say *how are* as [hæɹɪə] or [hæɹlə], with both the glide and the liquid present. This type of intrusion, therefore, must be taken either as a “replacement” of the glide or as an intrusion, not following a glide, but rather following the nuclear vowel remaining after a glide has been reduced or lost. The plausibility of this “replacement” hypothesis following /aw/ in Philadelphia is further supported by Ash’s observations of the final /l/ in that dialect:

When contact with the roof of the mouth fails altogether, the result is a segment that resembles a voiced glide articulated far back in the mouth. It may also be accompanied by lip-rounding, which results in the sound of /w/. [Ash 1982b, 162]

Thus, since a final vocalized /l/ can become homophonous with final /w/ in this dialect, it is natural that replacements of this kind will ensue. In fact, northeastern Philadelphia children’s spelling errors, also reported as far west as Cincinnati, Ohio, and well into the Inland South, commonly show examples such as <braln> for *brown*.

It has been proposed in this section that the processes of vocalization, linking, merger, intrusion, and generalization are hierarchically related, in that order, for both *r* and *l* in all dialects of English. Though it is logically the case that, for example, linking may not occur without vocalization, there is no logical limitation on the existence of dialects having, say, intrusion without vocalization or linking, or intrusion and vocalization without linking. However, none of these other logically possible patterns are attested in any dialect of English for either *r* or *l*, thus supporting their sequential hierarchy. This proposed relationship is further supported by the fact that the choice of intruded element is never arbitrary (that is, only a dialect that vocalizes /l/ may use [l̩] as a linking or intruding element). Figure 1 gives a flowchart outlining these processes and some example dialects where they may be found. The remainder of this paper describes the geographic and demographic distribution of the intrusive *l* in more detail, showing these to be consistent with a picture of intrusive *l* being a relatively new phenomenon, and identifying regions showing the greatest innovation at present.

FIGURE 1
Flowchart Demonstrating Sequence of Intrusion-Related Processes





GEOGRAPHIC AND SOCIOLINGUISTIC DISTRIBUTION

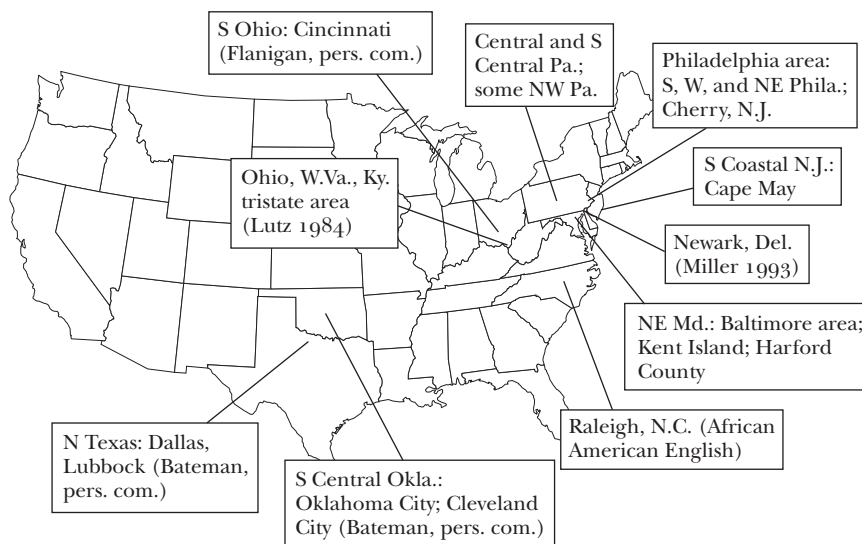
Without a doubt the greatest obstacle to tracking the intrusive *l* is that its use is extremely socially marked (at least in the Mid-Atlantic states) and therefore very difficult to elicit in any but the most personal settings. Thus, for example, a search of the TELSUR telephone survey database in the mid-1990s did not reveal a single production of intrusive *l*, despite its geographic and demographic focus on speakers at least some of whom must surely use intrusive *l* in their daily speech (the expected heavy vocalization of /l/ was of course present). Likewise, I have found that other proven methods, such as that used to elicit vocalized /r/ in New York (Labov 1966), tend only rarely to elicit intrusive *l* from speakers. According to one speaker from York, Pennsylvania, who left town to attend university (female, mid-twenties, lower-middle-class background), she and her friends are all very aware of their *l* intrusion, and she produces this phenomenon only in comfortable conversation with other intrusive *l* speakers of her age when she goes home to visit (reminiscent of Labov's 1963 observations of /r/ usage in Martha's Vineyard). She claims that they not only avoid using intrusive *l* outside their group, but often make fun of themselves using it, viewing it almost as a mark of group membership, distinguishing them from older York speakers.

In one of the rare successful examples of an elicitation method similar to Labov's (1966) applied to intrusive *l*, in 1992 I asked a speaker from Harford County, Maryland (female, 21 years old), to talk about her favorite movies (an approach I have used a number of times in the course of this study). Several times, when she freely offered the information about the circumstances of the first time she saw a particular movie (e.g., *I saw it twice*), she used an intrusive *l* in *saw[l] it*. Upon further questioning about each movie (e.g., where/when/with whom did she see it?), however, her productions of *saw it* did not have the intrusive *l*. While this was an exciting result, this method has not worked with many speakers. The only differences I can surmise between this and other interviewees are that she was a personal friend who felt quite comfortable speaking with me and that she didn't know she was being "interviewed" until afterwards. As a result of this, I have found it impossible to collect quantitative usage data methodically in the course of this study. If not for that fact that I spent the first 20 years of my life in Pennsylvania and have many friends and family members who use intrusive *l*, I do not believe I would have been able to amass sufficient data for this study.

Figure 2 maps the geographic distribution of intrusive *l*. Items marked in figure 2 have been either personally verified by me or reported from



FIGURE 2
Distribution of Intrusive *l* in the United States



multiple or very reliable sources (e.g., linguists specializing in the relevant dialect area). As these data are compiled from a variety of sources and are not the result of a single methodical study, it is likely that the actual distribution is much more widespread than shown. In fact, indications from a variety of secondary sources—primarily single unverified reports from other linguists and nonlinguists who have heard intrusive *l* used—suggest possible extensions of the phenomenon as far afield as Iowa, central Kentucky, Georgia, and southern California.³

Of the locations shown in figure 2, the few previous written descriptions of intrusive *l* are from unpublished works, including data from a dialect survey of high school students in the Ohio/West Virginia/Kentucky tristate area (Lutz 1984); an in-depth study of a middle-aged female speaker in Newark, Delaware (Miller 1993); and earlier, less thorough surveys by the present author (Gick 1991, 1997). Reports from other linguists include in particular much helpful input from Joe Bateman (pers. com., Oct. and Nov. 1997), on Oklahoma, Texas, and New Mexico, and from Beverly Flanigan (pers. com., Jan. 1997), on Ohio. The remainder of the locations are based on my own personal attestations.

Reports of intrusive *l* seem to be divided between two distinct regions: one in (very generally) the Mid-Atlantic states (MATl.) and one in northern



Texas and Oklahoma (NTex.-Okla.). It is conceivable that these two regions could be found to be connected by intervening areas if a more thorough study of the Inland South were conducted. However, it appears that the NTex.-Okla. pattern is distinct from the MAtl. pattern, suggesting that it may be a different phenomenon altogether. The crucial difference between the patterns in these two regions is that, while intrusion tends to develop following /ɔ/ in the MAtl. pattern, the NTex.-Okla. pattern appears to have developed intrusion following schwa (as is more commonly the case with intrusive *r*).

The NTex.-Okla. pattern bears a striking similarity to one dialect of Bristol, England, which is famous for being the only English dialect previously reported to regularly epenthesize an [ɫ] primarily following schwa (Weissmann 1970, 220; Wells 1982, 344–45): for some Bristol speakers, all final schwas, regardless of following context, surface as [ɫ] (resulting in such homophonous pairs as *idea/ideal*, *area/aerial*, *Eva/evil*, and so on). This has also been reported to take place following unstressed /o/ for some speakers (e.g., *mango/mangle* and *tango/tangle*). Further, contrary to the available literature on the dialect, I have also transcribed a middle-aged male Bristol speaker inserting a dark [ɫ] after the vowel /ɔ/ in the word *saw* (followed by a pause of a full second and the word *the*): [sɔ:ɫ...ðə]. Thus, although Bristol *l* apparently began as a merger with schwa, it too, as with the MAtl. intrusive *l*, seems to be generalizing to the full set of “intrudable” vowels /a, ɔ, ə/.

Recent CNN coverage of the Timothy McVeigh execution (7 June 2001) included a short interview of a local Oklahoma City native (white male, middle aged, with typical central Oklahoma dialect features). This speaker produced the phrase *thorough about* twice, both with an intrusive *l*. The final vowel of the word *thorough* was produced as a schwa in both cases, with an intervening bright [ɫ] ([θɔ:ɫəbɔ:ɫ]). As with Bristol, it is possible to analyze this and similar cases of intrusion following what may be a reduced /o/ in this dialect (e.g., *wheelbarrow* reanalyzed as *wheelbarrel*) as insertion following /o/ rather than schwa, though the schwa analysis is more consistent with the general pattern for this dialect. According to work by Joe Bateman (pers. com., Oct. and Nov. 1997), insertion of [ɫ] following schwa is typical of speakers in northern Texas and south-central Oklahoma at least as far as Oklahoma City. He has recorded speakers in Dallas and Lubbock, Texas, and Purcell, Oklahoma, producing intrusive *l* at the end of the word *idea*. All of the speakers who produced these forms were white males born in the 1950s, fitting the profile of the CNN interviewee. Only one younger speaker in Bateman’s data set produced an intrusive *l*. This speaker (male, born in Grant County, New Mexico, in 1982, Anglo-His-



panic, mother's family from Oklahoma) inserted *l* in contexts following /ɔ/ (in *saw*, *draw*), /o/ (in *go*, *row*), and possibly schwa (preconsonantly in *Truth or Conse[ɪ]quence*, a town name in southern New Mexico). This isolated case may indicate an ongoing process of generalization similar to the one in Bristol and other intrusive *l* and *r* dialects.

The MATl. intrusive *l* pattern differs from that of NTex.-Okla. in that it occurs primarily following /ɔ/. That is to say, all MATl. speakers who use intrusive *l* produce *saw*[ɪ] *it* or *draw*[ɪ] *ing* (for *drawing*), while only some speakers produce intrusive *l* after /a/ and /ə/, and often only under restricted conditions (e.g., forms such as *area*[ɪ] or *idea*[ɪ] seem to be avoided, presumably because of their confusion with *aerial* and *ideal*, respectively). Intrusion following /aw/ (as in *now*[ɪ] *I*) is also common in the MATl., though as discussed above, this is more a replacement than a proper intrusion. Also unlike the NTex.-Okla. pattern, intrusive *l* in the MATl. usually follows a more typical intrusive pattern of occurring only in sandhi (intervocalic) position. Thus, it is quite uncommon to hear pronunciations such as *saw*[ɪ] *the* in the MATl.

The sporadic spreading of intrusive *l* to other final vowels (/a/ and /ə/) suggests that this generalization stage is currently ongoing among intrusive *l* speakers in the MATl. It has been my observation that most intrusive *l* dialects have not begun this transition as yet. However, I have collected a number of examples such as *bra*[ɪ] *is* (e.g., from a female Philadelphia speaker in her early twenties). For many dialects, this is not an issue at all because of the widespread merger of /a/ and /ɔ/, which according to recent survey data (Labov 1996) has taken place in most of western Pennsylvania and Maryland; southern and eastern Ohio; northeastern Kentucky; and all of West Virginia, thus covering a good deal of the intrusive *l* territory. This merger can take two primary directions: merger to a more /a/-like vowel, or merger to a more /ɔ/-like vowel. According to Labov (1996), of the merged regions, it is only, roughly speaking, northwestern Pennsylvania and northeastern Ohio that have merged to /a/, with the rest of the areas having merged to a vowel closer to /ɔ/. While it is far less common in the /a/-merged areas, intrusive *l* does occur sporadically among the youngest generations (about 30 and under), most frequently in *saw*[ɪ] *it/him/her/them*. I propose that this pattern is a borrowing from surrounding areas rather than an independent development. I do not call this an independent development partly because of the demographic and geographic distribution, but more importantly because this is the one case where there is no merger between the vocalized liquid and the final vowel. Thus, even though vowel-final and /l/-final forms are phonetically distinct (e.g., *draw* [dɹɑ:] vs. *drawl* [dɹɑ:l]), they still both surface as [dɹɑ:lɪŋ] *drawing/drawing*), in defiance of the



traditional analogical paradigms such as the one given in (1) and (2) above.

Even in dialects without the /a-/ɔ/ merger, there is an independent reason why it is difficult to find examples of intrusive *l*: there are simply very few lexical items with final /a/. The list consists of *bra*, *ma*, *pa*, *spa*, *la*, *blah*, *ha*, and *shah*. And while most *l*-intruders will epenthesize indiscriminately following the vowel /ɔ/ (e.g., *raw*[l] *eggs*, *paw*[l] *on*, *gnaw*[l] *at*, *saw*[l] *Italy* [Miller 1993]), many speakers seem uncomfortable with intrusion after lower frequency /a/-final lexical items (such as *spa* or, for those who do not use the terms, *ma* and *pa*). The only /a/-final word I have heard with intrusive *l* with any consistency at all in these dialects is *bra*.

As described above, it is also possible for intrusive *l* to appear following schwa, though again with approximately the same low frequency as it appears following /a/. Thus, for example, one speaker (male, age 25) from Ellicott City, near Baltimore, Maryland, whose schwas in isolation showed no *l*-coloring, produced the phrase “a whole plethora[l] of ‘em,” with a bright [l] inserted between the two [ə]’s.

EPICENTERS

Because of its distinct characteristics and physical distance, I propose tentatively that the intrusive *l* has developed independently from two different epicenters within the /l/-vocalizing regions of the United States, with one epicenter in southern Oklahoma and northern Texas (Tex.-Okla.), and one around southeastern Pennsylvania, northeastern Maryland, and northern Delaware (Pa.-Md.-Del.). This proposal is relatively straightforward for the Tex.-Okla. region, which is geographically smaller and where the phenomenon shows more limited scope and variation. However, some justification must be given for this placement of the origin of the more extensive MAtl. region. In addition to internal evidence discussed above, including the proposed recent introduction of intrusive *l* into /a/-merged dialects in northwestern Pennsylvania, there are four reasons to identify the Pa.-Md.-Del. tristate area as the epicenter: the age of speakers, their social class, the consistency of occurrence, and the stage of development of the phenomenon.

In many dialects, intrusive *l* is associated only with the younger generations. However, in Pa.-Md.-Del., elderly speakers produce intrusive *l* as well, as compared with 30–40-year-olds and younger in York and those under 30 in northwestern Pennsylvania. Second, as for social class, the first-grade students producing intrusive *l* in Philadelphia schools were recorded in a



distinctly upper-middle-class area, while in essentially all other areas, intrusive *l* is heard only among working-class or rural speakers; likewise, on Kent Island, Maryland, it has been reported that speakers of all ages and classes produce intrusive *l*. Third, I have found the phenomenon to be very reliably produced (if hard to elicit) by Pa.-Md.-Del. speakers, while in most other areas it is somewhat sporadic and highly lexical item-dependent. Fourth, it is only in the Pa.-Md.-Del. area that I have observed consistent signs of generalization of intrusive *l* to /a/-final and schwa-final words. In addition to these reasons, this region marks the juncture between the heavily /l/-vocalizing South and the less typically /l/-vocalizing Northeast. It could be argued that language learners at this type of dialect boundary would have more occasion to hear both vocalized and nonvocalized postvocalic /l/s, from which they might be more inclined to form the analogies leading to intrusion (see Gick forthcoming b for possible phonetic support for the development of such analogies at the edges of vocalizing regions).

If these tentative proposals are correct, as only further research and time will tell, then the intrusive *l* is a relatively recent phenomenon (at least compared with the intrusive *r*), which has independently developed in two distinct forms in two areas of the United States and which continues to spread from there. Further observation of this change in progress will lead to a better understanding of the interactions between consonants and vowels in sound change. In particular, the intrusive *l* should help to provide a more informed view of the development of the very similar intrusive *r* and other cases of sandhi epenthesis.

NOTES

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1. The “dark *l*” [ɫ] symbol should not be taken to imply a lateral liquid—it is used here simply for lack of a better symbol to represent the uvular/pharyngeal (see Narayanan, Alwan, and Haker 1997, 1072, 1076) vocalic constriction remaining following more-or-less complete vocalization of /l/ in this dialect. Henceforth, unless otherwise stated, the [ɫ] will be used broadly to indicate such a vocalized /l/ (lacking tongue tip contact), regardless of the place of the dorsal constriction.
2. Many thanks to Beth Dokachev and others who have kindly supplied me with much material of this kind.
3. While the Iowa, Kentucky, and Georgia reports are more or less expected, the single case reported for southern California has possible Philadelphia connections and should not be considered reliable.

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