

FROM LOANWORDS TO LEXICAL INNOVATION: COVID-19 BUZZWORDS IN JAPANESE DISCOURSE

Takako Kawabata

SOAS University of London, London, United Kingdom

kawabata.takako@n.iput.ac.jp

Received: 13-09-2024

Accepted: 06-01-2025

Published: 21-05-2025

Abstract: The COVID-19 pandemic has significantly influenced language, leading to the emergence of numerous neologisms worldwide to describe unprecedented changes in lifestyle. In Japan, English-based loanwords were frequently adopted alongside Japanese terms in pandemic discourse, despite the availability of Japanese equivalents. This study explores COVID-19-related buzzwords in Japan, focusing on their formation and usage. It addresses three key research questions: 1) What types of COVID-19-related neologisms emerged in Japanese? 2) What are the distinguishing features of these neologisms? and 3) What roles do English loanwords play? Using linguistic and sociolinguistic approaches, the study examines terms nominated for two prominent new word and buzzword awards in Japan. The findings reveal four categories of neologisms: Japanese words, English loanwords, concomitants of Japanese and English loanwords, and hybrids of Japanese and English words. Furthermore, the study identifies four primary processes: nominalisation, word formation, lexical deviation, and borrowing. The analysis highlights the sociolinguistic impact of these neologisms, demonstrating how they reflect Japan's cultural and generational dynamics, facilitate engagement with global public health discourse, and underscore tensions around accessibility for older demographics. This research contributes to understanding language evolution in response to international events and offers a novel perspective on the impact of the COVID-19 pandemic on the Japanese language.

Keywords: COVID-19; nominalisation; word formation; lexical deviation; borrowing

INTRODUCTION

Background and Context

The COVID-19 pandemic has profoundly impacted virtually every aspect of life globally, from public health to economic activities, and social interactions to cultural practices. One of the notable but often underappreciated areas of change due to the COVID-19 pandemic has been in language. Crises and major societal disruptions historically prompt the emergence of new words—neologisms—that encapsulate novel experiences, concepts, and phenomena associated with the events. The COVID-19 pandemic is no exception, with a surge in neologisms across various languages as people have sought to describe new realities and navigate unprecedented challenges.

Language is crucial for communication, shaping and reflecting societal attitudes, behaviours, and responses during crises. The emergence of neologisms during the COVID-19 pandemic provides valuable insights into how societies adapt linguistically to extraordinary circumstances.

These linguistic innovations are not merely additions to the lexicon but are imbued with cultural and social significance, encapsulating shared experiences and collective consciousness.

Japanese is known for its adaptability in incorporating foreign terms, and using loanwords has long been an integral part of its lexicon (Hosokawa, 2015; Kunert, 2020). During the pandemic, new words and phrases were coined in Japan to address its unique challenges, leading to numerous neologisms' widespread creation and use of multiple neologisms. These neologisms complement conventional terminology and introduce new English-based loanwords into the linguistic repertoire. This linguistic evolution includes using English-based loanwords alongside native terms, reflecting various aspects of the pandemic, from medical and public health terminology to colloquial expressions capturing the everyday realities of this transformative period. While some of these English loanwords have Japanese equivalents, the extent to which they are used and the

*Corresponding Author:

kawabata.takako@n.iput.ac.jp



©0000 The Author(s). Published by TRANSBAHASA
This is an open access article under CC-BY-SA Licence

criteria for their adoption in describing the health crisis remain ambiguous.

While extensive work has been conducted on the sociolinguistic aspects of loanwords in Japan (Asahi et al., 2022; Hosokawa, 2023), relatively little research has examined how neologisms emerge in response to societal crises, particularly during the COVID-19 pandemic. Studies such as O'Neill's (2021) analysis of COVID-19-related English loanwords have shed light on generational disparities in comprehension and usage. Toratani (2023) examined specific terms like *masuku* ('mask'), revealing cultural underpinnings. However, existing research has yet to comprehensively address the processes and implications of neologism formation that combine native Japanese and loanword elements, particularly in times of crisis.

The study analyzes COVID-19-related terms nominated for major new word and buzzword awards in Japan from 2020 to 2023, using Krishnamurthy's (2010) framework—nominalisation, word formation, lexical deviation, and borrowing. It also explores the role and function of English-based loanwords during the pandemic. The research addresses three main questions: the types, features, and functions of COVID-19-related neologisms in Japanese. By examining buzzwords, the study reveals linguistic trends and societal engagement with these terms.

The importance of this research lies in its contribution to understanding how language evolves during crises. It offers valuable insights for linguistics, lexicography, sociolinguistics, and public health communication by documenting real-time linguistic change and highlighting effective strategies for engaging the public.

The COVID-19 Pandemic and Government Responses in Japan

To provide context for analyzing Japanese COVID-19-related neologisms, this study first outlines the progression of the pandemic and governmental responses in Japan,

followed by a review of the linguistic impact of COVID-19 both globally and locally. Previous studies on pandemic-related neologisms are discussed alongside an overview of the Japanese lexicon, emphasizing the role of loanwords in the language.

Japan reported its first COVID-19 case on January 15, 2020, with a major outbreak soon after on a cruise ship in Yokohama on February 3 (Ministry of Health, Labour and Welfare, 2020). The WHO named the virus and disease on February 11, but in Japan, the public commonly referred to it as *shingata korona* (Ministry of Health, Labour and Welfare, 2020). The Japanese Government declared a state of emergency in several prefectures, including Tokyo, on April 7, 2020 (Ministry of Health, Labour and Welfare, 2020). This was followed by various emergency measures, border controls, and the postponement of the 2020 Summer Olympics (International Olympic Committee, 2020; Ministry of Health, Labour and Welfare, 2020).

Unlike many countries, Japan avoided strict lockdowns, instead opting for quasi-emergency strategies such as limiting activity in dining and event spaces (Steen, 2020). These restrictions were gradually relaxed, and by March 2022, the country began to shift toward coexistence with the virus (Cabinet Secretariat, 2022). Eventually, COVID-19 was reclassified to be treated like seasonal influenza starting in May 2023 (Ministry of Health, Labour and Welfare, 2023).

Linguistic Impact of COVID-19 Globally

The COVID-19 pandemic significantly accelerated the productivity of morphological systems through borrowing, compounding, blending, and affixation, reflecting the adaptive nature of language (Souag, 2020; Werigbeleghe & Kwokwo, 2019). Neologisms—newly coined words or expressions—emerged rapidly in response to the global crisis, filling lexical gaps and

improving communication (Jiang et al., 2021; Sharipova, 2024). Their creation is often influenced by sociocultural shifts, with crises such as the pandemic prompting linguistic innovations (Samylicheva & Gazda, 2020; Lehrer, 2003; Fischer, 1998; Bell, 2021).

The year 2020 saw a notable spike in language change as both new words and altered meanings of existing terms emerged to convey novel experiences. These changes enhanced communicative precision during the pandemic (Korat, 2019; Klymenko, 2019; Nicholson et al., 2023). Lexicographers worldwide documented such neologisms, which unlike nonce formations, are stable and widely recognized within speech communities (Stevenson, 2015; Matiini, 2024; Schmid, 2008; Fischer, 1998; Usevičs, 2012). This study defines neologisms as expressions that are still considered new yet used consistently over a certain period.

Cross-linguistic studies confirmed that COVID-19 triggered similar linguistic responses globally. The Oxford English Dictionary added numerous COVID-19 terms in 2020 (Oxford English Dictionary, 2024), and neologism research has spanned many languages: English (Asif et al., 2021; Ibrahim et al., 2020), German (Klosa-Kückelhaus, 2022), Spanish (Bueno & Freixa, 2022; Adelstein & Boschioli, 2022), European and Brazilian Portuguese (Barbosa & Martins, 2022; Alves et al., 2022), Croatian (Mihaljević et al., 2022), Korean (Nam et al., 2022), and New Zealand Sign Language (Vale & McKee, 2022). Comparative studies included Hungarian, Italian, and English (Papp, 2022), and French, German, Dutch, and English (Cartier et al., 2022).

Other research analyzed formation methods, communicative roles, and social implications of neologisms (Kananaj & Rushiti, 2024; Asif et al., 2021). Social media platforms, especially Twitter, were also used to explore neologism trends during early 2020 (Ibrahim et al., 2020; Al-Azzawi &

Haleem, 2021). These studies revealed frequent use of borrowing, word formation, and lexical deviation. Additionally, research explored public awareness and usage patterns of neologisms, including demographic differences such as gender-based variations in Saudi Arabia (Amiruddin et al., 2022; Al-Melhi & Busabaa, 2022).

Linguistic Impact of COVID-19 in Japan

In Japan, the COVID-19 pandemic has created numerous neologisms, reflecting both linguistic innovation and cultural adaptation. Terms such as ソーシャルディスタンス (*sōsharudisutansu*, social distance), 自粛警察 (*jishukukeisatsu*, self-restraint police), and 'ウィズコロナ (*wizu korona*, with corona) have become commonplace, encapsulating various aspects of the pandemic experience. During the pandemic, Toratani (2023) examined how the Japanese used the word マスク (*masuku*, mask). O'Neill (2021) analysed the comprehensibility of COVID-19-related English loanwords by the Japanese public and found a lower comprehension rate among research participants over 60 than younger participants. Other researchers have focused on analysing the social impacts of the pandemic in Japan. Minetaki (2020) investigated the use of COVID-19-related words on Japanese Twitter, arguing that lifting some pandemic measures influenced economic activities by the public. Yomoda (2021) analysed Japanese tweets containing 'COVID-19 and school closures' and found they mainly expressed negative sentiments, whereas the public had positive attitudes toward online learning. These neologisms provide linguistic tools to navigate the pandemic and reflect cultural nuances and societal responses to the crisis.

In the case of Japan, the use of loanwords and their impact should not only be discussed from a linguistic perspective but also examined in terms of their influence on broader society. Loanwords serve crucial

sociocultural functions. Beyond introducing new concepts, they often signify cultural openness and modernization. For instance, adopting English loanwords during the COVID-19 pandemic facilitated the dissemination of global public health information in Japan, highlighting the role of English as a *lingua franca*. However, the sociocultural implications extend further: loanwords like *sōsharudisutansu* (social distance) and *rokkudaun* (lockdown) reflect Japan's integration into global discourse while sparking debates about accessibility for older demographics.

Japanese Lexicon

The Japanese lexicon comprises four main categories: native Japanese words, *kango* (Sino-Japanese words), *gairaigo* (primarily European loanwords), and hybrids combining Japanese and foreign elements (Taylor & Taylor, 1995). *Gairaigo*, often written in katakana, includes both sound-based loans (*onyaku*) and translated words (*[hon]yakugo*) (Park, 1986). The presence of Western loanwords in Japanese has grown over time. For instance, *Kojien* data from 1991 showed that Western-based words made up 16.6% of the lexicon (Oshima, 2009). Sanseido's loanword dictionary grew from 20,000 entries in 1972 to 52,500 in 2000 (MacGregor, 2003), with English comprising 80–85% of *gairaigo* (Park, 1986; Irwin, 2011).

Borrowing is a key mechanism in language development, with speakers of all languages adopting new terms (Trask, 1996). In Japan, loanword usage correlates with age and gender. A 2004 survey showed that 35% of youth aged 15–19 understood *gairaigo*, while awareness among those over 60 was significantly lower (National Institute for Japanese Language and Linguistics, 2004). Ishino (1983) found younger people were more accepting of English loanwords. However, during the COVID-19 pandemic, excessive reliance on *gairaigo* led to confusion among older adults unfamiliar

with English-based terms (The Sankei News, 2020).

METHOD

This study systematically examined COVID-19-related neologisms that gained prominence in Japanese society from 2020 to 2023, illuminating their characteristics and evolution. Words nominated for two distinguished 'word of the year' awards in Japan were analysed: the *U-can Shingo Ryukogo Taisho* (U-can new words and buzzwords award), announced by the collaboration between educational material company U-can and the publisher Jiyukokuminsha, and the *Sanseido Jishowoamuhitoga erabu kotoshino shingo* (Sanseido word of the year selected by lexicographers), published by Sanseido, were analysed for the study. These awards annually recognize the top 30 words nominated by the Japanese public, with editorial staff selecting the word of the year from these lists in December. In addition to the top 30 words, Sanseido has a special category related to the social situation of the year. In 2020, Sanseido's list had a category for COVID-19-related words, with six words being nominated. The nominated words included new words, existing words with new meanings or concepts, and buzzwords. To expand the scope beyond award-nominated buzzwords, this study additionally examined the usage of these neologisms in everyday contexts. Sources such as online forums and social media platforms (e.g., Twitter) were observed to trace how these words were adopted and used across different societal domains.

Krishnamurthy's (2010) framework has been adopted in the research on COVID-19 neologisms. Krishnamurthy (2010) analysed Salman Rushdie's novel *Midnight's Children* and identified four neologisms: nominalisation, word formation, lexical deviation, and borrowing. Krishnamurthy's study on lexis and neologisms concerns the use of English and other languages, and it

helps investigate COVID-19-related new words and buzzwords in Japanese that contain English loanwords and compound words blending English. As previous research on COVID-19-related neologisms has adopted this framework (Al-Azzawi & Haleem, 2021; Asif et al., 2021; Ntalala, 2022), utilising it in this study facilitates the comparison of neologism types across different languages and societies. Therefore, this study examines the characteristics of COVID-19 neologisms based on the framework and four forms identified by Krishnamurthy and other researchers.

The methodology encompassed several key steps:

1. The top 30 nominated words are distinguished into 'COVID-19-related' and 'non-COVID-19-related' categories.

The two buzzword awards provide explanations of the meanings and social backgrounds of each nominated word, such as words widely used to express COVID-19 restrictions. This research distinguishes between COVID-19-related and non-COVID-19-related words based on these explanations.

2. Categorising the types of COVID-19-related words based on their linguistic origins, including Japanese words, loanwords, concomitants of Japanese and loanwords, and hybrid forms that blend Japanese and foreign language elements. (This step includes identifying the linguistic origins of the loanwords.)
3. These neologisms are identified through four distinct forms: nominalisation, word formation, lexical deviation, and borrowing, drawing upon Krishnamurthy's established classifications.
4. Classifying the neologisms based on their usage contexts. The identified neologisms were further analyzed to understand how

they were utilized across different societal and communicative contexts.

The study captures a broader perspective on how pandemic-related terms permeated Japanese society by incorporating award-nominated and organically used neologisms. This expanded approach allows a more nuanced understanding of their sociolinguistic impact, bridging institutional recognition with grassroots adoption.

RESULTS AND DISCUSSION

Classification of Neologisms

Examining nominated words from 2020 to 2023 revealed intriguing patterns in Japan's emergence and evolution of COVID-19-related neologisms. The number of nominated words in four years was 158 after excluding duplicated words in the two awards. Among the nominated words, 30 were related to the COVID-19 pandemic.

In 2020, many such words surfaced, but this trend gradually waned in subsequent years. The chi-square test revealed a p-value less than 0.05, indicating that the observed difference is statistically significant. Although most COVID-19-related words appeared in 2020, some new words became widely used in the following years. The term '*shingata korona*' (COVID-19) was not among the nominations. Most of the non-COVID-19-related words were associated with entertainment in 2020, the Tokyo Olympic Games in 2021, and war and religious groups related to the assassination of then-Prime Minister Shinzo Abe in 2022. The findings were summarized in Figure 1.

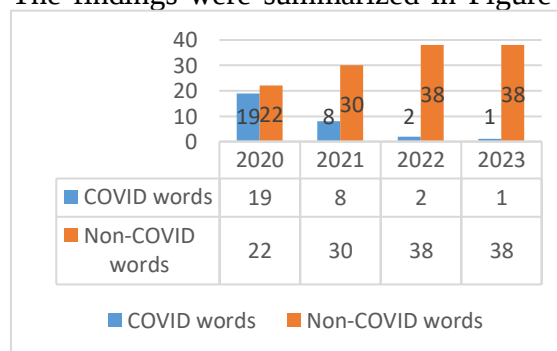


Figure 1. Number of COVID-19-related and non-COVID-19-related words by year

Linguistic Origins

The study identified four types of COVID-19-related neologisms in Japanese: Japanese words, loanwords, concomitants of both Japanese and loanwords, and hybrids of Japanese and loanwords. Although Japanese has historically adopted medical terminologies from German, COVID-19-related loanwords and hybrid words predominantly contain English elements, reflecting the widespread use of English-based loanwords in Japanese society.

Loanwords appeared prominently in 2020; however, all the new words that emerged in the following years were either Japanese or blends of Japanese and loanwords. Although Japanese words continued appearing over the four consecutive years, this does not indicate statistical significance, as the number of COVID-19-related words decreased yearly. The chi-square test produced a p-value of 0.307, indicating no statistically significant difference. Figure 2 provides insights into the types of COVID-19-related words, categorised by year.

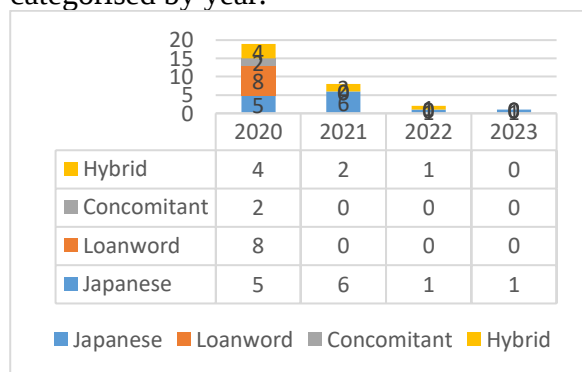


Figure 2. Types of COVID-19-related words by year

All the loanwords were adopted from English, for example, ロックダウン (*rokkudaun*, lockdown). However, some English-based loanwords were 'Japanese English' and were not used outside Japan. One example of this form is Go Toキャンペーン (*Go To kyampēn*, Go To campaign), also called Go To トラベル (*Go To toraberu*, Go

To travel), a tourism-boosting campaign led by the Government to support industries struggling with the pandemic-caused downturn (The Japan Times, 2021). Another example is リモート (*rimōto*, remote), which is used to mean 'work remotely' and 'work from home' in Japanese.

In the nomination lists for 2020, two entries were concomitants of Japanese and English-based loanwords, which are the use of Japanese and English loanwords. One entry was 新しい生活様式 (*atarashiiseikatsuyōshiki*, new lifestyle) in Japanese and ニューノーマル (*nyūnōmaru*, new normal) as a loanword. The other entry was おうち時間 (*ouchijikan*, time spent at home) in Japanese and ステイホーム (*suteihōmu*, stay home) as a loanword. Although the Japanese and English phrases express almost the same concepts, the two languages were used in different periods.

The final type is hybrid words, consisting of Japanese and English morphemes. For example, アベノマスク (*abenomasuku*, masks the Japanese Government provided to the public) is a compound noun formed from アベ (*abe*, then-Prime Minister Shinzo Abe), ノ (*no*, possessive in Japanese, 'of' in English), and マスク (*masuku*, mask), which is a conventionally used English-based loanword in Japanese. Another example is Zoom映え (*zūmu bae*, photogenic at Zoom meetings), which comprises an English morpheme, 'Zoom' (*zūmu*, an online meeting system), and a Japanese word, 映え (*bae*, sequential voicing of a noun 'hae', which means 'to make something appear more beautiful'). An English acronym with a Japanese noun, PCR検査 (*PCR kensa*, PCR test), was also in this type. All the pandemic-related words, their pronunciations, and meanings are listed in Table 1.

Table 1. COVID-19 related words, pronunciations, and meanings

Year	Type	Written form and	English translation
2020	Japanese	アマビエ amabie	Amabie (name of a mythical creature believed to ward off plagues)
		自粛警察 jishukukeisatsu	Self-restraint police (vigilantes)
		濃厚接触者 nōkōsesshokusha	Close-contact person
		3密(三つの密) sanmitsu (mitsunomitsu)	Three Cs (i.e., Crowded places, Close-contact settings, and Confined and enclosed spaces)
		手指 shushi	Hands and fingers
	Loanword	エッセンシャルワーカー essensharuwākā	Essential worker
		Go To キャンペーン gōtō kyampēn	Go to campaign
		クラスター kurasutā	Cluster
		リモート rimōto	Remote (work from home)
		ロックダウン rokkudāun	Lockdown
	Concomitant	ソーシャルディスタンス sōsharudeisutansu	Social distance
		テレワーク terewāku	Telework (work from home)
		ワーケーション wākeshon	Workcation
		新しい生活様式 atarashiiseikatsuyōshiki/	New lifestyle /
		ニューノーマル nyūnōmaru	New normal
	Hybrid	おうち時間 ouchijikan/	Time spent at home /
		ステイホーム suteihōmu	Stay home
		アベノマスク abenomasuku	Abe's mask (masks the Japanese Government provided to the public)
		オンライン○○ onrain XX	Online XX (e.g., online drinking party)
		PCR検査 PCR kensa	PCR test
2021	Japanese	Zoom映え zūmu bae	Photogenic at Zoom meetings
	Hybrid	副反応 fukuhannō	Side effect
		変異株 henikabu	Variant
		人流 jinryū	Flow of people
		自宅療養 jitakuryōyō	Home recovery
	Hybrid	黙食 mokushoku	Eat in silence
		路上飲み rojōnomi	Drinking on street
		鼻マスク hanamasuku	Nose mask (i.e., wearing a face mask below one's nose)
		マスク会食 masukukaishoku	Wear a face mask when dining out
	Japanese	オミクロン株 omikuronkabu	Omicon variant
	Hybrid	顔パンツ kaopantsu	Face pants (i.e., cannot leave home without a face mask on)
	Japanese	4年ぶり/声出し応援 Yonenburi/koedashioen	For the first time in four years/Cheering out loud

Table 2. COVID-19-related words according to their forms and types

	Nominalisation	Word formation	Lexical deviation	Borrowing
Japanese	人流 jinryū	自粛警察 jishukukeisatsu	3密(三つの密) sanmitsu (mitsunomitsu)	アマビエ amabie
	路上飲み rojōnomi		黙食 mokushoku	濃厚接触者 nōkōsesshokusha
	4年ぶり/声出し応援 yonenburi/koedashioen			手指 shushi
				副反応 fukuhannō
				変異株 henikabu
Loanword				自宅療養 jitakuryōyō
				オミクロン株 omikuronkabu
				エッセンシャルワーカー essensharuwākā
				Go To キャンペーン gōtō kyampēn
				クラスター kurasutā
Concomitant				リモート rimōto
				ロックダウン rokkudāun
				ソーシャルディスタンス sōsharudeisutansu
				テレワーク terewāku
				ワーケーション wākeshon
Hybrid				

The words formed within nominalisation were 人流 (*jinryū*, flow of people) and 路上飲み (*rojōnomi*, drinking on street). The former is the nominalisation of the noun phrase *hito no nagare* (flow of people), and the latter is from the verb phrase *rojō de nomu* (drinking on street). Word formations also appear in the form of compound nouns, such as 自粛警察 (*jishukukeisatsu*, self-restraint police), which is formed from 自粛 (*jishuku*, self-restraint) and 警察 (*keisatsu*, police). Another example is オンライン○○ (*onrain* ○○, online XX), which comprises オンライン (*onrain*, online) and a noun related to an online activity (e.g., drinking party). Although オンラインゲーム (*onrain gēmu*, online game) has been commonly used, words related to cultural change due to the pandemic can be added to オンライン (*onrain*, online). The words formed within lexical deviation are 黙食 (*mokushoku*, eat in silence) and 顔パンツ

Forms of Neologisms

Further analysis unveiled that the COVID-19-related words in the present study could be classified into four distinct forms: nominalisation, word formation, lexical deviation, and borrowing. Table 2 lists the COVID-19-related words according to their forms and types.

(*kaopantsu*, face pants). These neologisms were created to reflect social change and the state of people's minds. Borrowings occurred not only from English but also from existing Japanese words. Semantic shifts of existing words fall into the widening, narrowing, or generalisation of meaning. For example, アマビエ (*amabie*), which is a mythical creature believed to ward off plagues, became the symbol of protecting people from epidemics. This borrowing is not a change in meaning but adds a new concept to reflect the social situation. Another example is 濃厚接触者 (*nōkōsesshokusha*, close-contact person), which could be any person in close contact with someone. The meaning of this term has narrowed to refer to a person who had contact with a COVID-19 carrier. The other shift is the generalisation of specific terms to daily use. The medical terms 手指 (*shushi*, hands and fingers) and 変異株 (*henikabu*, variant) came into common usage. The borrowings from English were エッセンシャルワーカー (*essensharuwākā*, essential worker) and ワークেশョン (*wākēshon*, workcation), which have no equivalent words in Japanese. English-based loanwords occur as a result of borrowing, and these include the shortened form of 'work remotely' as リモート (*rimōto*, remote).

Thematic Groups of Neologisms

The identified neologisms can be further categorised into three main thematic groups based on their usage contexts. These neologisms range from medical terminology to colloquial expressions, reflecting the multifaceted impact of the pandemic. Below is a summary of the most notable neologisms within each category.

Medical Terms and Public Health Communication

Japanese was used for medical terms such as 副反応 (*fukuhannō*, side effect) and 自宅療養 (*jitakuryōyō*, home recovery), highlighting the critical role of clear and accessible public health communication in

managing the pandemic. Ensuring that key terms are easily understood and widely disseminated enhances public compliance and awareness, aiding in effective crisis management. However, words related to COVID-19 prevention, such as クラスター (*kurasutā*, cluster) and ソーシャルディスタンス (*sōsharudisutansu*, social distance), were borrowed directly from English, despite having Japanese equivalents like "群れ" (*mure*, cluster) and "社会的距離" (*shakaiteki kyori*, social distance).

Societal Adaptation

The widespread use of terms such as テレワーク (*terewāku*, telework) and マスク会食 (*masukukaishoku*, wear a face mask when dining out) indicates a rapid societal adaptation to new norms and practices necessitated by the pandemic. Moreover, the popularity of colloquialisms such as 自粛警察 (*jishukukeisatsu*, self-restraint police) and 路上飲み (*rojōnomi*, drinking on the street) reflects the public's emotional and psychological response to prolonged restrictions and social pressures.

Cultural Nuances

Colloquialisms involved compounding and blending, creating new words that succinctly captured cultural nuances and complex concepts, such as アベノマスク (*abenomasuku*, masks provided by the Japanese Government). Furthermore, terms such as オンライン飲み会 (*online nomikai*, online drinking party) demonstrate Japan's ability to integrate foreign concepts into its cultural and linguistic fabric, reflecting a blend of traditional and modern influences.

Sociopolitical Context of COVID-19 Neologisms

The emergence of COVID-19-related neologisms in Japan must be understood within the broader sociopolitical context. Japan's unique pandemic response, characterized by quasi-emergency measures rather than strict lockdowns, shaped the emerging neologisms. Terms such as

sanmitsu (三密, the Three Cs: avoiding Crowded places, Close-contact settings, and Confined spaces) reflect the Government's emphasis on individual responsibility rather than enforced restrictions. This contrasts with the linguistic responses observed in countries with more stringent lockdowns, such as the frequent use of terms like 'lockdown' in English-speaking countries. The selective borrowing of English loanwords in Japan, such as *rokkudaun* (lockdown), often involved adapting foreign terms to fit domestic discourse.

The sociopolitical context further influenced linguistic choices. In the Philippines, a surge of pandemic-related vocabulary emerged, some used humorously, showcasing linguistic creativity in coining terms addressing various aspects of the crisis (Cahapay, 2020). In Brazilian Portuguese, terms related to lockdown and quarantine expanded in meaning to reflect conceptual information related to the pandemic (Alves et al., 2022). In contrast, Japan's economic recovery-focused discourse emphasized terms like *Go To Travel* campaigns, reflecting a push to stimulate domestic tourism.

Cross-Linguistic Comparisons

In English, word-formation processes were varied, covering all possible forms of derivation, including affixation, compounding, blending, clipping, acronyms, and dual processes. Compounding and blending were the most prominent (Al-Salman & Haider, 2021). By contrast, languages such as Spanish and Croatian predominantly relied on compounding and affixation rather than hybridization during the pandemic (Božanić & Brešan Ančić, 2022; Bueno & Freixa, 2022).

Comparing Japan's neologisms with other languages reveals shared and unique patterns. For instance, like many languages, Japanese coined new phrases to describe social phenomena and public health measures. The term *wizu korona* (ウィズコロナ, with

corona) parallels the English phrase "living with COVID-19," reflecting a global shift in pandemic management strategies. Similarly, terms like *remote* (リモート, remote) mirror the widespread adoption of remote work practices worldwide. However, Japan's neologisms also display unique linguistic creativity. Hybrid forms such as *abenomasuku* (アベノマスク, Abe's mask), combining the then-Prime Minister's name with an English loanword, exemplify Japan's ability to blend cultural and linguistic elements.

Implications of Sociopolitical and Cross-Cultural Dynamics

The findings highlight the interplay between sociopolitical factors and linguistic adaptation. This aligns with global patterns of linguistic adaptation but also reveals Japan-specific strategies, such as hybridization and the use of culturally resonant terms like *jishukukeisatsu* (自粛警察, self-restraint police). Cross-linguistic comparisons enrich this analysis by illustrating universal trends, such as the rapid emergence of public health-related terminology, alongside distinct cultural responses. This underscores the importance of sociopolitical context in shaping linguistic innovation, providing a foundation for further comparative studies on the global linguistic impact of COVID-19.

In Japan, adopting English loanwords during the pandemic underscores both the influence of globalization and the localized reinterpretation of foreign concepts. The prevalence of loanwords highlights Japan's historical openness to adopting Western terminology, particularly during crises that demand new linguistic frameworks. However, the reliance on English-based loanwords during the pandemic sparked debate over accessibility and inclusivity, especially for older generations less familiar with foreign terms (O'Neill, 2021). This tension underscores the sociopolitical challenges of balancing global integration with domestic linguistic needs.

This study reveals unique aspects of the Japanese context. It is important to note that English loanwords became less prominent after 2021. While English-based loanwords appeared at the pandemic's beginning, the new words and buzzwords gradually shifted toward Japanese terms. This shift reflects changes in Japanese lifestyle and the reduced need for borrowing, as new Japanese terms were developed to describe life coexisting with the virus. These findings align with prior research on adopting loanwords in Japanese, emphasizing their initial prominence during periods of rapid societal change (O'Neill, 2021; Ishino, 1983). However, the observed shift away from loanwords contrasts with studies highlighting the sustained prevalence of English loanwords in Japanese (Park, 1986; Irwin, 2011). This divergence may indicate a context-specific adaptation, where native Japanese terms were prioritized as the pandemic progressed and domestic public health strategies required terms that were more accessible to a broader audience.

The use of English loanwords in 2020, as noted in our findings, was influenced by several factors. Firstly, it is a convention in the Japanese language to employ loanwords to express foreign concepts. Secondly, Japan's distinct approach to pandemic measures, characterised by a lack of strict lockdowns and the promotion of 'sanmitsu' (the Three Cs: Crowded places, Close-contact settings, and Confined and enclosed spaces), made the term 'lockdown' seem less relevant. As a result, the loanword ロックダウン (*rokkudaun*, lockdown), instead of its Japanese equivalent 都市封鎖 (*toshifūsa*), was more commonly used. Moreover, the concept of 'social distance' was novel and foreign to the Japanese public, despite the existence of its Japanese equivalent, 社会的距離 (*shakaiteki kyori*), necessitating the use of the loanword ソーシャルディスタンス (*sōsharudisutansu*, social distance). As the focus moved from containment to prevention and coexistence with the virus, Japan

developed its native terms to describe this evolving reality. For example, マスク会食 (*masukukaishoku*, wear a face mask when dining out) became a norm, and 顔パンツ (*kaopantsu*, face pants, signifying the necessity of face masks) highlighted the importance of masks in daily life.

Another unique aspect of COVID-19-related neologisms is the selective use of loanwords. Terms with potentially negative connotations were more likely to be expressed using English loanwords, whereas positively connoted ideas were conveyed through Japanese expressions. For example, the English-based loanword オーバーシュート (*ōbāshūto*, overshoot) was used to describe a surge in COVID-19 cases, even though a Japanese equivalent, 感染爆発 (*kansem bakuhatsu*), also existed. In contrast, 集団免疫 (*shūdan men'eki*, herd immunity) was explained in Japanese.

The study also identified the neologisms' four structural and formation processes: nominalisation, word formation, lexical deviation, and borrowing. Both Japanese and English elements were present in all four forms. The prevalence of hybrid words reflects Japan's linguistic creativity and the influence of English on contemporary Japanese. The neologisms were used as nouns and noun phrases, fitting seamlessly into existing syntactic structures without requiring significant grammatical adjustments. This finding showcases the linguistic flexibility of the Japanese language in responding to the pandemic. These findings corroborate Krishnamurthy's (2010) framework, demonstrating that nominalization and word formation are critical in adapting language to societal crises. However, the study also reveals unique local cultural nuances. For example, hybrid terms like *abenomasuku* combine Japanese and English elements to reflect local sociopolitical contexts. This aligns with Lehrer's (2003) findings on linguistic creativity but emphasizes the role of

hybridity in capturing culturally specific meanings. Such terms contrast with neologisms in other languages, such as Spanish, which predominantly rely on compounding and affixation (Bueno & Freixa, 2022). This highlights the significance of cultural specificity in the processes of neologism formation.

The identified neologisms demonstrate a variety of structural formations, showcasing the linguistic creativity of Japanese society. The prevalence of hybrid words, combining Japanese and English elements, indicates an adaptive and innovative use of language to cope with unprecedented circumstances. The findings underscore the dual sociocultural functions of loanwords as both globalization tools and cultural identity markers. For instance, *sōsharudisutansu* (social distance) and *wizu korona* (with corona) reflect Japan's engagement with global public health discourse. At the same time, terms like *jishukukeisatsu* (self-restraint police) and *sanmitsu* (Three Cs) reveal localized adaptations to the crisis. These results support Sergeant's (2011) assertion that loanwords are markers of modernization and internationalization and highlight accessibility concerns for older generations (O'Neill, 2021).

This study's findings reveal shared and unique linguistic adaptations compared to neologisms in other languages. The pandemic-specific context introduced distinctive factors influencing this adoption. For example, *rokkudaun* (lockdown) aligns with global trends (Asif et al., 2021), while hybrid words such as *abenomasuku* reflect uniquely Japanese sociopolitical narratives. Significant societal disruptions prompt the rapid emergence of neologisms. These neologisms encapsulate new realities and behaviours, highlighting the adaptive nature of language in response to unprecedented events. The findings underscore the dynamic relationship between language and society, particularly in times of crisis. The observed

trends and patterns provide valuable insights for future linguistic research and public policy development.

CONCLUSION

This study investigated the emergence and characteristics of COVID-19-related neologisms in Japan, revealing a swift linguistic adaptation to a global health crisis. Unlike previous research that focused on gradual language change, this study shows how neologisms—particularly those combining native Japanese and English loanwords—played a key role in reflecting and responding to societal shifts. The analysis categorized neologisms into Japanese words, loanwords, combinations of both, and hybrids, with a notable decline in English-based terms from 2021 onward as public focus shifted toward prevention and coexistence. Using Krishnamurthy's (2010) framework of nominalisation, word formation, lexical deviation, and borrowing, the study demonstrated the Japanese language's flexibility. Terms like マスク会食 (*masukukaishoku*) and 顔パンツ (*kaopantsu*) reflect how such expressions became culturally embedded.

The research highlights how the integration of loanwords enables swift dissemination of global concepts, while native terms retain cultural relevance—seen in contrasts like *lockdown* versus 三密 (*sanmitsu*, Three Cs). This dual strategy underscores the importance of linguistic choices in effective public health messaging, especially in multilingual contexts. It also reflects Japan's balancing of global engagement and cultural identity in its language use. By contributing to Japanese sociolinguistics, the study provides insights into how language mediates between local and international spheres, and how public discourse adapts linguistically during crises. These findings are critical for linguists, educators, and policymakers seeking to understand or enhance crisis communication through language.

Future research could explore the long-term persistence of such neologisms through longitudinal studies, compare linguistic responses across cultures, and investigate how social variables like age and profession affect neologism adoption. As Japan continues to live with COVID-19, new terms may emerge, making it vital to consider the comprehensibility of loanwords across all demographics, as emphasized in past research (National Institute for Japanese Language and Linguistics 2004; O'Neill 2021). This study offers a foundation for future inquiry into neologism formation, dissemination, and obsolescence, contributing to the broader understanding of language evolution during crises.

REFERENCES

- Adelstein, A., & Boschioli, V. de los Á. (2022). Spanish neologisms during the COVID-19 pandemic: Changing criteria for their inclusion and representation in dictionaries. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 93–124). De Gruyter. <https://doi.org/10.1515/9783110798081-006>
- Al-Azzawi, Q. O., & Haleem, H. A. (2021). "Do you speak Corona?": Hashtags and Neologisms since the COVID-19 Pandemic Outbreak. *International Journal of Linguistics, Literature and Translation*, 4(4), 113–122.
- Al-Melhi, A., & Busabaa, N. A. (2022). Language and New Words and Phrases Related to Coronavirus Among Saudi Arabian Students: Awareness, Knowledge, and Use. *Theory and Practice in Language Studies*, 12(2), Article 2. <https://doi.org/10.17507/tpls.1202.02>
- Al-Salman, S., & Haider, A. S. (2021). COVID-19 trending neologisms and word formation processes in English. *Russian Journal of Linguistics*, 25(1), Article 1. <https://doi.org/10.22363/2687-0088-2021-25-1-24-42>
- Alves, I. M., Curti-Contessoto, B., & Costa, L. (2022). COVID-19 terminology and its dissemination to a non-specialised public in Brazil. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Exicography of Coronavirus-related Neologisms* (pp. 221–236). De Gruyter. <https://doi.org/10.1515/9783110798081-011>
- Amiruddin, N., Yassi, A. H., & Sukmawaty, S. (2022). Morphological Process of COVID-19 Neologisms: A Study of Compounding. *English Learning Innovation*, 3(2), 100–114. <https://doi.org/10.22219/englie.v3i2.20415>
- Asahi, Y., Usami, M., & Inoue, F. (Eds.). (2022). *Handbook of Japanese Sociolinguistics* (1st edition). De Gruyter Mouton.
- Asif, M., Zhiyong, D., Iram, A., & Nisar, M. (2021). Linguistic analysis of neologism related to coronavirus (COVID-19). *Social Sciences & Humanities Open*, 4(1), 100201. <https://doi.org/10.1016/j.ssaho.2021.100201>
- Barbosa, S., & Martins, S. D. (2022). The neologisms of the COVID-19 pandemic in European Portuguese: From media to dictionary. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 191–220). De Gruyter. <https://doi.org/10.1515/9783110798081-010>
- Bell, G. (2021). Pandemic Passages: An Anthropological Account of Life and Liminality during COVID-19. *Anthropology in Action*, 28(1), 79–84. <https://doi.org/10.3167/aia.2021.280115>
- Božanić, P., & Brešan Ančić, T. (2022). Formation of Neologisms Related to the COVID-19 Pandemic on Croatian Websites. *Zbornik Radova Filozofskog Fakulteta u Splitu*, 15, 63–86. <https://doi.org/10.38003/zrffs.15.4>
- Bueno, P. J., & Freixa, J. (2022). Lexicographic detection and representation of Spanish neologisms in the COVID-19 pandemic. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 73–92). De Gruyter. <https://doi.org/10.1515/9783110798081-005>
- Cabinet Secretariat. (2022). *COVID-19 Information and Resources*. <https://corona.go.jp/en/emergency/>
- Cahapay, M. B. (2020). Trending phrases, names, and hashtags related to Covid-19 in the Philippines: The language of social crisis. *Muallim Journal of Social Sciences and Humanities*, 4, 1–9. <https://doi.org/10.33306/mjssh/91>
- Cartier, E., Onysko, A., Winter-Froemel, E., Zenner, E., Andersen, G., Hilberink-Schulpen, B., Nederstigt, U., Peterson, E., & Meurs, F. van. (2022). Linguistic repercussions of COVID-19: A corpus study on four languages. *Open Linguistics*, 8(1), 751–766. <https://doi.org/10.1515/opli-2022-0222>
- Fischer, R. (1998). *Lexical Change in Present-day English: A Corpus-based Study of the Motivation, Institutionalization, and Productivity of Creative Neologisms*. Gunter Narr Verlag.
- Hosokawa, N. (2015). Nationalism and Linguistic

- Purism in Contemporary Japan: National Sentiment Expressed through Public Attitudes towards Foreignisms. *Studies in Ethnicity and Nationalism*, 15(1), 48–65. <https://doi.org/10.1111/sena.12135>
- Hosokawa, N. (2023). *Loanwords and Japanese Identity: Inundating or Absorbed?* Routledge. <https://doi.org/10.4324/9781003197522>
- Ibrahim, E. R., Kadhim, S. A., Mayuuf, H. H., & Haleem, H. A. (2020). A Sociolinguistic Approach to Linguistic Changes since the COVID-19 Pandemic Outbreak. *Multicultural Education*, 6(4), 122–128.
- International Olympic Committee. (2020, March 24). *Joint Statement from the International Olympic Committee and the Tokyo 2020 Organising Committee—Olympic News*. International Olympic Committee. <https://olympics.com/ioc/news/joint-statement-from-the-international-olympic-committee-and-the-tokyo-2020-organising-committee>
- Irwin, M. (2011). Loanwords in Japanese. In *Slcs.125*. John Benjamins Publishing Company. <https://benjamins.com/catalog/slcs.125>
- Ishino, H. (1983). *Gendai gairaigo kosatsu [A study of modern loanwords]*. Taishukan Shoten.
- Jiang, M., Shen, X. Y., Ahrens, K., & Huang, C.-R. (2021). Neologisms are epidemic: Modeling the life cycle of neologisms in China 2008–2016. *PLOS ONE*, 16(2), e0245984. <https://doi.org/10.1371/journal.pone.0245984>
- Kananaj, A., & Rushiti, R. (2024). Exploring the Linguistic Landscape of a Global Pandemic: Covid-19 Neologisms. *Revista de Gestão Social e Ambiental*, 18(8), e05917–e05917. <https://doi.org/10.24857/rgsa.v18n8-003>
- Klosa-Kückelhaus, A. (2022). German Corona-related neologisms and their lexicographic representation. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 27–42). De Gruyter. <https://doi.org/10.1515/9783110798081-003>
- Klymenko, O. (2019). Twitterverse: The birth of new words. *Proceedings of the Linguistic Society of America*, 4, 11:1-12. <https://doi.org/10.3765/plsa.v4i1.4507>
- Korat, O. (2019). The Rationality of Semantic Change. In N. Tahmasebi, L. Borin, A. Jatowt, & Y. Xu (Eds.), *Proceedings of the 1st International Workshop on Computational Approaches to Historical Language Change* (pp. 151–160). Association for Computational Linguistics. <https://doi.org/10.18653/v1/W19-4719>
- Krishnamurthy, S. (2010). The chutnification of English: An examination of Salman Rushdie's "Midnight's Children" lexis. *Journal of Social and Cultural Studies*, 13(1), 11–28.
- Kunert, H. (2020). Contemporary Loanwords in hiragana: An Analysis of Typical Traits and Contexts. *Japanese Studies*, 40(1), 21.
- Lehrer, A. (2003). *Understanding trendy neologisms*. <https://www.semanticscholar.org/paper/Understanding-trendy-neologisms-Lehrer/9d2062cbd1538ba2913443201e44767fe4b061da>
- MacGregor, L. (2003). English in Japanese TV commercials. *Journal of Intercultural Communication*, 6, 147–163.
- Matiini, G. (2024). Varieties of neologism used in online gaming conversation. *Language Literacy*, 8(1), 346–361. <https://doi.org/10.30743/ll.v8i1.9190>
- Mihaljević, M., Hudeček, L., & Lewis, K. (2022). Coronavirus-related neologisms: A challenge for Croatian standardology and lexicography. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 163–190). De Gruyter. <https://doi.org/10.1515/9783110798081-009>
- Minetaki, K. (2020). Text mining of tweets related to COVID-19. *Shokei-gakuso: Journal of Business Studies*, 67(1), 195–219.
- Ministry of Health, Labour and Welfare. (2020, January 16). *新型コロナウイルスに関連した肺炎の患者の発生について (1例)*. https://www.mhlw.go.jp/stf/newpage_08906.html
- Ministry of Health, Labour and Welfare. (2023, May). *新型コロナウイルス感染症の5類感染症移行後の対応について*. Ministry of Health, Labour and Welfare. <https://www.mhlw.go.jp/stf/corona5rui.html>
- Nam, K., An, J., & Jung, H.-Y. (2022). The emergence and spread of Korean COVID-19 neologisms in news articles and user comments and their lexicographic description. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 43–72). De Gruyter. <https://doi.org/10.1515/9783110798081-004>
- National Institute for Japanese Language and Linguistics. (2004). *Gairaigoni kanshuru ishiki chosa [survey regarding the awareness of loanwords]*. <https://www.ninjal.ac.jp/archives/genzai/ishiki/>
- Nicholson, J.-B., Newman, A. M., & Ramasubbu, N. (2023). New Language and the Diffusion of Innovation: The Case of Bitcoin. *Academy of Management Proceedings*, 2023(1), 19446.

- <https://doi.org/10.5465/AMPROC.2023.19446abstract>
- Ntalala, S. (2022). Social-cultural Dynamics and Language Innovations: A Lexicology of COVID-19 Neologisms in Kiswahili. *Asian Journal of Language, Literature and Culture Studies*, 5(4), 124–133.
- O'Neill, T. (2021). Koronashokku: Loanwords in Japanese and the Covid-19 pandemic. *SOAS Working Papers in Linguistics*, 20, 121–141.
- Oshima, K. (2009). Semantic and structural shift patterns of gairaigo in Japan. *Intercultural Communication Studies*, 11, 51–65.
- Oxford English Dictionary. (2024). *Oxford English Dictionary*. <https://www.oed.com/>
- Papp, J. (2022). How the COVID-19 pandemic is changing the Hungarian language: Building a domain-specific Hungarian/Italian/ English dictionary of the COVID-19 pandemic. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 147–162). De Gruyter. <https://doi.org/10.1515/9783110798081-008>
- Park, W. (1986). *Western loanwords in Japanese*. University of Stockholm.
- Samylicheva, N., & Gazda, J. (2020). Derivative neologisms as sociocultural dominants in the Russian and Czech languages of the modern period. *SHS Web of Conferences*, 88, 01022. <https://doi.org/10.1051/shsconf/20208801022>
- Schmid, H.-J. (2008). *New Words in the Mind: Concept-formation and Entrenchment of Neologisms*. 126(1), 1–36. <https://doi.org/10.1515/angl.2008.002>
- Sergeant, P. (2011). The symbolic meaning of visual English in the social landscape of Japan. In P. Sergeant (Ed.), *English in Japan in the Era of Globalization* (pp. 187–204). Palgrave Macmillan UK. https://doi.org/10.1057/9780230306196_10
- Sharipova, S. (2024). USAGE OF NEOLOGISMS IN MEDIA DISCOURSE. *The American Journal of Social Science and Education Innovations*, 6(09), Article 09. <https://doi.org/10.37547/tajssei/Volume06Issue09-09>
- Souag, L. (2020). When is templatic morphology borrowed? *Morphology*, 30(4), 469–500. <https://doi.org/10.1007/s11525-020-09360-8>
- Steen, E. (2020, May 12). Tokyo Q&A: Why is Japan not in a hard lockdown over coronavirus? *Time Out Tokyo*. <https://www.timeout.com/tokyo/news/why-is-japan-not-in-a-hard-lockdown-over-coronavirus-051220>
- Stevenson, A. (2015). Oxford Dictionary of English (3rd ed.) (Online). In *Oxford Dictionary of English* (3rd ed.) (Online). Oxford University Press. <http://www.oxfordreference.com/display/10.1093/acref/9780199571123.001.0001/acref-9780199571123>
- Taylor, I., & Taylor M. M. (1995). *Writing and literacy in Chinese, Korean, and Japanese*. John Benjamins Pub. Co. <https://ci.nii.ac.jp/ncid/BA27269248>
- The Japan Times. (2021, November 11). Japan's Go To Travel subsidy program to resume possibly in February. *The Japan Times*. <https://www.japantimes.co.jp/news/2021/11/11/national/go-to-return/>
- The Sankei News. (2020). *Koronakade tobikau katakanago, 'wakarinikui' no koe, kansens risukuno takamarini kokenmo [Katakanago overly used during COVID-19 pandemic. People say "they are difficult to understand", and increase the risk of infection]*. <https://www.sankei.com/article/20200423-OTHHWO5U7VMDHDEEI6YCORLP5Q/>
- Toratani, K. (2023). How did COVID-19 impact the use of Japanese complex words with *masuku* 'mask' in 2020? *Linguistics Vanguard*, 0(0). <https://doi.org/10.1515/lingvan-2021-0143>
- Trask, R. L. (1996). *Historical linguistics*. Arnold. https://books.google.co.jp/books/about/Historical_Linguistics.html?id=FWFyQfMhiyQC&redir_esc=y
- Usevičs, S. (2012). *Neologisms in British newspapers*. <https://www.semanticscholar.org/paper/NEOLOGISMS-IN-BRITISH-NEWSPAPERS-Usevi%C4%8Ds/1dd8c7e932e8670ccc9ae24cfa90dc809f434c07>
- Vale, M., & McKee, R. (2022). Neologisms in New Zealand Sign Language: A case study of COVID-19 pandemic-related signs. In A. Klosa-Kückelhaus & I. Kernerman (Eds.), *Lexicography of Coronavirus-related Neologisms* (pp. 261–274). De Gruyter. <https://doi.org/10.1515/9783110798081-013>
- Werigbeleghe, E., & Kwokwo, O. M. (2019). Verbal Extensions as a Morphological Productivity Strategy Towards Meaning Creation in Languages. *Studies in Literature and Language*, 18(2), Article 2. <https://doi.org/10.3968/10928>
- Yomoda, K. (2021). Public Concerns toward School Closures Caused by Novel Coronavirus Disease (COVID-19) Pandemic.: A Quantitative Text Analysis and a Sentiment Analysis of Twitter Data. *The Nagoya Gakuin Daigaku Kyoshoku Centre Nenpou; The Annual Report of the Center of Teacher Training Course*, 5, 49–61.