



A Cognitive Semantic Analysis of ROAD Concept in English and Japanese Expressions

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Abstract

This paper examines how the ROAD concept is lexicalized in English and Japanese, focusing on both physical and metaphorical extensions. Japanese relies on three core morphemes—道(michi), 路(ro), and 通(tori)—while English distributes meanings across a larger set of lexical items specialized by scale, location, and function. Special attention is given to two pivotal English terms, way and road, and their correspondences with Japanese 道 and 方(kata).

The analysis shows that way is exceptionally polysemous, spanning both “means” and “manner,” whereas Japanese separates these functions between 道 and 方. Road, by contrast, foregrounds the structural course itself and partially aligns with 道 and 路. 通 highlights the notion of transitability, extending from physical streets into abstract domains.

Methodologically, the study adopts a contrastive semantics framework, emphasizing the role of schematicity and conceptual focus (agent vs. path) in shaping cross-linguistic patterns. A central finding is a noteworthy inversion: while English lexicalizes the ROAD concept through a fine-grained set of terms, Japanese tends to consolidate it. Moreover, some of the abstract senses expressed by way in English find parallels not in ROAD concept terms in Japanese, but in DIRECTION concept terms such as 方. This inversion highlights how different languages balance lexical economy with semantic precision, shedding light on broader mechanisms of lexicalization.

Ultimately, the comparison between English and Japanese expressions illustrates the dynamic interplay between universal image schemas and language-specific lexical organization.

Keywords: cognitive semantics, cross-linguistic comparison, metaphorical extension, Japanese and English

1. Introduction

Language provides rich resources for representing spatial experience, and among them the concept of ROAD has been widely extended in both literal and metaphorical domains. From concrete paths and streets to abstract ideas such as life choices or moral conduct, the ROAD concept serves as a powerful source domain in English and Japanese. This paper investigates how these languages lexicalize and extend this concept, with a particular focus on similarities and differences in their lexicalization patterns.

1.1 Research Focus

This study examines how the ROAD concept—defined here as the trajectory one follows to reach a destination—is lexicalized and extended in Japanese and English. Both languages ground the concept in embodied spatial experience (movement along a path), yet they diverge in how they lexicalize and extend it. Japanese relies on three high-frequency morphemes: 道(michi/dō), 路(ro), and 通(tori). 道 provides the broad conceptual core, extending into highly abstract domains. 路 specifies regulated or institutionalized routes, such as school routes or sea routes. 通, by contrast, refers to urban streets and major thoroughfares. English, on the other hand, employs a larger set of lexemes such as *road*, *way*, *path*, *street*, and *track*.

1.2 Previous Studies

Lakoff and Johnson (1980, 1999) demonstrated that image schemas such as PATH structure abstract domains including life choices, morality, and decision-making. For Japanese, Shinohara (1985) showed through etymological comparison that the concept of 道 spans both physical and metaphorical domains, while Ishiguro (2021) illustrated how the concept of 道 in martial arts corresponds to English way in its normative and spiritual dimensions.



These findings suggest that while Japanese and English share embodied experiential foundations, they differ significantly in their lexicalization strategies.

1.3 Purpose and Structure of the Paper

Building on these insights, this paper contrasts Japanese and English ROAD concept terms with three aims: (i) to analyze the distribution and semantic scope of 道, 路, and 通り in Japanese; (ii) to map English ROAD concept terms to these categories; and (iii) to reexamine the relationship between English way and Japanese 道, while also showing that way often extends beyond ROAD meanings. It also finds parallels in other Japanese expressions. The paper proceeds as follows: Section 2 analyzes Japanese ROAD concept terms; Section 3 examines the range of English ROAD concept terms; Section 4 focuses on the comparative semantics of way in relation to Japanese 道 and beyond; and Section 5 concludes with a discussion of cross-linguistic implications for how embodied schemas are lexicalized differently in Japanese and English.

2. Japanese ROAD Concept Terms

Japanese lexicalizes the ROAD concept primarily through three morphemes: 道, 路, and 通り. Each has a distinct etymological origin, and these origins have shaped their semantic development and current usage.

2.1 道 (*michi/dō*)

According to Shirakawa (2014), the character 道 combines 足 (*chaku*, 'to walk, to move') with 首 (*shu*, 'head'). Its original sense was "to walk while carrying the head of an enemy tribe." In subsequent usage, however, it came to designate the path that had been ritually purified through this act—the sacred way along which people were guided. From this shift in meaning, 道 no longer referred to a violent act itself but to the sanctified place of passage. This interpretation foregrounded the notion of a course or route, making "road" the basic sense. From this embodied image of movement, 道 came to denote a road in general and subsequently extended to abstract domains. Expressions such as 人生の道 (*jīnsei no michi*, 'the road of life'), 人の道 (*hito no michi*, 'the moral way'), and culturally embedded terms such as 剣道 (*kendo*, 'the way of the sword') and 茶道 (*sadō*, 'the way of tea') illustrate this broad scope. 道 thus functions as the conceptual core of the Japanese ROAD domain, bridging concrete movement with abstract cultural or normative practices.

2.2 路 (*ro*)

According to Kamata and Yoneyama (2011), the character 路 combines 足 (*ashi*, 'foot') with 各 (*kaku*, 'to arrive'), originally signifying "the path one walks to reach a destination." This etymology foregrounds the notion of a course or route—a path defined by the act of walking to reach a destination. Over time, its semantic range developed toward designated or institutionalized routes, emphasizing regulated and functional paths rather than broad abstractions. Compounds such as 通学路 (*tsūgakuro*, 'school route'), 進路 (*shinro*, 'career course'), 航路 (*kōro*, 'sea route'), and 街路 (*gairo*, 'street system') reflect this tendency. In many contexts, 路 corresponds closely to English *route* or *course*, highlighting its orientation toward institutional and functional pathways.

2.3 通り (*tōri*)

According to Kamata and Yoneyama (2011), the character 通 (*tsū*) is etymologically related to 筒 (*tsutsu*, 'tube'), evoking an image of an open, hollow conduit without obstruction allowing passage. This "pass-through" schema forms the spatial foundation of 通り, whose core meaning involves the possibility of moving through a space without hindrance. Its earliest sense denoted a passageway that permits movement, and this foundational image remains central. Accordingly, 通り came to designate public thoroughfares such as 表通り (*omote-dōri*, 'main street'), 裏通り (*ura-dōri*, 'back street'), and 目抜き通り (*menuke-dōri*, 'central thoroughfare'). While often associated with urban streets—including prominent examples such as *Chūō-dōri* in Ginza, Tokyo—the term more generally denotes any route that allows through-movement, encompassing both major avenues and smaller backstreets. From this spatial foundation, 通り also extended into abstract domains.



In adverbial constructions such as 言葉通り (*kotoba-dōri*, ‘as said, literally’) or 指示通り (*shiji-dōri*, ‘according to the instructions’), the sense of “passing through along a prescribed course” metaphorically motivates meanings of conformity and compliance: an utterance or action is said to “go through” when it matches the expected path. Related extensions appear in 議案が通る (*gian ga tōru*, ‘a bill passes’), 話が通じる (*hanashi ga tsūjiru*, ‘the message gets through’), and 声がよく通る (*koe ga yoku tōru*, ‘the voice carries well’), where 通 expresses successful transmission or acceptance across physical, social, and cognitive domains.

In English, spatial 通り corresponds most directly to the general category of *street*, but depending on scale and prominence it also overlaps with terms such as *avenue* or *boulevard*. This distribution illustrates a broader typological contrast: whereas Japanese employs the single term 通り to encompass both major thoroughfares and smaller backstreets, English lexicalizes these distinctions more narrowly, differentiating between *street*, *avenue*, and *boulevard*. At the same time, parallel expressions such as *the bill went through* or *the message got through* show that English also employs the passage schema in social and cognitive contexts. This highlights both a conceptual divergence in adverbial uses (*X-dōri* vs. *according to*) and a cross-linguistic convergence in metaphorical mappings of passage.

道, 路, and 通り therefore illustrate a layered lexicalization of the ROAD domain in Japanese. These observations raise the question of how such distinctions are reflected—or redistributed—across English terms such as *road*, *way*, *path*, and *street*.

3. English ROAD Terms

English lexicalizes the ROAD concept through a much more diversified vocabulary than Japanese. While Japanese relies on three core morphemes (道, 路, 通り), English distributes meanings across a wide set of lexemes that differentiate according to scale, location, and function. This lexical diversity reflects both historical developments and modern innovations tied to motorized transportation. This section first examines institutionally regulated designations such as *course* and *route*, then turns to narrower pathways such as *path* and *trail*. It next considers urban thoroughfares such as *street* and *avenue*, and finally addresses large-scale infrastructural terms like *highway* and *freeway*, which remain highly concrete and show little metaphorical extension.

Each cluster is analyzed in terms of etymology, semantic development, modern usage, and metaphorical potential, with attention to their correspondences with Japanese expressions. Etymological information is drawn from the *Oxford English Dictionary* (OED, 2nd ed.) and Terasawa (ed.) (1997).

3.1 Institutional and regulated routes

English also employs terms for institutionally regulated routes, often extending into institutional or metaphorical domains. Their etymologies highlight notions of flow and sequence, making them well suited for abstraction. This cluster corresponds closely to Japanese 路, as seen in compounds such as 進路 (*shinro*, ‘career path’) and 航路 (*kōro*, ‘sea route’).

Table 1. Comparative semantics of institutional and regulated ROAD terms

Term	Etymology	Semantic Development	Modern Usage / Function	Japanese Parallel
route	L <i>rupta</i> “broken-up way”	cleared path → designated route	travel routes, shipping routes, flight routes	航路
Course	L <i>cursus</i> “running”	flow → ordered sequence	courses of study, career course	進路
Passage	OF <i>passer</i> “to pass”	act of passing → route that allows passage	sea passages, textual passages	通路

Notes: L=Latin; OF=Old French.

In these uses, both *route* and *course* exhibit strong potential for abstraction, but in different ways. The etymological backgrounds already suggest this divergence: *route* derives from Latin *rupta* “a broken or cleared way,” implying a path newly opened or chosen. This sense motivates figurative uses such as *the route to success*, where the emphasis falls on the specific path taken toward a goal. *Course*, by contrast, comes from Latin *cursus* “running, flow,” which underlies its use for ordered and regulated progressions.



This distinction is evident in expressions such as *course of study* or *college course*, which are fully natural, whereas *route of study* would be unnatural or unidiomatic. The contrast reflects how *course* aligns with institutional, programmatic sequences, while *route* emphasizes individual trajectory and choice. *Passage* occupies a more limited role yet diverges conceptually by extending from physical transit to textual segments, as in *textual passages* or metaphorical uses like *the passage of life*. Thus, while all three terms remain grounded in notions of travel and navigation, they reveal distinct pathways of conceptual transfer into institutional, cognitive, and discursive domains.

3.2 Narrower pathways

A second cluster covers smaller-scale pathways, including *path*, *trail*, *lane*, *alley*, and *track*. Their etymologies emphasize narrowness, traces, or informal passageways, reflecting routes marked by use rather than formal construction. Compared with major roads or urban boulevards, these items remain more closely tied to embodied experience, often linked to walking, tracing, or passing through. Among them, *path* and *track* in particular have developed strong metaphorical potential, whereas *lane* and *alley* tend to remain spatially concrete.

Table 2. Comparative semantics of narrower ROAD terms

Term	Etymology	Semantic Development	Modern Usage / Function	Japanese Parallel
path	OE <i>pæþ</i> “to tread”	treaded way	Nature trails, figurative “career path”	小道, 進路
trail	L <i>trahere</i> “to drag”	track left by dragging → path to follow	Hiking trails, animal tracks	山道, 道筋
track	Du <i>trekken</i> “to draw”	trace of a car passing → line of progress	Rail tracks; figurative “on the right track”	軌道, 道筋
lane	ON <i>lōn</i> “row of houses”	alley between houses → narrow path	Side roads, countryside lanes	小道
alley	L <i>ambulāre</i> “to walk”	narrow pedestrian path	Urban backstreets	路地

Notes: OE=Old English; ON=Old Norse; Du=Dutch

While all of these terms retain concrete reference to narrow or secondary routes, their etymological backgrounds help explain why some extend metaphorically while others remain spatially bound. *Path* originates in the image of footsteps marking a way, which motivates figurative uses like *life path* and *career path*. *Trail* originally denoted a line dragged or drawn along the ground, and thus points to temporary traces rather than established ways. Accordingly, its metaphorical uses are more limited, often linked to pursuit like *follow a trail of evidence*. *Track* evokes the idea of traces left by movement, supporting abstract idioms such as *stay on track* or *on the right track*. Both terms foreground progression through traces, making them highly productive in figurative domains. *Lane* remains largely spatial, though idioms like *memory lane* show occasional figurative development without broader productivity. *Alley* remains even more strongly concrete, designating narrow passageways in urban space. Unlike *path* or *track*, it has not developed systematic abstract uses.

Taken together, these contrasts show how terms rooted in footprints and traces (*path*, *track*) provide a natural basis for abstract mappings of life progress or goal pursuit, while those rooted in narrow pathways or bounded spaces (*lane*, *alley*) remain tied to the physical domain.

3.3 Urban thoroughfares

A distinct set of terms for city streets and avenues developed through urban planning. These terms seem to reflect historical influences on urban infrastructure. They correspond most directly to Japanese 通り, which designates urban thoroughfares. Because of their strong association with physical and social space, these terms rarely extend metaphorically, illustrating the principle that concreteness constrains abstraction.



Table 3. Comparative semantics of urban ROAD terms

Term	Etymology	Semantic Development	Modern Usage / Function	Japanese Parallel
Street	L <i>sternere</i> “to spread, cover, pave”	paved and extended roads → general urban roads	urban thoroughfares, place names (Oxford Street)	通り
Avenue	L <i>advenire</i> “to approach”	way of approach	road city streets, often prestigious	通り
boulevard	MLG & MDu <i>bolwerk</i> , “bulwark”	fortifications → wide promenade	wide, landscaped urban road	大通り／通り

Notes: MLG=Middle Low German; MDu=Middle Dutch

Despite their shared reference to urban thoroughfares, the three terms display distinct semantic developments. *Street* developed as the general term for urban roads and remains the most common in place names such as *Oxford Street*. Figurative uses are limited, as in the expression *the man on the street*, designating “ordinary people.” This sense arises metonymically: the street represents public space, and by extension the everyday citizens who inhabit it. In this way, *street* represents not only the physical thoroughfare but also the social life of the city. *Avenue* came to denote broad, often tree-lined streets and carries connotations of prestige. Its rare abstract uses, as in *avenues of research*, leverage the underlying metaphor of an “approach” to a destination, though such cases remain peripheral compared to its overwhelmingly concrete usage. *Boulevard* underwent semantic change when early modern cities converted their dismantled walls into broad promenades. From there, it came to designate wide urban roads, often landscaped, as in *Boulevard Saint-Germain*. It has remained almost entirely concrete, firmly tied to the material organization of urban space rather than abstract domains.

Taken together, this cluster highlights the limited metaphorical potential of urban thoroughfare terms. Unlike *path* or *track*, whose embodied traces invite abstraction, *street*, *avenue*, and *boulevard* remain anchored in the physical and social fabric of urban space. Their occasional figurative uses are best understood as limited metonymic extensions, reinforcing the principle that lexical concreteness constrains conceptual expansion.

3.4 Major Highways and Motorways

This cluster designates large-scale infrastructural routes built for motor traffic and long-distance travel. Their emergence is closely tied to the expansion of modern transportation systems in the twentieth century. While Japanese employs the single compound 高速道路 (*kōsokudōro*) to cover this entire semantic domain, a wider range of terms exists in English. Because of their high degree of technical specificity, these items remain almost entirely concrete, with little to no metaphorical extension.

Table 4. Comparative semantics of modern infrastructural ROAD terms

Term	Etymology	Semantic Development	Modern Usage / Function	Japanese Parallel
highway	OE <i>hēiweg</i> “high way”	important way	main vehicular roads	高速道路
freeway	AmE, 1930 free+way	a way free from cross-traffic way	multi-lane expressways with limited access	高速道路
motorway	BrE 1903 motor + way	specialized for automobile traffic	high-capacity expressways	高速道路/ 自動車専用道路
expressway	1938 AmE express+way	Emphasis on speed and efficiency	Used widely in Asia and parts of U.S.	高速道路

Notes: AmE=American English; BrE=British English

Highway combines *high* and *way*, where *high* referred not only to physical elevation but also to importance. A highway was thus a main public road, and the term later broadened into the general label for major vehicular routes with regional variation in usage. *Freeway* denotes *free* in the sense of being unimpeded. The term emphasizes a road free from intersections or signals, ensuring uninterrupted flow of traffic. *Motorway* foregrounds the motor vehicle as its defining feature. It refers to



high-capacity roads built for automobile traffic and remains the official term in the U.K. and some Commonwealth countries. *Expressway* derives from *express*, originally meaning “to press out.” The term evoked the act of making something stand out, as if a form or letter were pressed into relief. What stands out is set apart from the ordinary, and this sense of distinctness developed into the meaning “special”.

Applied to transport, “special” came to highlight speed and priority, and in this way *express* gave rise to the modern use in *expressway*, denoting a road designed for faster travel than ordinary streets. Together, these terms illustrate how English diversified in response to modern transport systems, whereas Japanese consolidated the entire domain under a single compound, 高速道路.

3.5 Toward the comparative analysis

The four clusters above illustrate how English fragments the ROAD domain into a finely differentiated set of lexical items, in contrast to Japanese reliance on a smaller set of morphemes. Yet this fragmentation does not capture the full picture: two pivotal terms—*way* and *road*—cut across categories, reaching far beyond physical infrastructure. *Way* emerges as the most schematic and polysemous, while *road* serves as a key anchor for metaphorical mappings of progress and destination. Section 4 therefore turns to these pivotal terms and their parallels with Japanese 道 and 方.

4. Comparative Semantics of Way, Road, 道, and 方

The preceding section showed how English lexicalizes the ROAD domain into multiple specialized items, in contrast to Japanese, which relies on fewer but more flexible morphemes. Two terms, however, stand out from these clusters: *way* and *road*. Both originate in the physical notion of a path but have undergone distinctive semantic extensions. *Way* has developed into one of the most polysemous items in English, spanning physical routes, methods, and manners of life. *Road*, by contrast, retains a closer tie to the concrete notion of a route, yet plays a central role in metaphorical mappings of progress and destination. This section compares these two English terms with Japanese 道 and 方. While 道 parallels *way* in its schematicity and ability to extend into abstract domains, 方 aligns more closely with the methodological sense of *way*. *Road*, meanwhile, resonates with 道 and 路 when the emphasis is placed on the journey or on the structural course rather than on the agent's manner of progression.

4.1 Framing the comparison

Previous scholarship, notably Shinohara (1985) and Ishiguro (2021), has often paired *way* with 道, treating them as functional equivalents in their ability to bridge physical and abstract domains. Yet closer inspection reveals important divergences. *Way* is exceptionally polysemous, extending both toward “method/means” and “manner/style,” while 道 is more circumscribed, often tied to cultural and institutional applications. Moreover, Japanese provides 方, a morpheme often corresponding more closely to the methodological sense of *way*. The following subsections analyze these relationships in detail: (i) *way* and 道, (ii) *way* and 方, and (iii) *road* in relation to both Japanese terms.

4.2 Way and 道: shared schematicity

Both *way* in English and 道 in Japanese originate in the physical notion of a path—a path with a beginning, an end, and the traversal in between. This underlying image schema naturally licenses abstraction: a path is both a space to move through and a process leading to a goal. In English, *way* has extended in two principal directions. One is toward means and method, where the focus is on the process as a strategy for reaching an objective (*a way to solve the problem*). The other is toward manner and style, where the emphasis falls on how the journey is carried out (*the way of life, the way of tea*). In both cases, the abstraction highlights the agent's perspective—how a person or community proceeds toward a destination.

Japanese 道 shows a partially parallel trajectory. Like *way*, it can denote physical roads as well as metaphorical life courses such as 人生の道 (*jinkei no michi*, ‘the road of life’). In cultural and institutional contexts, 道 extends to regulated practices such as 剣道 (*kendō*) or 茶道 (*sadō*), encoding not just a skill but a disciplined mode of living. In this respect, 道 resonates more strongly with the “manner/style” than with the “method/means” dimension of *way*. The latter, as shown next, aligns more closely with



方. At the same time, the comparison highlights a structural contrast: English compresses both “means” and “manner” into a single polysemous lexeme (*way*), whereas Japanese distributes these functions across distinct morphemes (道 and 方). This difference underscores how English accommodates semantic breadth within a single lexeme, while Japanese manages conceptual complexity through lexical differentiation.

4.3 *Way and 方: methodological and directional parallels*

The Japanese morpheme 方 primarily denotes “direction” or “orientation,” but by extension it also expresses “method” or “manner of doing something.” In this respect, 方 frequently parallels the methodological sense of *way*. For example, a *way to solve the problem* corresponds to 解決の方法 (*kaiketsu no hōhō*), not typically to 道. Both *way* and 方 encode abstract orientation: they indicate not the journey itself but the strategy or direction taken by an agent. This differs from 道, which retains a stronger association with life courses or cultural disciplines. In short, when *way* means “method,” 方 is often the closest Japanese equivalent. Yet even here the trajectories diverge in scope: 方 extends into methodological or directional senses without the strong cultural or disciplinary associations found in 道. By contrast, *way* covers both domains simultaneously, ranging from everyday problem-solving to existential orientations. This asymmetry reflects broader tendencies in the two languages—Japanese splits abstract orientation across multiple morphemes, while English allows a single term to span both pragmatic and existential domains.

4.4 *Road and metaphors of journey*

While *way* highlights the agent’s experience of progressing, *road* places the conceptual focus on the path itself as an objective structure. Etymologically deriving from Old English *rād* “riding,” *road* retains a sense of the concrete route and has extended metaphorically to signify a course with identifiable stages and milestones. Expressions such as *the Road to Athens* (Olympic campaigns) or *the road to success* illustrate this orientation: the emphasis is not on how the subject proceeds, but on the trajectory itself, typically conceptualized in terms of steps or phases. This differs from *way*, which emphasizes individual choice and manner of progression.

4.5 *Synthesis*

The comparison of *way*, 道, 方, and *road* underscores both cross-linguistic parallels and subtle divergences. *Way* is highly schematic and polysemous, extending toward both means and manner; 道 overlaps most closely with the latter. 方 provides Japanese with a separate resource to capture the methodological sense of *way*. *Road*, though less expansive, plays a pivotal role in metaphors of progress and destination, partially overlapping with both 道 and 路.

Together, these terms illustrate how English and Japanese map the ROAD schema differently: English distributes meanings across multiple overlapping items, while Japanese relies on a combination of the broad coverage of 道 and the complementary morphemes 路, 通り, and 方. This contrast sheds light on the interaction between schematic image schemas and language-specific lexicalization patterns.

5. Conclusion

This study has explored how the ROAD concept is lexicalized and extended in English and Japanese. Japanese relies on three core morphemes—道, 路, and 通り—to cover a broad semantic field, while English distributes meanings across a more diversified set of terms, each specialized by scale, location, or function. The analysis further highlighted how schematic terms in English, especially *way*, undergo extensive metaphorical extensions, whereas more concrete items such as *avenue* or *boulevard* remain confined to literal contexts. The role of 通り, meanwhile, shows how Japanese encodes urban and social space without significant metaphorical expansion.

A central finding is the nuanced relationship between *way*, 道, and 方. While 道 parallels *way* in its capacity to link physical and abstract domains, the methodological sense of *way* corresponds more closely with 方. Notably, English compresses both “means” and “manner” into *way*, whereas Japanese differentiates them lexically—a noteworthy inversion of the broader typological pattern where English fragments and Japanese consolidates. *Road*, meanwhile, plays a distinctive role by focusing on the journey or structural course, partially overlapping with both 道 and 路. These contrasts show how each



language draws on shared embodied schemas of movement yet organizes lexicalization in divergent ways.

Beyond descriptive comparison, the study underscores the theoretical value of examining schematicity and focus (agent vs. path) in cross-linguistic semantics. It also suggests pedagogical implications: highlighting such contrasts can help learners grasp why direct translation between English and Japanese often fails to capture subtle differences in meaning.

Future research may extend this approach to other path-related terms or investigate how these conceptualizations influence discourse patterns in each language. Ultimately, the comparison of way, 道, 方, 路, and 通り illustrates the dynamic interplay between universal image schemas and language-specific lexical organization.

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