Using the ANPS Typology to Unearth the Relationship Between Japanese Sign Language (JSL) Endonymic Toponym Distribution and Regional Identity

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Abstract

This study examines Japanese Sign Language (JSL) toponym distribution by categorizing 184 JSL endonymic toponyms via the Blair & Tent (2020) Australian National Placename Survey (ANPS) typology. Toponyms from the National Sign Language Toponym Map (Japan Federation of the Deaf et al. 2009) were collected and sorted by categories into a spreadsheet, which maintained token counts. Topographical category distribution shows that the Kinki region, which has a strong historical connection to Japan's national identity, has a disproportionately large number of signs related to commemorative eponyms. Past work on sign language toponyms has demonstrated the salience of social and structural factors on toponym spread and production. This study contributes to the understanding of toponym etiology by revealing how the incorporation of regional identity indices might support the preservation of particular kinds of toponyms.

Keywords: toponym, eponym, typology, etiology, sign language, Japanese Sign Language (JSL)

Introduction

This study categorizes 184 JSL prefecture, city, and town toponyms via the Blair & Tent (2020) Australian National Placename Survey (ANPS) typology in order to examine what factors motivate particular outputs in JSL toponym creation and spread. Application of a classification system may tease out particular forms that stand out as especially memorable. In the current literature, sign language toponyms have been classified via general, ad-hoc categories that make etiological observations and crosslinguistic comparison among sign-toponyms difficult. This study exploits the functional strength of a typology to reveal systemic insights about sign language toponym distribution.

JSL toponyms make up a collection of in-group toponyms in that they are largely spread person-to-person and do not appear on widely distributed maps, whether analogue or digital. As a result, they may share characteristics with other in-group toponymies such as island (Nash 2013), shore (Clark 2002), or indigenous names (Hunn 1996). Such relatively unofficial names require buy-in and spread by the active users of a language, so in a sense, in-group toponyms are somewhat democratized in that names that a community fails to use will fall into disuse, while names favored by the users tend to remain. Such an in-group process offers insight into the types of names that are particularly sticky or memorable in a broad population. As a result, in-group toponymies inform toponym creation motivation in a way that well-established, readily accessible, mapped names may not. Continued distribution of lesser-documented toponyms requires a way of remembering. Case studies of in-group toponymies can measure how name category salience preserves toponyms over generations in the communal memory, independent of institutional reinforcement.

This study further builds upon prior investigations of salient features that trigger sign-toponym creation and spread. "Salience" serves as a catch-all term for statistically significant relationships between toponym construction or distribution, and structural or socially relevant factors. For instance, the Japanese characters that make up the source spoken-toponym affect how likely a JSL target sign-toponym will semantically map to the Japanese source name (George 2022); the educational backdrop influences whether signers create original sign-toponyms independent of the surrounding spoken language, or produce sign-toponyms indexed to their spoken-toponym equivalents as calques (Hofer 2021; Nonaka et al. 2020). Regional identity markers offer another possible area of salience.

A significant proportion of original JSL sign-toponyms incorporate regional identity markers, such as names from historical figures, famous areas, and notable events that commemorate Japan's history (George 2022). Recent historical scholarship demonstrates how regional identity markers frame the local dynamics of people, events, and resources to distinctively characterize a region and its inhabitants in the service of building political, social, and cultural capital (Gedacht 2022; Shimoda 2014; Wigen 2010). After the Meiji Restoration in the late 19th century, the Meiji government fostered regional sentiment as a means to unify the reformed Japanese state (Wigen 2010). Regions also reworked local histories of rebellion to reflect fealty to the state; the legend of the White Tiger Brigade of the historical Aizu region serves as an exemplar.

The White Tiger Brigade, consisting of a unit of teenaged boys, committed suicide when they believed that Wakamatsu had lost to the emperor's forces in the Boshin War. This familiar legend reifies the regional values of honor, courage, and loyalty of the Aizu people; however, the legend clashes with the historical record in several ways. The White Tiger Brigade served as rebels who lost the war, but the conflict was reemphasized as a common regional conflict; the boys likely died before the siege of Wakamatsu even began; and the narrative conveniently ignores the many mass suicides preceding the fall of Wakamatsu (Shimoda 2014). Ultimately, the legendary group became a symbol of redemption and facilitated Aizu's assimilation to the newly emerging

Japanese state (Shimoda 2014). The White Tiger case demonstrates how regional identity markers drive the discourse with respect to the communal impression of a region and its people (Shimoda 2014). Over time a number of such regionally established markers ossified and have appeared ubiquitously throughout contemporary media and in popular culture. The historical significance of regional identity markers suggests that an investigation of their distribution vis-à-vis a typology may show their role in sign-name creation and spread.

A classification system facilitates the identification of patterns that provide etiological insights about name creation (Blair & Tent 2021; Stewart 1975). Stewart denotes two epistemological stances with respect to toponymy: "etymological" concerned with rooting out the histories of names, and "etiological" concerned with investigating the drivers of the creation of a given name (1975, 44-52). The ANPS typology supports the quantitative study of toponyms by uncovering naming patterns and targeting features for examination of "naming intention, or the why of naming" (Blair & Tent 2020, 1-6). "Intention" refers to a characteristic that serves as the focal point for name generation; such intentions lead to the creation of particular types of concrete expressions subject to classification. Naming intention manifests itself as characterization of a feature; commemoration of a person, place or event; or novel language output creation (Blair & Tent 2020). A growing number of sign language studies investigate toponyms, typically focusing on deriving name origins; consequently, the empirical foundation necessary to increase emphasis on the investigation of the etiology of sign-toponyms has expanded. Emphasis upon etiology requires significant sample sizes that allow for the quantitative investigation of naming; to that effect, application of the ANPS typology acts as a first step in exploring the intentions of sign language toponymy creation.

Sign Language Toponyms

Toponyms have been examined across many sign languages, which typically contain a mix of endonymic or independent signs, and exonyms or signs indexed to the source name (George 2022). In JSL, the name ISHIKAWA 石川 prefecture appears as an exonymic compound sign connecting ISHI 'stone' and KAWA 'river' as a semantic calque of the Japanese spoken name.[1] Exonymic toponyms may index the semantics, morphology, or phonology of the source Japanese name (George 2022). JSL also has independent signs such as OKINAWA 沖縄 prefecture, made up of a sign that consists of a motion that metonymically represents a traditional dance from the region (Yonekawa 1997); an endonymic toponym does not arise due to influence from the Japanese source name (George 2022). JSL endonyms and exonyms contrast structurally in that endonyms largely emerge as monomorphemic and conform to the core constraints of the JSL lexicon. In contrast, most exonymic toponyms emerge as compound words that faithfully index the source Japanese name input; as a result, indexical transparency overrides morphological efficiency (George 2022). Since JSL independent toponyms conform more closely to the core structure of JSL as a whole, their designation as endonyms reflects their paradigmatic relation to the bulk of the JSL lexicon. JSL toponyms influenced by and linked to the source Japanese names more appropriately represent exonyms since relatively more peripheral structural constraints shape them (George 2022). Across different languages such as Tibetan Sign Language (Hofer 2021), Ban Khor Sign Language (Nonaka 2015), Taiwan Sign Language (Chang 2011), Israeli Sign Language (Revilla 2009), Adamorobe Sign Language (Nyst 2007), New Zealand Sign Language (McKee & McKee 2000), British Sign Language (Sutton-Spence & Woll 1999), and Quebec Sign Language (Dubuisson and Desrosiers 1994), sign toponyms contrast with respect to the distribution of endonyms and exonyms.

JSL as a language emerged in the late 19th century Meiji era facilitated through assembled communities of signers beginning with the establishment of the first Deaf school in 1878 in Kyoto (Nonaka et al. 2015; Yonekawa 1984). Similar to JSL, many sign languages developed along with the establishment of universal public education due to the interaction of students through their idiolects, or home-sign communication systems, which they acquired through interaction with their families and surrounding community members (George 2011). Students' collections of idiolects became systematized and creolized, eventually emerging as conventional sign languages (Stokoe 2005; Senghas et al. 1997).

Various endonymic toponyms developed over time, and signers in name creation not only integrated natural relationships to the land, but also sourced Japan's rich history, which had ties to the growing sense of Japan's national identity from the Meiji era onward. The fundamental contrast between sign and spoken language regional toponym creation lies in that conventionalized endonymic sign-toponyms emerge in parallel within known, defined regional boundaries. While the specific origins of JSL toponyms remain unknown, several unique names for a region would have emerged through idiolects, and once a critical mass of signers assembled, the most favored variants would spread, whether through intersubjectively perceived appropriateness or, as suggested by Labov in the Philadelphia Neighborhood Study on language change (2001), through the influence of community leaders or language innovators.

Hofer (2021) offers an example of influential individuals participating in the creation of new toponyms in Tibetan sign language. They discuss creating a sign for *Chagpori Hill* 'iron hill', a prominent landmark. A native

signer and community leader preferred a complex descriptive sign endonym over a structurally simpler exonymic loan translation, perhaps anticipating that visual cues would have wider recognition than a Tibetan calque. This results in a long sign, which appears to promote semantic transparency over morphological simplicity. In a Deaf community with relatively limited literacy, the choice of sign seems intuitive since more signers may recognize and spread the sign, which over time may become more arbitrary and simplified (Frishberg 1975). The sign creators anticipate that Tibetan signers will be more likely to take up a descriptive sign than one grounded in the Tibetan landmark name that few signers will know. As for spoken-toponyms, sign-toponyms primarily serve to distinguish one place from another (Blair & Tent 2020); additionally, JSL endonymic toponyms provide a manifestation of an intersubjective, shared notion of history and national identity within the signing community.

Although JSL signers created endonymic toponyms, such signs can lose connection with their intended references, and become de-semanticized, as discussed in the literature for spoken language toponyms (Anderson 2003). The degree of transparency can vary due to the degree which signers consciously reinforce toponym origins. For instance, JSL instructors typically teach prefectural signs names with reference to their perceived sign origins, producing mnemonic anchors; Yonekawa (1997), the major Japanese-JSL dictionary, lists prefectural toponym etymologies. Prefecture names have a greater proportion of endonyms to exonyms than city and town names (George 2022), and the greater preservation of endonyms may reflect the manifestation of conscious teaching and preservation of prefectural sign etymologies.

The data set for this study comes from The National Sign Language Toponym Map, compiled from a survey of Japan prefectural Deaf association representatives (Japan Federation of the Deaf et al. 2009). JSL to some degree has official signs with respect to standardized sources such as the Sign Language Interpreter Certificate Examination[2] and that appear in official media such as the Japan Broadcasting Corporation Sign Language News, typically announced by Deaf JSL signers. However, JSL city and town toponyms do not appear on public maps or even in standard JSL dictionaries. Knowledgeable signers surveyed for the National Toponym Sign Language Map perhaps chose signs they intuitively believed had the most widespread use. Some Deaf association representatives note endonymic signs declining in use by younger signers; their intuitions comport with an apparent a shift away from endonymic signs in favor of Japanese indexed exonymic toponyms (George 2022).

JSL regional toponyms exhibit variation, especially with respect to distribution of both endonymic/exonymic pairs and alternative endonymic forms. The National Toponym Sign Language Map lists endonymic alongside exonymic forms for place names such as HAMADA 浜田 city in Shimane represented as a semantic calque (Japan Federation of the Deaf et al. 2009), or the nickname of a person who lived in that town;[3] HITA 日田 city in Oita represented as a phonological mapping (Japan Federation of the Deaf et al. 2009), or a lowered palm down hand movement with an unknown origin;[4] and KANOYA 鹿屋 city in Kagoshima represented as a semantic calque (Japan Federation of the Deaf et al. 2009), or the nickname of a senior student.[5] Endonymic variants include CHOSHI 銚子 city in Chiba (Japan Federation of the Deaf et al. 2009) represented by indexing a landmark, the Inubosaki Lighthouse 犬吠埼灯台, or another sign representing the mouth of the Tonegawa River 利根川;[6] and NARASHINO 習志野 city in Chiba (Japan Federation of the Deaf et al. 2009), with two signs, each representing a variation on the city symbol.[7]

Social factors such as literacy and the history of Deaf education affect the types of signs in circulation. In contrast to the ubiquity of exonyms in JSL, Tibetan sign language largely contains endonymic toponyms, evidencing the fact that these Deaf populations have contrasting histories of educational access. The Deaf in Japan have a long history of inclusion in education particularly influenced by the practice of Oralism, which emphasizes speech and literacy over signing as the medium of instruction (Nonaka et al. 2015; Hayashi & Tobin 2015; George 2011; Peng & Clouse 1977). The Tibetan Deaf population lacks similar educational access leaving a relative lack of literacy, which minimizes the influence of written language on Tibetan Sign Language (Hofer 2021).

Structural factors also may influence whether particular toponyms emerge as endonyms or exonyms. For JSL, the presence of a simple character morpheme such as 川 *kawa* 'river' in the source Japanese toponym significantly increases the chance of a sign toponym emerging as exonymic, thus indexed to the source name (George 2022). Sensitivity to the source word shape reflects the history of literacy and an orally focused curricula in Japanese Deaf schools. In turn, Deaf student intersubjective familiarity with widely mapped and documented place names enhance the generation and spread of exonyms relative to endonymic variants.

Applying the ANPS Typology to Sign Language Toponymy

The ANPS typology explicitly has a basis in the investigation of Australian place names or features (Blair & Tent 2020); however, the typology offers great potential for the quantitative investigation of non-Australian place names due to the emphasis on a generalizable notion of naming intention and the use of a branching category

tree that facilitates providing a single category for each toponym. The ANPS taxonomy consists of two primary categories +DESCRIPTIVE and -DESCRIPTIVE (Blair & Tent 2020).

+DESCRIPTIVE refers to a characteristic of the named feature or its physical environment. It has three subclasses: Descriptive, Associative, and Evaluative. 1 Descriptive denotes an inherent characteristic of the named feature, so it refers in a direct, concrete way physically or functionally. The subdivisions comprise 1.1 topographic, referring to an inherent aspect, such as physical appearance; 1.2 relational, referring to a relative relationship to another feature; 1.3 locational, depicting location or orientation; and 1.4 functional, indicating the official role of a feature. 2 Associative refers to some aspect identified with a feature, such as the natural environment, an occupation, an activity, or a fabricated structure. 3 Evaluative denotes the namer's emotional feeling about a feature, and comprises 3.1 commendatory names with a positive association and 3.2 condemnatory names with negative connotations.

-DESCRIPTIVE largely refers to three commemorative functions: Occurrent, Copied, and Eponymous; and a non-commemorative subclass, Innovative. 4 Occurrent comprises 4.1 incident, which documents an incident upon discovery, and 4.2 occasion, marking a notable date. 5 Copied, use of a loan name, comprises 5.1 locational, the use of a name from another place and 5.2 linguistic, a calque from another language. 6 Eponymous commemoratively applies a name from a person, entity, or concept as representative of the toponym. 7 Innovative refers to the introduction of a novel linguistic creation for a toponym; the subcategories comprise humor and aptness.

Interpreting Metonymic Toponyms in the ANPS Typology

While ANPS offers a relatively comprehensive typology, with respect to iconic toponyms grounded in metonymy, application of the ANPS system is not always straightforward and is subject to interpretation. Certain classes of spoken language toponyms rely on metonymy. Metonymy involves the use of one entity to refer to a related entity; particularly of interest here is "part for whole" metonymy which involves selecting a part of the referent to represent the whole and highlight a notable characteristic (Lakoff & Johnson 2003). Incident toponyms typically do not describe an incident but refer to an element or actor to iconically represent the incident resulting in part for whole metonymy. A significant number of toponyms derived from animal names represent incident toponyms rather than descriptive, local toponyms referring directly to animals (Stewart 1975). Examples of metonymic animal incident toponyms include *Wildboar River* in Arsenjew, Siberia, which refers to wild boars that maimed and killed two hunters, and *Tiger River* named for a tiger who raided traplines; *Bear River* in California so-named because a Grizzly maimed a person near that river (Stewart 1975); and *Wolf Spring* so-named because a wolf killed and ate a six-year-old boy near a spring in Selongey France (Stewart 1975). The animals in the capacity of actors iconically represent incidents marked by the toponyms.

Many sign toponyms have iconic metonymy that potentially subjects them to variation in classification. Iconicity comes as a byproduct of a mental image of a referent motivating the form of a given sign; as a result, a sign emerges based upon the social context and circumstances surrounding the production and spread of a given form (Hofer 2021, Taub 2001). Many of the JSL toponyms evidence part for whole metonymy in which an associated feature or characteristic represents the referent. Endonymic toponyms can index characteristics versus actions or metonymically represent instrument, handling, and object morphemes, as discussed for sign language lexemes (Padden et al. 2013). For instance, the ASL sign TREE, which represents an object lexeme, traces the shape of a tree without human action; TOOTHBRUSH in ASL represents an instrument sign in which the signer extends the index finger to represent the toothbrush and moves side to side in a brushing motion; in contrast, HAMMER in ASL represents a handling sign in which the hand forms a grasping shape which moves in a hammering motion (Padden et al. 2013). The instrument sign represents part of the object with movement while the handling sign represents the bearer of the object with movement. Since many signs represent the part for whole concept, they oftentimes do not depict their referents directly, which leaves classification of such metonyms subject to interpretation.

A key issue with respect to sign toponymy is the question of what constitutes the borrowing of an eponym, since in the most literal sense, no literal non-sign eponyms are borrowed, even though sign names can be construed to index particular eponyms. JSL endonymic toponyms do not literally spell out the names of their referents. Rather, they rely heavily on part for whole metonymy. For instance, the sign OSAKA 大阪 city refers to Toyotomi Hideyoshi, one of the key unifiers of Japan, by forming an object sign that mirrors the appearance of a feature on Toyotomi's crown (Yonekawa 2009) (Figure 1); therefore, the headpiece feature represents the crown which represents Toyotomi who represents Osaka. Although he is not literally named, this unique name sign for a historical figure clearly is meant to commemorate his association with the establishment of the region that is part of modern-day Osaka; therefore, it is classed as an eponymous sign referring to a notable person. If the sign for Osaka stuck with the most literal interpretation, it would not represent the use of a name since Toyotomi Hideyoshi is not spelled out. Rather it might class as associative in some way since it represents an image of an object associated with a local historical figure. While such an interpretation is possible, it completely ignores the notable commemorative function of Toyotomi as a symbol of Osaka, which is unique to

JSL and completely independent of the source Japanese name for the region. Although sign name appellations created to represent particular figures of history do not represent the literal linguistic form of the referent, the sign anthroponym sufficiently indexes and stands in for the Japanese name in a way that is arguably eponymous.

Named structural entities introduce classification ambiguity as well, since any metonymically described structure could be considered an associative structure or a commemorative named concrete entity. The sign NARA 奈良 city depicts *Daibutsu* 'the Big Buddha', an iconic bronze Buddha statue housed in Todaiji temple via a pose, which resembles the pose of the statue (Yonekawa 2009) (Figure 1). The fact that the sign uniquely refers to that statue in reference to Nara supports the interpretation of the sign as an eponym of Daibutsu representing a named concrete entity toponym. Alternatively, since the sign metonymically refers to a structure in Nara, one might classify the sign as associative; however, as in the Osaka case, the associative designation would ignore the commemorative function of both the Daibutsu and Todaiji temple as symbols of Nara city. HIROSHIMA 広島 city represents the very iconic Itsukushima Shrine floating *torii* gate (Japan Federation of the Deaf et al. 2009) (Figure 1). While the iconic significance of the torii gate leads to its classification as a named concrete entity, in contrast to NARA, the sign HIROSHIMA consists of a generic sign for a torii gate and could in other contexts refer to other torii gates so it could be literally classified as a descriptive associative structure. In the case of HIROSHIMA, the historical significance of the reference is favored over the literal sign construction in interpreting its toponymic classification.

This study will classify JSL endonymic toponyms that index historical figures, landmarks, and concepts as eponymous since they potentially serve a commemorative function. The relational framing of a history to a region reflects to some degree an intentional connection to the past that underlies the recognition of a particular regional identity (Stewart 1975). This classification of sign names is meant to be consistent for comparative, typological purposes. Contingent on the research focus, alternative classification interpretations may be useful, especially when dependent upon the type of toponymic metonymy.

OSAKA "Toyotomo Hideyoshi"   NARA "The Big Buddha"   HIROSHIMA "Itsukushima Shrine"

Figure 1: Metonymy in JSL Eponymous Toponyms

Adaptation of the ANPS Typology for Sign Language

Some categories of sign-toponyms, such as eponyms, require reflection in light of extensive metonymy in sign-toponymy, while other categories apparently lack relevance for the classification of sign-toponyms. For instance, categories referring to officially recognized territories tied to the notion of discovery appear extraneous since early exploration predates widespread conventionalized sign language use. Several subcategories require reconsideration with respect to sign-toponyms that represent officially named territories such as prefectures and cities.

JSL lacks toponym categories that refer to names formed in response to encountering new regions via early exploration. Since JSL emerged as a conventionalized language in the late 19th century, its toponyms formed within the context of officially established and named regions. As a result, no sign-toponyms would have emerged in response to an original official claim over a particular area, so the commemorative categories associated with discovery (4 occurrent, 6.1.1 namer, 6.1.3 colleague, 6.1.4 family member/friend, and 6.3.3 expedition vessel) are unnecessary. An occurrent commemorates the time of discovery by marking a relevant date or incident. The namer typically refers to the discoverer, and the absence of such a namer results in the absence of names of people with relationships to the potential namer. Traditional expedition vessels lacked

individuals who used conventionalized sign languages, so it follows that sign-toponyms would not develop from such vessel names upon first contact with an unnamed territory.

JSL has copied names; however, sign-toponyms lack the commemorative function since they serve as lexically-indexed loan names. 5.1 locational sign-toponyms are actually generic names reapplied to a new region; therefore, they merely index the spoken-toponym. For instance, the Japanese name *Kita-Hiroshima* city in Hokkaido prefecture commemorates the birthplace of Ikujiro Wada, who led a mass migration from Hiroshima prefecture to Hokkaido island around 1882 (Kadokawa Bunka Shinkō Zaidan, 1999). However, JSL sign-toponym namers in Kita-Hiroshima simply recycled the original endonymic sign HIROSHIMA concatenated with KITA 'north' to create the compound sign KITA-HIROSHIMA as a pastiche of the source name rather than a commemoratively transplanted one. Japanese to JSL calques, or exonyms, represent the majority of names in category 5.2 linguistic copied names. The sign-toponym namers index the Japanese source name, which results in sign/spoken-toponym indexical transparency.

JSL has a significant number of sign-toponyms based on the emblem of a city. The additional category 2.4 emblem represents sign-toponyms isomorphic to city emblems. Potentially, emblems could classify as 2.3 structures, although they serve as conceptual rather than physical constructions. Alternatively, they could categorize as 6.3.1 notable abstract entities, which have fundamentally symbolic referents; however, they lack a commemorative quality as the signs basically map the symbols. Since such signs are ubiquitous in JSL, an independent category might facilitate crosslinguistic comparison with other sign-toponym systems.

Methodology

This study investigates the categorical distribution of 184 endonymic JSL toponyms based on the ANPS (2020) categories. Nine hundred and thirteen names were collected from the National Toponym Sign Language Map (Japan Federation of the Deaf et al. 2009). The names were identified as endonyms—original sign names—or exonyms—signs indexed to the source Japanese word—and assembled into a spreadsheet database. The spreadsheet formulae categorized all names as endonymic or exonymic and simple or compound. Endonym etymologies were identified via JFD et al. (2009), Yonekawa (1997), and email correspondence with prefectural level Japan Federation of the Deaf offices listed in Japan Federation of the Deaf et al. (2009). Endonyms were sorted into the ANPS (2020) subcategories for this investigation. To examine topographical distribution, category counts were sorted based on nine widely recognized regions: Hokkaido 北海道, Tohoku 東北, Kanto 関東, Hokushinetsu 北信越, Tokai 東海, Kinki 近畿, Chukoku 中国, Shikoku 四国, and Kyushu 九州. Finally, A subset of JSL endonymic toponyms and classifications were compared with their spoken Japanese toponym counterparts to determine if there were significant distributional differences between Japanese spoken language and JSL naming practices.

The Data and Results

The JSL toponym database primarily consists of descriptive, associative, and eponymous toponyms, which in total make up 93.48% (172/184) of the JSL endonymic toponym collection. Table 1 shows the distribution of 184 endonymic toponyms divided into the two major divisions of +DESCRIPTIVE/-DESCRIPTIVE as well as the various categories under each branch of the ANPS category tree (Blair and Tent 2020, 11). Each of the primary ANPS classes is listed with its number of toponyms. 63.04% (116/184) of the toponyms classify as +DESCRIPTIVE while the remaining 36.96% (68/184) classify as -DESCRIPTIVE. The +DESCRIPTIVE toponyms are distributed throughout the descriptive and associative subcategories but largely absent from the evaluative subcategory. The largest single category is associative which makes up 50% (92/184) of the tokens in the database. With respect to -DESCRIPTIVE, eponyms make up the largest category representing 30.43% (56/184) of all database toponyms. Named concrete entities represent the majority of eponyms with 51.79% (29/56) of all eponymous toponyms. This section will discuss several examples of toponyms in further detail.

Table 1: The ANPS Typological Distribution of 184 JSL Endonymic Toponyms & Examples

+DESCRIPTIVE 116/184 (63.04%)				
CATEGORY NAME	**#**	**%**	**EXAMPLE**	
1 Descriptive	24	13.04		
1.1 topographic	13	7.07	HOKKAIDO 北海道	Traces the shape of Hokkaido
1.2 relational	7	3.80	SHIZUOKA 静岡	Traces Mt. Fuji which borders Shizuoka
1.3 locational	4	2.17	OITA 大分	Depicts Oita's relative location on Kyushu island
1.4 functional	0	0	(KYOTO 京都 2nd category)	Represents the meaning of 'west capital'
2 Associative	92	50.00		
2.1 environment	24	13.04	YAMANASHI 山梨	Depicts a famous prefecture crop, grapes
2.2 occupation/activity	29	15.76	OKINAWA 沖縄 URAYASU 浦安	Metonymically represents traditional dance move Traces Mickey ears to represent Tokyo Disneyland
2.3 structure	22	11.96	IYO 伊予	Represents the terminus of a local train line
2.4 emblem	17	9.24	FUJIMINO ふじみ野	Depicts Fujimino city's emblem
3 Evaluative	0	0	(AMAKUSA 天草 2nd category)	Connotes "a place with bad people"
-DESCRIPTIVE 68/184 (36.96%)				
CATEGORY NAME	**#**	**%**	**EXAMPLE**	
5 Copied	12	6.52		
5.1 locational	12	6.52	HIGASHI KURUME 東久留米	Copies name from KURUME in Kyushu prefecture
5.2 linguistic (exonymic)	0	0	–	–
6 Eponymous 29%	56	30.43		
6.1 Human	24	13.04		
6.1.2 notable person	15	8.15	OSAKA 大阪 AIZUWAKAMATSU 会津若松	Metonymically represents Toyotomi Hideyoshi Metonymically represents the White Tiger Unit
6.1.5 associated person	9	4.89	AMAKUSA 天草	Refers to Amakusa's former prison colony residents
6.2 Other animate entity	0	0		
6.3 Non-animate entity	29	15.76		
6.3.1 notable abstract entity	3	1.63	IBARAKI 茨城	Refers to the 1860 Sakuradamon Incident
6.3.2 named concrete entity	26	14.13	NARA 奈良	Represents pose of the *Daibutsu* 'Big Buddha' statue
6.4 literary/mythical entity	3	1.63	SAITO 西都	Metonymically depicts the Iwanaga Princess legend
7 Innovative	0	0	(2nd category for various signs)	

JSL Descriptive Toponyms

The Descriptive subcategory represents 13.04% (24/184) of the toponyms and includes 1.1 topographic, 1.2 relational, and 1.3 locational toponyms (Table 1).
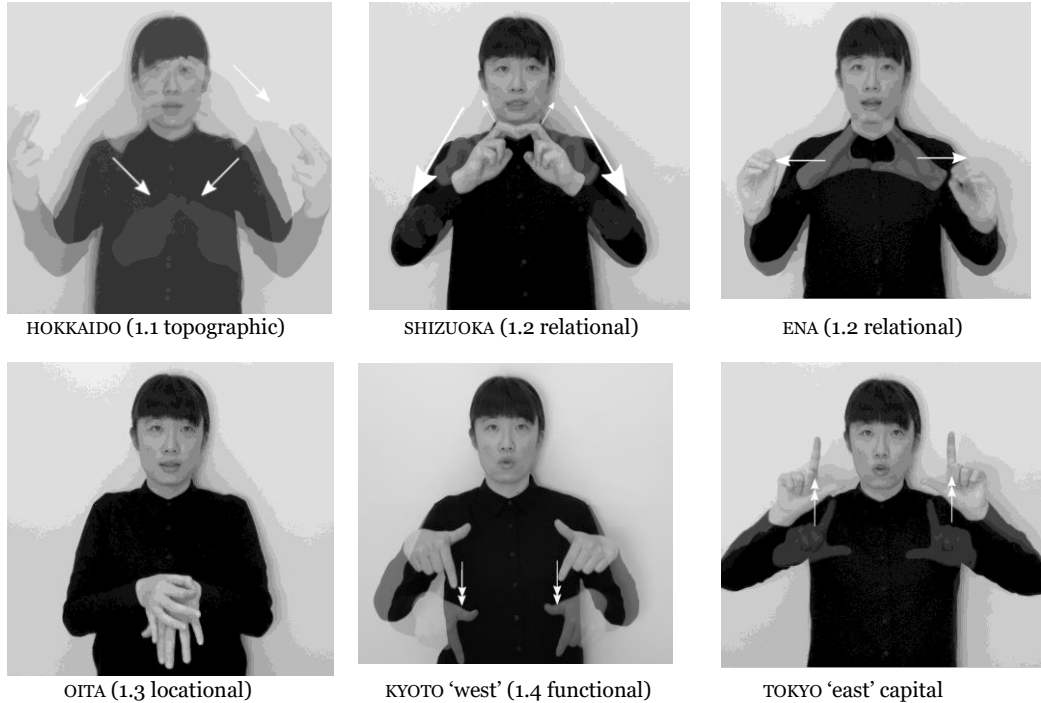

HOKKAIDO (1.1 topographic) SHIZUOKA (1.2 relational) ENA (1.2 relational)

OITA (1.3 locational) KYOTO 'west' (1.4 functional) TOKYO 'east' capital

Figure 2: JSL 1.0 Descriptive Toponyms and TOKYO

1.1 Topographic toponyms, which refer to each region's physical appearance, make up 7.07% (13/184) of the database. Examples include HOKKAIDO 北海道 (Figure 2), which traces the shape of the prefecture (Japan Federation of the Deaf et al. 2009); SAPPORO 札幌 city, which overlaps the fingers of both hands to depict the street map grid of the city's layout (Japan Federation of the Deaf et al. 2009); and SHIGA 滋賀 composed of a sign mimicking the playing of a biwa lute metonymically refers to the shape of lake Biwa (Yonekawa 1997), in the center of the prefecture.

1.2 relational signs, which denote a relationship with nearby features, make up 3.80% (7/184) of the collection. SHIZUOKA 静岡 (Figure 2), the home prefecture for Mt. Fuji, has a distinctive sign for Fuji, which traces a large outline representing the shape of the mountain (Japan Federation of the Deaf et al. 2009). For the city name ENA 恵那 in Gifu prefecture (Figure 2), the hands form into a triangular shape to represent the bordering Ena mountains.[8] Other names include TSUKUBA 筑波 city, which traces the shape of the twin Tsukuba mountains (Japan Federation of the Deaf et al. 2009); AWAJI 淡路 city in Hyogo, which depicts the movement and form of the famed whirlpools off the bay; and ASOSHI 阿蘇 city in Kumamoto prefecture, which depicts a well-known volcano in the region.[9]

1.3 locational signs, which depict relative locations, consist of four tokens; OITA 大分 prefecture (Figure 2), represents Kyushu Island with the secondary hand and indicates the location of Oita prefecture within it via the primary hand (Yonekawa 1997); KYOTO 京都 consisting of the sign for 西 *nishi* 'west' (Figure 2), serves as a descriptive locational morpheme since the sign relies upon a contrast with the sign TOKYO 東京 *higashi* 'east' (Yonekawa 1997). Tokyo is the modern-day capital of Japan, but the previous, old capital Kyoto lies in the west, so the JSL reference could be interpreted as a 1.4 Functional sign meaning "western capital".

JSL Associative Toponyms

The Associative subcategory is the largest representing half (92/184) of the JSL endonym database. This subcategory includes 2.1 environment, 2.2 occupation/activity, 2.3 structure, and 2.4 emblem toponyms (Table 1).

2.1 environment toponyms associated with the local natural features make up 13.04% (24/184) of the database, largely consisting of flora and fauna from the regions. Examples include YAMANASHI 山梨 prefecture (Figure 3), which traces via movement the shape of a bunch of famous prefectural grapes (Yonekawa 1997); AKITA 秋田 prefecture, which traces the outline of the Japanese butterbur plant (Yonekawa 1997); YAMAGATA prefecture, which represents the shape of a cherry to represent cherries, which the region is known for (Yonekawa 1997); SHIMA 志摩 city in Mie prefecture, which traces the outline of the turbo sazae plant that can be found there;[10] YATOMI 弥富 city in Aichi prefecture, which depicts goldfish swimming to represent goldfish farming (Japan Federation of the Deaf et al. 2009); and AWARA あわら in Fukui, which represents famous hot springs, with one hand representing the water and the other steam mimicking a well-known icon found on signage and maps.

2.2 occupation/activity makes up 15.76% (29/184) of the database. Examples include OKAYAMA 岡山, which metonymically refers to the making of tatami mats (Japan Federation of the Deaf et al. 2009), a craft that the prefecture is known for; OKINAWA 沖縄 prefecture (Figure 3), which represents movement from a traditional dance from the island region (Yonekawa 1997); the sign for TOYOTA 豊田, which refers to the home city of the car manufacturer consists of the CAR as part of a compound sign combining with the exonymic sign for rice paddy; URAYASU 浦安 city in Chiba, which traces Mickey Mouse ears on the head (Figure 3), which denotes the operation of Tokyo Disneyland in that city;[11] MONBETSU 紋別 in Hokkaido, which represents decorative points on a kimono design that the region is famous for (Japan Federation of the Deaf et al. 2009).

2.3 structure toponyms, which represent manmade structures, make up 11.96% (22/184) of the collection. They include KOMAKI 小牧 city in Aichi prefecture, which incorporates the sign PLANE in reference to the airport in that area; SAGAMIHARA 相模原 city in Kanagawa, which a military base in reference to the presence of a base in the area;[12] IYO 伊予 city in Ehime prefecture (Figure 3), which represents the terminus of a train line in that area (Japan Federation of the Deaf et al. 2009); YOKOTE 横手 city in Akita, which traces the shape of the traditional *kamakura*, igloo-like snow huts erected during an annual Shinto festival (Japan Federation of the Deaf et al. 2009).

2.4 emblem toponyms, which metonymically represent the shapes of various regional symbols, make up 9.24% (17/184) of the database. As man-made constructions, emblems could potentially be classified under structures; however, emblems make up nearly 10% of the toponym database so standout as a subclass. Examples include SETOUCHI 瀬戸内 city in Okayama,[13] IWAKI いわき city in Fukushima (Japan Federation of the Deaf et al. 2009), and FUJIMINO ふじみ野 city, (Figure 3) in Saitama prefecture (Japan Federation of the Deaf et al. 2009).
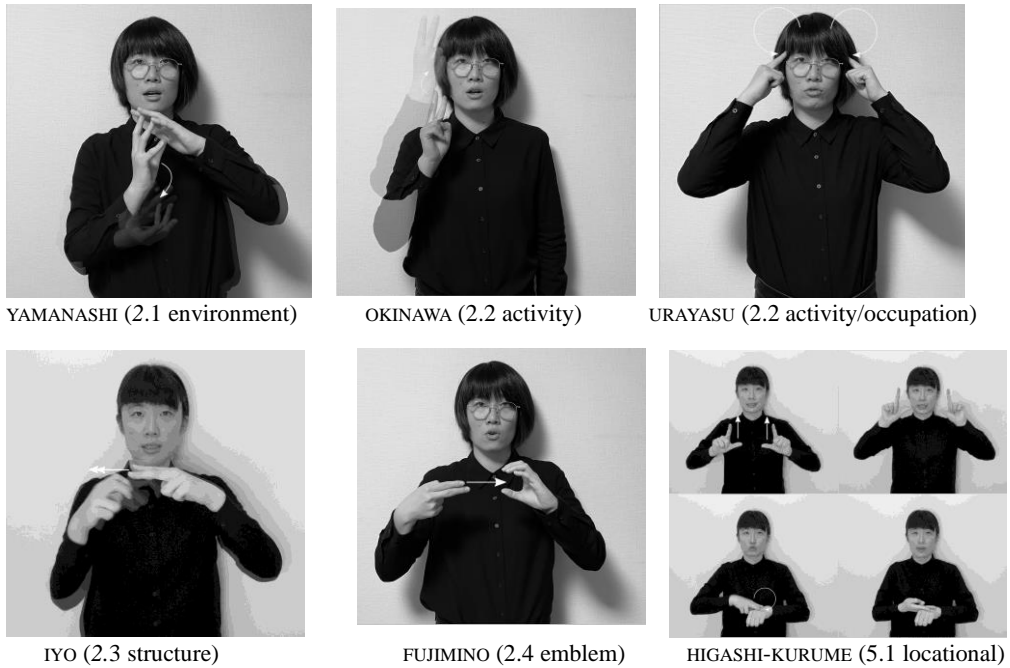
YAMANASHI (*2*.1 environment)

OKINAWA (2.2 activity)

URAYASU (2.2 activity/occupation)

IYO (*2*.3 structure)

FUJIMINO (2.4 emblem)

HIGASHI-KURUME (5.1 locational)

Figure 3: 2.0 Associative and 5.1 Locational Toponyms

JSL Locational Toponyms

Twelve endonymic JSL toponyms are 5.1 locational with names copied generically from names from other locations (Table 1). KITA-HIROSHIMA 北広島 'North Hiroshima' city in Hokkaido prefecture and HIGASH-KURUME 東久留米 'East Higashi-Kurume' town in Tokyo (Figure 3) both copy names from other prefectures. They are both parts of compounds that begin with a cardinal sign followed by a generic sign indexed to the same name from a different region of Japan. Another name, KITA-IBARAKI 北茨城 'North Ibaraki' city, generically reproduces the name *Ibaraki* following the cardinal sign *kita* 'north'. 5.2 linguistic JSL toponyms are considered to be exonymic loan translations that index the semantics, morphology, or phonology of the source Japanese name (George 2022).

Eponymous JSL Toponyms

Eponyms make up the largest -DESCRIPTIVE subcategory, representing 30.43% (56/184) of all database toponyms. These non-descriptive toponyms consist of these subcategories 6.1.2 notable person, 6.1.5 associated person, 6.3.1 notable abstract entity, 6.3.2 named concrete entity, and 6.4 literary/mythical entity.

JSL Notable and Associated Person Toponyms

Signs in the category of 6.1 human make up 13.04% (24/184) of the JSL endonymic toponyms; the subcategories are 6.1.2 notable person and 6.1.5 associated person.

     Signs that metonymically refer to 6.1.2 notable person represent 8.15% (15/184) of the toponym database. Examples include OSAKA 大阪 city (Figure 1), which represents the crown of Toyotomi Hideyoshi 豊臣秀吉 the second great unifier of Japan (Japan Federation of the Deaf et al. 2009); KUMAMOTO prefecture, which represents Kato Kiyomasa 加藤清正, a regional ruler of Kumamoto, with two hands forming the circular impression on Kato's bronze armor depicted in many images of him (Yonekawa 1997); and SENDAI 仙台 city in Miyagi (Figure 4), which uses the thumb and index finger to trace the shape of a crescent moon at forehead

level to represent the headpiece of Date Masamune 伊達政宗, the early regional ruler and founder of Sendai (Yonekawa 1997). The sign for AIZUWAKAMATSU 会津若松 city in Fukushima (Figure 4) represents the action of "seppuku", ritual suicide by sword through the abdomen to represent 白虎隊 the Byakkotai 'White Tiger Brigade', a squad composed of sons of samurai who committed suicide as a group when they mistakenly believed that their castle had been breached during the Battle of Tonoguchihara.[14] AIZUWAKAMATSU incorporates a handling morpheme to produce the *seppuku* action. Thus, arguably, it could classify as a "named abstract entity" focusing on the event rather than the individuals involved. SHIBATA 新発田 city in Niigata is the number "16", which represents the 16th infantry regiment of the Imperial Japanese Army stationed in Shibata city until late Meiji.

Signs related to 6.1.5 associated person make up 4.89% (9/184) of the toponym database. MUKOU 向日 city in the Kyoto prefecture to represent a local from the early Showa period, and depicts him with a large chin via a descriptive sign; names developed from Deaf people's nicknames appear in other towns in Kyoto as well.[15] AMAKUSA 天草 city in Kumamoto (Figure 4) denotes the meaning of "a place with bad people", since the area originally housed a criminal colony; notably a number of signers use variants rather than this sign,[16] which could also classify as a condemnatory evaluative sign. SAIKI 佐伯 city depicts the dress of members of the navy to refer to their historical presence in the town.[17] TENRI 天理 city in Nara consists of a ritualistic movement made by members of the Tenri religious group founded in the are in the 19th century.[18]
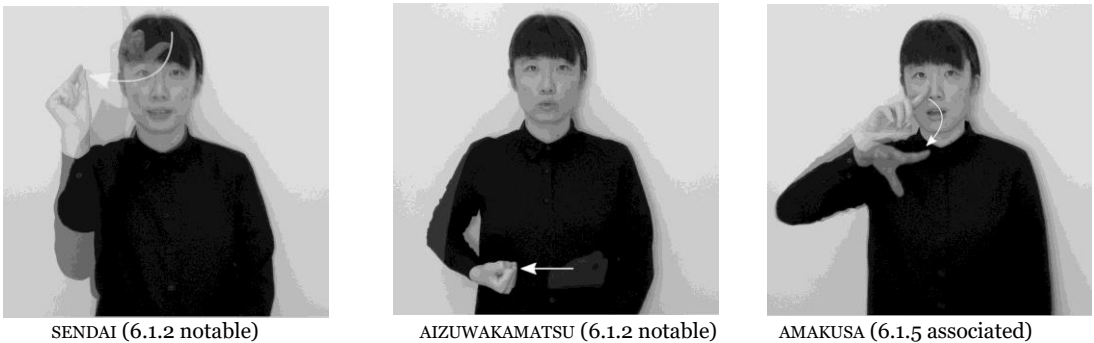

SENDAI (6.1.2 notable) AIZUWAKAMATSU (6.1.2 notable) AMAKUSA (6.1.5 associated)

Figure 4: Eponymous–6.1.2 Notable & 6.1.5 Associated Person Toponyms

JSL Non-Animate Entity Toponyms

6.3 non-animate entities make up 15.76% (29/184) of the JSL endonymic toponyms; categories represented are 6.3.1 notable abstract entity and 6.3.2 named concrete entity.

The database consists of three 6.3.1 named abstract entities, all which refer to historical military conflicts in each region. SHIBUSHI 志布志 city in Kagoshima prefecture uses the thumbs to depict to figures moving back and forth in conflict to refer to the Boshin War and the conflict between the Satsuma and Hyuga domains.[19] TANABE 田辺 city in Wakayama prefecture uses the index and thumb to depict a clucking chicken associated with the Genpei War, which has a legend about the Kumano navy using red and white chickens to predict the winning side of the conflict.[20] IBARAKI 茨城 prefecture, (Figure 5) depicts the arm coverings of a traditional raincoat to reference the Sakuradamon Incident of 1860 in which a Ronin from present day Ibaraki assassinated Ii Naosuke, chief Minister of the Tokugawa Shogunate (Yonekawa 1997).

6.3.2 named concrete entities make up roughly 14.13% (26/184) of the database. The class consists largely of metonymic references to traditional structures. Examples include NARA 奈良 prefecture (Figure 1), which represents the pose of the *Daibutsu* 'Big Buddha' bronze statue residing in Great Buddha Hall 東大寺大仏殿 (Japan Federation of the Deaf et al. 2009); ASHIBETSU 芦別 city in Hokkaido prefecture (Figure 5), which traces the profile of the five-storied pagoda 五重塔, a famous city landmark (Japan Federation of the Deaf et al. 2009); and FUKUCHIYAMA 福知山 city in Kyoto, which metonymically depicts a traditional dance with bells of good fortune that is associated with Fukuchiyama shrine (Japan Federation of the Deaf et al. 2009).
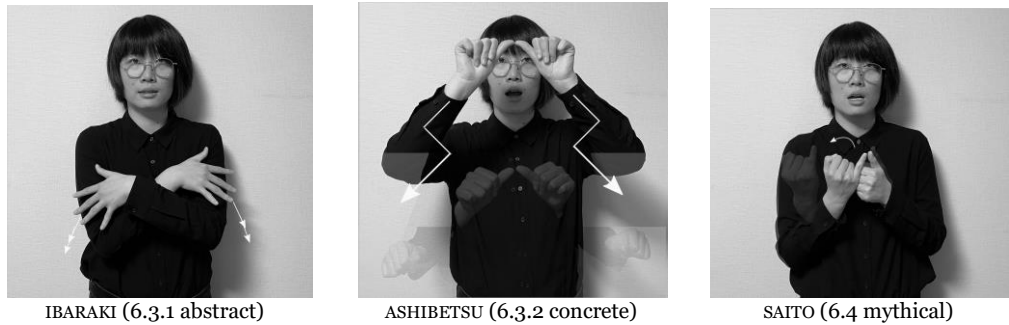
IBARAKI (6.3.1 abstract)   ASHIBETSU (6.3.2 concrete)   SAITO (6.4 mythical)

Figure 5: Eponymous−6.3 Non-animate Entity & 6.4 Mythical Entity Toponyms

JSL Literary and Mythical Entity Toponyms

6.4 literary/mythical entities make up 1.63% (3/184) of the database. Examples include SAITO 西都 city in Miyagi prefecture (Figure 5), which metonymically recounts the legend of the Iwanaga Princess 神阿多都比, depicting the princess rejected by the god Ninigi; Shiromi Shrine in Saito is associated with this legend. GOBOU 御坊 city in Wakayama prefecture refers to the tale of Anchin and Kiyohime 案珍と清姫の物語 by representing the scene where Anchin is chased by Kiyohime and hides inside the bell of Dojoji Temple.[21] A variant of the sign IZUMOSHI 出雲 city in Shimane prefecture denotes the lay of the hair of the deity Okuninushi 大国主命, who is depicted in a famous statue in Shimane.[22]

Topographical Distribution of JSL Endonymic Toponym Classes

The distribution of name types appears in Table 2 divided into widely recognized regional divisions: Hokkaido 北海道, Tohoku 東北, Kanto 関東, Hokushinetsu 北信越, Tokai 東海, Kinki 近畿, Chukoku 中国, Shikoku 四国 and Kyushu 九州. Three regions stand out with respect to the proportion of -DESCRIPTIVE eponyms: the Kinki, Chukoku, and Kyushu regions. Based on chance, one would expect about 37% of each region's toponyms to be -DESCRIPTIVE; however, Kinki at 54.29% (p=.02, sd=2.86), Chukoku at 50% (p=.11, sd=1.93), and Kyushu at 45.16% (p=.09, sd=2.69) exceed in their expected proportions.[23] Since +DESCRIPTIVE possibly acts as a more fundamental class (Stewart 1975), the default expectation is that proportionally more +DESCRIPTIVE toponyms represent the norm. Since the Kinki region stands out with respect to statistical significance of its toponymic category distribution this region will receive further discussion below.

Table 2: Regional Classification Distribution

	Hokkaido	Tohoku	Kansai	Hokushinetsu	Tokai	**Kinki**	Chukoku	Shikoku	Kyushu	**ALL**
	北海道	東北	関東	北信越	東海	**近畿**	中国	四国	九州	**ALL**
% of regional names endonymic	22.22	14.29	18.78	8.33	**31.18**	26.72	26.67	11.63	25.41	21.32
+DESCRIPTIVE	6	6	31	5	23	16	8	4	17	116
+DESCRIPTIVE %	75.00	54.55	72.09	83.33	79.31	45.71	50.00	80.00	54.84	**63.04**
1. Descriptive										
1.1 topographic	2	0	3	3	2	1	0	0	2	**13**
1.2 relational	0	0	2	0	2	2	0	0	1	**7**
1.3 locational	0	1	0	0	0	2	0	0	1	**4**
2 Associative										
2.1 local	1	2	3	2	6	5	0	1	4	**24**
2.2 occupation/activity	2	1	7	0	6	3	3	0	7	**29**
2.3 structures	1	1	8	0	3	2	4	2	1	**22**
2.4 emblems	0	1	8	0	4	1	1	1	1	**17**
3. Evaluative										
-DESCRIPTIVE	2	5	12	1	6	**19**	8	1	14	68
-DESCRIPTIVE %	25.00	45.45	27.91	16.67	20.69	**54.29**	50.00	20.00	45.16	36.96
4. Occurrent										
5. Copied										
5.1 locational	1	1	4	0	1	3	1	0	1	**12**
5.2 linguistic	0	0	0	0	0	0	0	0	0	**0**
6. Eponymous										
6.1.2 notable person	0	2	1	1	1	5	2	0	3	**15**
6.1.5 associated person	0	0	1	0	0	2	1	0	5	**9**
6.3.1 notable abstract entity	0	0	0	0	0	2	0	0	1	**3**
6.3.2 named concrete entity	1	2	6	0	4	5	4	1	3	**26**
6.4 literary/mythical entities	0	0	0	0	0	2	0	0	1	**3**
7. Innovative										
TOTAL METONYMS	8	11	43	6	29	35	16	5	30	**184**

The percentage of a region's -DESCRIPTIVE/+DESCRIPTIVE toponyms was compared with the percentage of endonymic/exonymic toponyms to examine whether their relative distributions could predict the degree to which a region will have endonymic or exonymic outputs. The assumption is that endonyms might resist change over longer periods of time based on the class it belongs to: perhaps a +DESCRIPTIVE sign-toponym would have higher transparency and spread more easily; or perhaps signers would document and teach -DESCRIPTIVE commemorative signs more frequently, similarly to prefectural sign-toponyms. The Kinki region has the highest percentage of -DESCRIPTIVE toponyms at 54.29%, and its percentage of endonymic toponyms is higher than average at 26.72% but not the highest. The Tokai region has almost the highest percentage of +DESCRIPTIVE toponyms at 79.31% and the highest proportion of endonyms at 31.18%. As the Kinki and Tokai data show, the relative distributions of -DESCRIPTIVE/+DESCRIPTIVE and endonymic/exonymic forms do not exhibit an obvious correlation.

JSL and Japanese Toponym Comparison

A cursory examination comparing 70 JSL endonymic place names with their local Japanese counterparts shows that both JSL and spoken Japanese toponyms consist of mostly descriptive, associative, and eponymous names; the primary contrast is that the spoken Japanese name set has a larger number of locationally copied names.[24] Both JSL and Japanese names could refer to local nature, such as in *Yamagata* 山形 prefecture; JSL refers to cherries but the Japanese literally refers to the surrounding mountains. Both JSL and Japanese toponyms can refer to history; for *Ibaraki* 茨城 prefecture, JSL refers to the Sakuradamon Incident of 1860, while Japanese refers to the Thom Castle legend from the 8th century Nara period. The spoken Japanese toponym for *Okinawa* 沖縄 refers to offshore fishing grounds, while JSL refers to a cultural dance. Frequently, Japanese employs a copied name from a local structure such as a shrine, for names such as *Fukuoka* 福岡 prefecture or *Soja* 総社 市 city in Okayama.

Also ubiquitous in spoken Japanese are name loans; for instance, many cities in Hokkaido come from the indigenous Ainu language and many names come from Chinese such as in *Kyoto* 'capital' and a possible etymology for the name *Gifu* prefecture. The JSL name for *Kyoto* 京都 is represented by 西 *nishi* 'west', which contrasts with the sign for Tokyo, 東京 *higashi* 'east' (Yonekawa 1997). As the Japanese name *Kyoto* is a loan translated from Chinese, meaning 'capital', JSL with the interpretation as 'western capital' incidentally indexes the semantics of the Japanese toponym Kyoto, and each can classify as a descriptive functional toponym.

JSL endonymic toponyms classify in some respect similarly to spoken language toponyms in that they largely express descriptive features of a place or tend to commemorate someone or something. The endonyms lean more heavily on +DESCRIPTIVE rather than commemorative toponyms, which likely follows trends across most languages. Stewart discusses name categorization and points out more descriptive names tend to reflect earlier time periods and commemorative/commendatory names tend to rise with respect to a region's cultural self-identity and tend to arise at a much later stage (Stewart 1975). In such a light, +DESCRIPTIVE names could be considered more fundamental and thus expected to be more represented in a set of toponyms than -DESCRIPTIVE/commemorative forms. Names would precede the notion of a nation-state, so by the time there exists a local identity, newer commemorative names would be created in a locality already holding several names.

JSL endonymic toponyms are constructed independently from Japanese place names, and typically their meanings contrast with the Japanese spoken names. As a result, JSL presents another stratum of naming that reflects upon characterizations of regions from the early 20th century onward in contrast to the older Japanese toponyms. The JSL collection consists of traditional as well as more modern references to Japanese society. Relative to the Japanese toponyms with the same regional referents, the classes of JSL toponyms do not shift significantly. Rather the use of contemporary references increases. Shared naming practices between Deaf and hearing culture reinforces the frame of the Deaf as a linguistic minority influenced by the majority.

Discussion: JSL Toponyms and Regional Identity

The topographic distribution shows that the Kinki region, area of the old capital and most identified with the origins of Japan as a nation, has the greatest proportion of commemorative endonyms; these regional identity indices accumulate, fossilizing watershed moments in the modern conception of Japan. The prevalence of commemorative toponyms, rather than the more ubiquitous +DESCRIPTIVE toponyms, in the region most strongly tied to Japan's modern historical identity demonstrates a way regional identity may reflect name type distribution.

Emergent toponyms require semantic anchoring to facilitate spread (Hoffman & Tóth 2019), and incorporating several nationally recognized icons may make Kinki toponyms more robust. Language spread requires reinforcement via the community of language users (Hoffman & Tóth 2019; Thomason and Kaufman 1988; Haugen 1950), so the more accessible a given toponym is the more likely that it will receive uptake and distribution. JSL toponym integration of well-known national historical figures and landmarks reinforces such signs to insiders through identification with their regional history, while those outside the region also have a link through connection with the commemorated national history. Signs such as NARA and OSAKA, associated with national icons, correspond with the collective image of the Kinki region both internally and externally so may resist becoming anachronistic. The most iconic history related to the formation of Japan as a nation is salient in a distinctive way.

To some extent, the preponderance of commemorative toponyms in the Kinki region is epiphenomenal since various regions of Japan also have their own iconic national toponyms. The Kinki region has the longest history as the center of Japan's national identity so a special significance tends to adhere especially to the old capitals of Nara and Kyoto. Although Kinki is not the region with the highest proportion of endonyms, it has a significantly higher proportion of commemorative eponyms. National affinity and identification with that region may reinforce the preservation of commemorative toponyms in a way distinct from other historically significant parts of Japan.

The wide use of JSL commemorative signs in the Kinki region reflects a likely combination of the cultural knowledge accumulated by signers through public education and the influence of educators both Deaf and hearing. It is notable that Kyoto, part of the Kinki region, had established the first Deaf school (Yonekawa 1984), which makes that area one of the oldest bases for sign language creation by Japan's earliest assembly of Deaf students. As a result, that region may have fostered early, influential toponym innovators, consistent with the idea that community leaders with particular social characteristics validate particular language outputs and serve as the loci for language spread (Labov 2001).

The preponderance of descriptive and associative JSL endonymic toponyms conforms with the expectation that they represent fundamental categories early in the chronological development of toponym systems (Stewart 1975). Commemorative classes, such as eponyms, show recognition of a collective identity that develops later in societies.

JSL toponyms reinforce the idea from Shimoda (2014) that regional identity is discursive (p 6). Regional icons have persistent reinforcement through visual monuments and representation of notable historical figures in popular entertainment and media. JSL endonymic toponyms receive influence from, and continue to shape, commonly circulated regional identity markers as a continuing part of that discourse. Insofar as JSL toponyms repackage familiar icons in novel ways, JSL regional identity markers could be considered generative as well.

Classifying Sign Toponyms via ANPS

Ultimately, a classification system such as the ANPS typology supports etiological insights into naming. The classification system facilitates a topographical analysis of JSL which demonstrates the influence regional identity. The etiological unearthing potential of ANPS supports further use of such a classification system across languages for further understanding toponym development and spread.

Comparison of endonyms across sign languages could be facilitated by a consistent classification system such as ANPS. The sign literature has a growing body of work on toponymy that supports the use of quantitative heuristic devices for building typologies of sign onomastic outputs. Many questions remain with respect to both structural and social influences on the development and spread of sign name outputs. Especially of interest is the spread and maintenance of in-group endonymic signs, which appear to require particular strategies for their survival in the face of growing reinforcement of exonymic forms.

The representation of names topographically acts as one of the most useful heuristics made available through ANPS. Name class distribution indexes individual names in a compact way that supports quantitative analysis. Examination of JSL toponyms regionally provides some evidence for a correlation between historical name salience and regional identity. Finer tuned distributions based on breakdown by prefectures or even cities potentially allow for other insights on regional identity and name class distribution.

Despite a branching structure that aims for "one word, one class", the metonymic nature of many toponyms and the general nature of the evaluative branch subjects many toponyms to more than one interpretation (Blair and Tent 2021). The ANPS typology allows for a representation of the names to create a useful heuristic for holistic data representation, although varying interpretations can lead to alternate or multiple classifications of toponyms. For instance, AMAKUSA marks the criminal colony history associated with the town; the fact that the inhabitants had a negative reputation incidentally fostered an evaluative aspect as the sign metonymically represents the referents via an evaluation of their past behavior. If simply classed as descriptive/evaluative, the heuristic would ignore that the source of the negative evaluative aspect indexed the inhabitants rather than the place. As a result, it is useful to see it as an eponymous index formulated as a

descriptive/condemnatory toponym. The focus could be on the literal form of the sign; however, a universal literal focus on name outputs may overgenerate surface level interpretations that ignore more appropriate intentions for toponym creation.

Notes

[1] In the sign language literature, small caps are conventionally used to distinguish signed names from spoken/written names.

[2] Japan Association of Sign Language Interpreters, accessed February 10, 2023.

[3] Shimane Deaf Information Center representative, E-mail message, September 15, 2020.

[4] Oita Deaf Information Center representative, E-mail message, September 10, 2020.

[5] Kagoshima Deaf Federation representative, E-mail message, September 17, 2020.

[6] Chiba Deaf Information Center representative, E-mail message, September 10, 2020.

[7] Chiba Deaf Information Center representative, E-mail message, September 10, 2020.

[8] Gifu Federation of the Deaf representative, E-mail message, September 16, 2020.

[9] Kumamoto Deaf Information Center representative, E-mail message, September 14, 2020.

[10] Mie Federation of the Deaf representative, E-mail message, September 11, 2020.

[11] Chiba Deaf Information Center representative meeting, September 10, 2020.

[12] Kanagawa Federation of the Deaf representative, E-mail message, September 10, 2020.

[13] Kanagawa Federation of the Deaf representative, E-mail message, October 6, 2020.

[14] Fukushima Federation of the Deaf representative, E-mail message, September 11, 2020.

[15] Kyoto Federation of the Deaf representative, E-mail message, September 9, 2020.

[16] Kumamoto Federation of the Deaf representative, E-mail message, September 14, 2020.

[17] Oita Federation of the Deaf representative, E-mail message, September 10, 2020.

[18] Nara Federation of the Deaf representative, E-mail message, September 12, 2020.

[19] Kagoshima Federation of the Deaf representative, E-mail message, September 17, 2020.

[20] Wakayama Federation of the Deaf representative, E-mail message, September 10, 2020.

[21] Wakayama Federation of the Deaf representative, E-mail message, September 10, 2020.

[22] Shimane Deaf information center representative, E-mail message, September 15, 2020.

[23] P-values calculated via Binomial model: $P(k) = {_n}C_k p^k q^{n-k}$ where n=number of a region's tokens; k= number of a region's non-DESCRIPTIVE tokens; p=the proportion of non-DESCRIPTIVE tokens (68/184); and q=1-p. If 5 copied tokens are considered non-commemorative, the same three regions still have the highest proportion of commemorative toponyms. The average number of commemorative toponyms would be 30.43% with Kinki at 45.71% (p=.02, sd=2.72), Chukoku at 43.75% (p=.11, sd=1.84), and Kyushu at 41.94% (p=.06, sd=2.56).

[24] Japanese toponym etymologies referenced in Kadokawa Bunka Shinkō Zaidan (1999).

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