'THE RESEARCH IS CONDUCTED…': AN EXPLORATION OF A GRAMMATICAL METAPHOR SYNDROME IN INDONESIAN RESEARCH ARTICLES

Putu Nur Ayomi[1]*; Shoshana Dreyfus[2]; Syamsul Hadi[3]; Adi Sutrisno[4]

[1]Linguistic Department, Faculty of Cultural Science, Gadjah Mada University
Jl. Bulaksumur, Caturtunggal, Daerah Istimewa Yogyakarta 55281, Indonesia
[1]English Language Department, Faculty of Foreign Languages, Mahasaraswati University
Jl. Kamboja No. 11A, Denpasar - Bali, Indonesia
[2]Department of English Language and Linguistic, Faculty of Law, Humanities and the Arts, University of Wallongong
Building 19, University of Wallongong, NSW 2522, Australia
[3]Arabic Language and Linguistics, Faculty of Cultural Sciences, Gadjah Mada University
Jl. Bulaksumur, Caturtunggal, Daerah Istimewa Yogyakarta 55281, Indonesia
[4]English Department, Faculty of Cultural Sciences, Gadjah Mada University
Jl. Bulaksumur, Caturtunggal, Daerah Istimewa Yogyakarta 55281, Indonesia
[1]putu.nur.a@unmas.ac.id; [2]shooshi@uow.edu.au; [3]syamsulhadi@mail.ugm.ac.id; [4]adisutrisno@ugm.ac.id

ABSTRACT

The research examined the use of one grammatical metaphor (hereafter GM) syndrome frequently found in Indonesian language research articles (hereafter RAs). This syndrome followed the lexicogrammatical structure of Process+Range or Process+Medium. An interesting feature of this GM syndrome, which, to date, had not been studied, was that while GM typically increased the lexical density of a clause by condensing meaning into nominal groups. This GM syndrome seemed to do the opposite. e.g., rather than writing 'merubah' (changed) as Process, writers used 'melakukan perubahan' (do some changes), which had the structure of Process+Range. This had the effect of delexicalizing the verb as well as increasing the number of words in the clauses. Instead of seeing this form as a mere ritual in academic writing, the research sought to understand the functional role in the RAs. The data was taken from a small corpus of RAs from two refereed Indonesian humanities journals. The occurrences of this GM syndrome were identified. A systemic analysis was then conducted with a metafunctional lens, examining the ideational, interpersonal, and textual functions of this form of GM syndrome. The analysis reveals that ideationally, GM syndrome is a resource to manage technicality, abstraction, taxonomy, and activity sequence; textually, the syndrome is a resource organizing textual coherence through the management of hyperThemes; and interpersonally, the syndrome functions as a resource for Graduation, which decreases the force of propositions.

Keywords: grammatical metaphor, grammatical metaphor syndrome, Indonesian research articles

INTRODUCTION

From the perspective of Systematic-Functional Linguistics (SFL), language and knowledge are not seen as separate phenomena (Halliday & Matthiessen, 2014). Developing knowledge simultaneously means developing knowledge of the language that constructs that knowledge (Halliday & Matthiessen, 1999). However, there is a great shift in the register of everyday spoken language that communicates common knowledge, characterized by congruent language forms. It compares to the formal written language used at the tertiary level to exchange and produce specialized knowledge. This written formal language makes the use of many incongruent forms (Liardét, 2015; Liardèt, 2016a; Larsson, 2018). Further, it is not an easy task for students to master such language patterns. It typically requires a conscious educational process and exposure to these incongruent forms. It is not only non-native users of English who have difficulty with these forms but also native users (Devrim, 2015; Ryshina-Pankova, 2015).

The phenomenon of the move from the concrete and congruent forms of language to the incongruent

forms happens through several processes, the chief one of which is GM. From a semogenic perspective, language first develops from congruent forms; for example, there is a linear or congruent 'one to one' relation between the constituents in the semantics and the lexicogrammatical stratum (Halliday & Matthiessen, 1999). As an example, a happening is construed as a clause involving both a participant and a process in which the participant is typically construed as a noun and the process as a verb. This is the form that comes first in language and provides the basis for further development. However, to expand the potential of language as a meaning-making resource, there is the possibility of realignment between strata (Halliday & Matthiessen, 1999), e.g., the meaning of a 'process' or 'quality' is construed as a noun instead of a verb or adjective respectively. This incongruent realization of meaning that occurs with GM creates a 'stratal tension' between the semantics and the lexicogrammar. Halliday and Matthiessen (1999) also model GM as a 'semantic junction' between semantic categories. For example, rather than seeing the noun 'awareness' only as a thing, it is a process-thing. In the research, the term 'activity-entity' (Hao & Humphrey, 2019) refers to this form of nominalized process to present the semantic compounding of process and thing in the discourse semantic stratum.

Halliday and Mathiessen (2014) have recognized two types of GM; ideational GM, which comprises both experiential and logical GM, and interpersonal GM, which deals with metaphors of mood and modality. In scientific writing, ideational metaphor plays the most significant role in relation to the subject matter of the RA's field (Hao & Humphrey, 2019). Furthermore, Halliday and Matthiessen (1999) have listed 13 types of ideational GM. However, as can be seen in Figure 1, they do not usually occur individually, but in the form of syndromes.
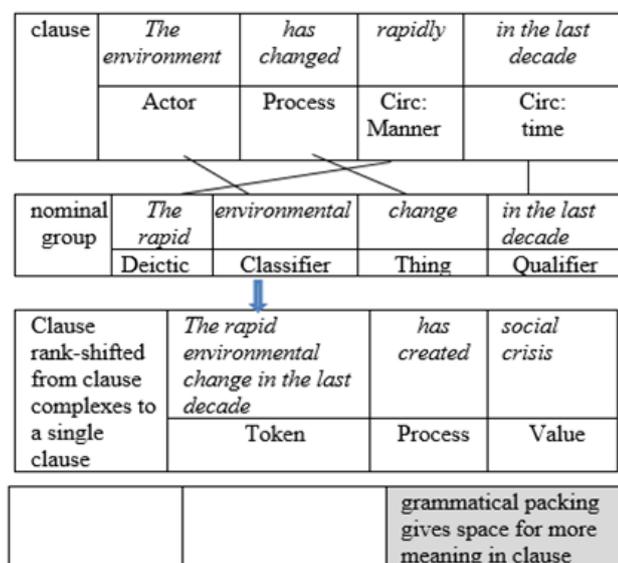

Figure 1 Category and Rank Shifts in Metaphoric Reconstrual

In Figure 1, the central GM involves the shift from the process 'was driving', to the 'ing' form of a noun (while there is no morphological change here, the role and function have changed). Thus, the other participants and circumstances in the congruent rank must act as the modifying constituents in the nominal group that has 'driving' as the head noun.

The GM syndrome discussed here consists of two of the 13 ideational types of GM (Halliday & Matthiessen, 1999). The first is the nominalization of the process (GM type 2), and the second is the creation of a process with a verb with no congruent source of meaning (type 12). This means that the meaning typically contained within the process has been transformed into a nominalized form, such as from 'present' to '(give a) presentation' or from 'investigate' to '(conduct an) investigation'.

SFL is a multifaceted model of language, which understands the language system as being multidimensional. Two of the key dimensions are stratification and metafunction (Halliday & Matthiessen, 2014). Stratification refers to how language comprises several layers or planes; the context, content, and expression planes. The context plane consists of the register, which also has three dimensions; field (what the text is about), tenor (the relationship between participants), and mode (how the text is organized). Martin and Rose (2003) have expanded the context plane with a further subdivision of the genre above the register. The content plane of language is divided into two strata; semantics or discourse semantics and lexicogrammar. The strata have a relationship of realization, i.e., meaning in the semantic stratum is realized as wordings in the stratum of lexicogrammar. Another key dimension is metafunction, which complements stratification, as all strata can be seen as having three broad functions (metafunctions). They are (1) the ideational metafunction, which construes our experience of life as entities, activities, qualities, and circumstances; (2) the interpersonal metafunction, regulating social relations between communicators; and (3) the textual metafunction, organizing the other two metafunctions as coherent text. The metafunctions work across the strata, the rank of the clause, and discourse.

Clause as the ideational meaning realization in the stratum of lexicogrammar can be seen from two perspectives; transitivity and ergativity. The transitive perspective sees a clause as a linear construct. It names participants according to the type of process in the clause, e.g., actor, senser, sayer, goal, etc. The ergative perspective, on the other hand, is more generalized. Participants are categorized based on their nuclearity in relation to the process. The nucleus of a clause consists of the obligatory elements process and medium. Medium is the participant that is going through the process. The participant that initiates an action is called the agent. The other participant that is not affected by the process and indicates the domain of the process is called the range, which shares a similar definition as the scope in the transitive perspective (Halliday

& Matthiessen, 2014). The ergative perspective is used to analyze the GM syndrome being discussed in the research. The differences between the agent and medium can be seen in the example of Table 1.

Table 1 Example of Transitive and Ergative Perspective on Clauses

	The government	changed	The regulation
Transitivity	Actor	Process: material	Goal
Ergativity	Agent	Process: material	Medium
	The regulation	**has changed**	
Transitivity	Actor	Process: material	
Ergativity	Medium	Process: material	
	Students	*must enjoy*	*the learning process*
Transitivity	Senser	Process: mental	Phenomenon
Ergativity	Medium	Process: behaviour	Range

As one of the important features for construing meaning in the discourses associated with academic and bureaucratic language, GM has been studied from different perspectives. Derewianka (2003) has studied the emergence of GM in child language development and confirmed that GM's use begins around early adolescence and typically increases as children mature into adulthood. That GM marks higher language development can also be seen in second or foreign language development (Liardét, 2016a; To, 2018). Researchers also have found that native speakers of English use more GM and with greater fluency than their non-native counterparts, especially in academic writing (He & Yang, 2018; Zhao, 2017). Higher-level tertiary students learning English as a second language show more mastery in the use of GM than those in the lower levels (Liardét, 2016b; Ryshina-Pankova, 2015; Velázquez-Mendoza, 2015). Further, researchers also demonstrate that with knowledge of GM, students can improve their production of the more valued academic texts within their disciplines (Devrim, 2015; Ferreira, 2019), which also helps to increase their academic success (Ezeifeka, 2015; Walsh Marr, 2019). As one form of GM, nominalization has also been studied as a resource for the construction of knowledge in various disciplinary discourses. For example, it is one resource to build technicality in scientific discourse and abstraction in humanities discourse (Jalilifar, White, & Malekizadeh, 2017; Martin, 2004).

GM is clearly one of the key features of academic writing. Many researchers have studied GM in English or the use of GM in English as a second language. However, there is still a lack of research explaining the construction of GM in languages other than English, including in the Indonesian language, specifically, in how GM is employed to construe meaning in Indonesian scientific texts.

The research does not focus on GM, generally. Instead, its focus is on one type of GM syndrome that has not been analyzed comprehensively for the functional motivation of its use. This GM syndrome, which seems to occur quite frequently in Indonesian academic writing, has the configuration of Process + Range or Process + Medium. In this type of GM, a process that is congruently realized as a verb is encoded nominally as an entity that can later serve as a range or medium in a clause. The process itself is replaced by a 'lexically empty verb' or a generic verb (Derewianka, 2003). An example of this is, "*Mereka mengambil kesimpulan bahwa …*", in which the meaning of the mental process '*menyimpulkan*' (conclude) is shifted into the noun form '*kesimpulan*' (conclusion) (medium) in the clause structure, with the more generalized verb '*mengambil*' (take) filling the process slot.

Many forms of this GM are considered 'dead metaphors' (Halliday & Matthiessen, 1999) or 'faded metaphors' (Derewianka, 2003), which means they lose their semantic tension that understand as the congruent unmarked form. Common examples of this type of GM in everyday spoken English are, 'take a walk', 'have a bath', or 'make a call', in which their congruent versions are the verbs 'walk', 'bathe', and 'call'. Phylogenetically, these expressions 'have taken over' their congruent forms and are used without any conscious effort (Halliday & Matthiessen, 1999). It is observed that in Indonesian; however, this metaphor is not used in spoken language; instead, it seems that it is reserved for written or formal language.

In contrast to other types of GM that move toward the compactness of information and increased lexical density, this type of GM both increases the number of words and length to the realization of meaning, and seems to make the meaning less straightforward. For instance, rather than using the verb form *merubah* (change) or *menderita* (suffer), people use *melakukan perubahan* (do some changes) or *mengalami penderitaan* (experience suffering). The research aims to investigate both the construction of this type of GM in Indonesian research articles and how it functions ideationally, interpersonally, and textually. Practically, the understanding of how this GM works in Indonesian scientific writing could be very useful in improving the teaching of Indonesian academic writing.

METHODS

The research is qualitative with the data consisting of four published RAs written in Indonesian. Two are from the discipline of linguistics (L), and the other two are from anthropology (A). These disciplines are chosen because of their familiarity with

the researchers. The four articles are taken from two reputable indexed Indonesian national journals and are chosen for their high citation index. These articles can be considered valued models of discipline-specific research writing that students or apprentices can learn from. The data are kept relatively small to enable close and detailed analysis of how these types of GM work as a meaning-making resource, including the meaning involved in the construction of discipline knowledge.

All four articles consist of the general stages of scientific research articles, which are the introduction, method, result, and discussion. However, they are not always named with these exact headings. The length of each research article can be seen in Table 2.

Table 2 Data Set

Data Set	Data Code	Number of Sentences	Topic
Wijana (2014)	L1	152	Foreign language resistance in the naming of shops in Yogyakarta
Hadi (2003)	L2	191	Sound change in the absorption of Arabic words into Indonesian
Permana (2009)	A1	242	Plant based traditional medication in Baduy
Zahra (2017)	A2	288	Knowledge production and the social movement of the Loji River Community

There are two steps involved in the data collection and analysis of the GM syndromes in the RAs. The first step is identifying the occurrences of the GM syndromes of 'Process + Range' and 'Process + Medium' or the opposite configuration of 'Range + Process' and 'Range + Medium'. These are then calculated and listed based on the characteristic of the generic process and the activity entities (see Tables 3 and 4), and this provides the basis for further analysis. The second step is examining and interpreting systemically how the GM syndromes contribute to the discourse semantic meanings of the Indonesian RAs across the three metafunctions (ideational, interpersonal, and textual). It refers to Martin and Rose (2003) by looking at the GM syndromes' position and how they interact with the other discourse features in clauses, paragraphs, and across the RAs.

RESULTS AND DISCUSSIONS

The first finding to be reported is the use of the generic processes that form part of the syndrome where the process occurs before the range or medium. This can be seen in Table 3.

Table 3 Generic Process in the Syndromes

Generic Process Used in GM	L1	L2	A1	A2
Process + (Range)	11	8	13	19
memiliki 'has/have'	3	-	-	2
melakukan 'do'	4	2	6	14
menunjukkan 'show'	2	-	-	-
memainkan 'play'	1	-	-	1
mengalami 'experience'	1	6	2	1
menderita 'suffer'	-	-	1	-
mempunyai 'own'	-	-	1	1
menjalani 'undergo'	-	-	1	-
mengadakan 'conduct'	-	-	1	-
mengajukan 'propose'	-	-	1	-
Process + (Medium)	3	21	12	8
terjadi 'happen'	3	19	4	-
menjalankan 'run'	-	-	1	-
menggunakan 'use'	-	-	1	1
menimbulkan 'cause'	-	-	1	-
melangsungkan/ berlangsung 'take place'	-	-	3	1
memegang 'held'	-	-	1	-
adanya 'exist'	-	1	4	1
terdapat 'occur'	-	1	-	-
membangun 'build'	-	-	-	3
memberikan 'give'	-	-	-	1
mengambil 'take'	-	-	-	1
mendapat 'pemahaman'	-	-	-	1

As can be seen in Table 3, all four academic articles use both the Process + Range and the Process + Medium type of GM. Further, some processes occur more frequently than others. In the Process + Range type, the most frequently used are *melakukan* 'do/conduct', *mengalami* 'experience', and *memiliki* 'has/own'. While in the Process + Medium, the most common one is *terjadi* 'happen'. The Indonesian language's clause construction mostly conforms with the SVO pattern, except for the relational clauses in which the Process is often left implicit and realized by zero verb clause (Ayomi, 2018). Therefore, in Indonesian, the clause construction is Process followed by Range or Medium in active voice or Process or Range followed by Process in the passive voice. The special case is for the verb *terjadi* 'happen', which can be preceded or followed by Medium, depending on the writer's choice of the Circumstance position, i.e., if the Circumstance is in the Theme position, then Medium comes after the Process (as in example 2), or if the Circumstance is placed in the Rheme position, the Medium comes before the Process (for example 1). The Circumstance is underlined, and GM is bolded).

1. ***Perubahan*** *juga* **terjadi** <u>*pada vokal tinggi /u/ menjadi vocal sedang /o/ contohnya adalah qurban menjadi korban/kurban*</u> (L2:24)
   '**Change** also **happens** on high vowel /u/ into mid vowel /o/ for example is the word qurban into korban/kurban'

2. *Pada kata fahm yang diserap menjadi paham* **terjadi penguatan** *bunyi/f/ menjadi /p/.* (L2: 71)
   'On the word *fahm*, which is absorbed into *paham*, **happen the sound strengthening** of sound /f/ into /p/'

It now turns into the types of activity entities occurring in the GM syndrome that function as Range or Medium in the clause (as in Table 4). The activity entities, following Hao and Humphrey (2019), are classified into two; enacted activity (activity carried out by the scientist or the writer), and observational activity (activity being observed on the objects of study). Looking at the types of activity entities involved in the construction enables us to map their use throughout the text.

Table 4 shows that most of the enacted activity entities in the Ras, e.g., *penelitian, pengamatan, ekspedisi, pembahasan,* collocate with the general process *melakukan* 'do' or its synonym *mengadakan* 'conduct'. These usually occur in the introduction or the research method section of the RAs to introduce the time, place, or manner of the research (as per example 3).

3.

Penelitian	***dilakukan***	*secara berkala sepanjang Juni 2016 hingga Mei 2017* (A2: 41)
ini		
'This research	is conducted	periodically throughout June 2016 to May 2017
Range	Process	Circumstance: manner and extent

The other enacted activity entities are mental and verbal, such as *penjelasan* 'explanation' and *pemahaman* 'understanding'. These occur with the general process *memberikan* 'give' or *mengajukan* 'propose' (as per example 4). By moving processual meanings of mental and verbal clauses into the Range means the projections (both locutions and ideas) are now taken up in the Qualifier of the nominal groups that make up those Ranges.

4.

Avonina (2006)	***mengajukan***	**suatu penjelasan** *tentang pengetahuan tradisional yang bersifat luas (A1:24)*
Avonina (2006)	proposes	a broad explanation about traditional knowledge
Medium	Process	Range

The observational entities, however, vary across fields depending on the topic being discussed. Many

Table 4 Types of Activity Entity in the Data

Type of Activity-Entity	L1	L2	A1	A2
Enacted	*Pengamatan* observation'	*pembahasan* discussion, *penelitian etimologi* etymological research	*penelitian* research, *penjelasan* explanation, *ekspedisi* expedition', *riset* 'research'	*penelitian* 'research', *pemahaman* understanding *pengumpulan data* data collection
Observational/ inferable	*resistansi* resistance *hubungan* 'relation', *dominasi suatu budaya* dominance of a culture, *perlawanan* resistance *cibiran* mockery	*perubahan bunyi* sound change, *penghilangan bunyi* sound elimination, *pemenggalan bunyi* sound elidation, *penguatan bunyi* sound strengthening, *penambahan bunyi* sound addition, *perubahan konsonan* consonant change, *pelemahan bunyi* sound weakening, *pelesapan bunyi* sound ellipsis	*pengobatan* medication, *interaksi* interaction, *perkembangan* development, *penemuan* discovery, *pengolahan* processing, *penggunaan* use, *petunjuk* indication, *peningkatan keperluan* raise of need'	*penetrasi pengetahuan* 'penetration of knowledge', *reproduksi* 'ruang space 'reproduction', *kepedulian* 'concern', *keterkaitan* 'relationship', *kesamaan* 'similarity', *penilaian kebutuhan* 'need assesment', *diskusi* 'discussion', *pemberian signifikansi* 'significance entitlement, *transmisi pengetahuan* 'knowledge transmission', *produksi pengetahuan* 'knowledge production', *distribusi pengetahuan* 'knowledge distribution, *audiensi* 'audience'

of these nominalized processes are the keywords of the field of the RAs. This can be seen in their high frequency and elaboration, as well as their position in the articles. These include the word *perlawanan* 'resistance' in L1 *perubahan bunyi* 'sound change' in L2, *pengobatan* 'medication' in A1, or *produksi pengetahuan* 'knowledge construction' in A2 that are going to be elaborated and discussed in the RAs.

There are several semantic's ideational functions of the GM syndrome. The first is the inclination to abstraction and technicality. As the GM construes process as a thing, which then becomes the participant in the clause, the GM syndrome directly rearranges the mapping of ideational meaning both at the lexicogrammatical and the discourse semantic strata. The preference towards the use of the highly established technical words in nominal form is one of the reasons for the use of Process-Range or Process-Medium GM in the RAs. This can especially be seen in the two linguistics RAs. The first linguistic text (L1) is a sociolinguistic RA, which is about how the commercial shop names in the streets of Yogyakarta resist the foreign language dominance in the business sector. A part of the L1 title, "*Bahasa, kekuasaan, dan resistansinya*" (Language, power, and resistance), clearly shows the abstract terms that construe the field of the text. These nouns function as the 'macro-topic', which frames the overall text, even though one of them has a congruent meaning as the process (resistance – to resist). They are expected to be unpacked, elaborated, and explained as the text unfolds. The words such as *kekuasaan* 'power' and *resistansi* 'resistance' (used consecutively with the Indonesian term *perlawanan*) are repeatedly used. These highly conceptual and ideological terms are used frequently and assumed to be shared knowledge. In L1, these abstract terms are neither decoded nor contested. They provide definitions even at the beginning of the RA, as one may find in textbooks. Instead, they are used throughout the text, outnumbering the use of their more congruent process form. The forms such as *menunjukkan resistansinya dengan* (show its resistance by..), or *melakukan perlawanan dengan* (do resistance by), or *terjadi resistansi* (resistance occurs) are chosen instead of *meresistansi dengan, melawan dengan,* or simply *melawan* (resists by) in L1. It is typical of highly written language, which tends to use nominalized forms.

The RA from the micro linguistic field (L2), whose topic is the phonological changes of Arabic loanwords into Indonesian, starts with the nominal technical term *perubahan bunyi* (sound change), which is later sub-categorized into different types. The use of technical terms for the scientific phenomenon under discussion, which is in the form of nominalization results in the frequent use of generic process verbs such as *terjadi* (happen/occur) with the process entities such as *pelesapan* (elision), *penambahan bunyi* (sound addition) or *kompresi* (compression) acts as the Medium. The clause construction of Medium-Process-Circumstance, such as '*Pelemahan bunyi terjadi pada*

bunyi bersuara (..)' 'Sound attenuation occurs in the voiced sound (..)' can be found repeatedly in L2 as the writer explains the environments for certain types of phonological change that have been set out in the paper's theoretical framework.

From this point of view, the two linguistic RAs are more similar to science discourse, which seeks to understand and describe the world through the lenses of the established theoretical framework construing these technical terms (Devrim, 2015). As a social science discipline, this is not surprising. In contrast to this, however, they are the anthropology RAs, where nominalizations are used mostly for abstractions, and these are packed and unpacked in the text through the use of incongruent and congruent forms. This is consistent with Martin (2004), who has argued that abstraction is mostly used in humanities, e.g., in history, to package many dynamic events into static and stable concepts such as the Dutch conquest (of Indonesia). The dynamic experience that happens through time is construed as a static and stable concept that everyone already has knowledge of.

The need to use an increased number of nominalizations to conform to the academic register can also be observed in the RAs. Nouns such as *penelitian* (research), *pengobatan* (medication), and other conventionalized words have become so familiar that the congruent verbal forms are of lesser use. The choice of using these more popular processual entities, therefore, requires other processes to fill the process role in the clause. Generic vocabulary representing the basic classification of processes in the transitivity system, such as 'do', 'happen', 'feel', or 'have' fill this void, even though these may extend the length of the clause compares to the congruent forms. Therefore, the effect of nominalizing the process is in one sense consistent with academic writing that makes the meanings more abstract, but in another sense, inconsistent that it lengthens the clauses and decreases their lexical density.

The second of the ideational function of the GM syndrome is minimizing agency. Nominalization has been known as a resource for minimizing agency in discourse as it enables either the removal or backgrounding of the agent (Cigankova, 2016; Zhu & Zhang, 2016). The preference for nominalization to realize enacted activities is particularly noticeable in the research method section of the RAs. In Indonesian academic writing, the use of the first-person pronoun is typically avoided. Many universities explicitly ban its use in students' writing to achieve objectivity. In its stead, passive voice constructions similar to *penelitian ini dilakukan….*(this research is done/conducted) are used, in which the process 'research' is constructed as an entity. The process is realized by the process 'do'. It is observed that this form frequently occurs in Indonesian research articles. When the process as verb 'research' is used, immediately preceding this, in the role of Range, what is researched, for example, *pengobatan tradisional masyarakat Baduy ini diteliti di Baduy Luar* (The Baduy traditional medication is

researched in outer Baduy). However, when the process 'research' is reconstrued as Range, there is no longer the necessity to specify what is done in the research, for example, *penelitian ini dilakukan di Baduy Luar* (this research is done/conducted in outer Baduy). However, more specification sometimes occurs in the qualifier of the nominal group, e.g., *penelitian tentang pengobatan masyarakat Baduy* (the research about the Baduy traditional medication).

The use of nominalization as Medium with the addition of the dummy process e.g. terjadi 'happen' also creates an intransitive/middle clause construction, e.g. *penemuan yang berharga dapat terjadi* (A2) 'a valuable discovery can happen' as opposed to its transitive/effective clause construction, e.g. *mereka menemukan sesuatu yang berharga* 'they discovered something valuable (Halliday & Matthiessen, 2014). In the middle voice construction, Process is seen as self-generated, and there is no agency feature in the grammatical slot (Dreyfus, 2017). This also occurs with the Process + Range structure; for example, in the clause, *Bahasa Indonesia mengalami dominasi* (the Indonesian language experienced dominations), 'dominations' is put in Range position. The effect of this that it appears as a stable and taken-for-granted phenomenon without any definite Agent, Range, nor Medium.

This GM syndrome can also increase the focus on the process instead of the Agent. For example, it can be compared with 'they described' and 'they give description'. In this example, the former foregrounds the Agent, as in the active sentence, it is natural that the Actor/Agent is in theme position as the point of departure. In contrast to this, the latter shifts the focus to the Range 'description', as it is a reconstrued participant, which is morphologically more marked and incongruent through the process of nominalization and metaphorisation. While 'they give description' is still in active voice with the Agent/Actor first, the process has been emptied out and the meaning has been transferred into the noun. Here, by construing process as part of the nominal group, the process is highlighted over the Agent, which can later be elaborated as the text is unfolding.

The construal of process meaning as an entity makes the process to become materialized and therefore transferable that can be produced and exchanged. In the data that researchers have found, this form is also used to give more authority to the academics, researchers, or experts as the producers of knowledge. This can be seen in A2, where the writer lists the purposes of the activity conducted by the Loji River community (KPKL).

5. *Memberikan gambaran* konkret mengenai erubahan kondisi lingkungan sebagai dampak aktivitas yang dilakukan oleh KPKL dan; (A2:61)
'To give a concrete description about the environmental changes as the result of the activity done by the KPKL and;

In sentence (5), the process *menggambarkan* (describe) and the knowledge of what being described is seen as an entity and the property of KPKL that can be distributed to the public.

6. *Membangun kesadaran* warga Kota Pekalongan –baik yang tergabung di laman penggemar KPKL di Facebook dan pengguna Facebook secara umum- akan permasalahan lingkungan di Kota Pekalongan. (A2:62)
'to build the awareness of the Pekalongan city residents –both those who join KPKL Facebook's fanpage or the users of Facebook in general about the environmental issues in Pekalongan'

In sentence (6), the processes *menyadari* (realize), experienced by the Pekalongan city residents, is seen as something that KPKL can build. The city residents are backgrounded as the classifier in the nominal group of *kesadaran* (realization/awareness), instead of being the obligatory Medium that undergoes the process as in the clause of the congruent form, *Warga kota Pekalongan menyadari permasalahan lingkungan di Pekalongan* (Pekalongan city residents realize the environmental issues in Pekalongan).

The third ideational function of the GM syndrome is construing further taxonomy of activities. As discussed earlier, writers use many technical and abstract terms derived from knowledge in previous studies or from the field-specific register, which results in the more frequent use of nominalization. As the writer develops his/her argument, he/she can further develop the taxonomy in order to produce new knowledge. Martin and Rose (2003) have explained that field consists of sequences of activity which involve people, things, qualities, places, and others.

By construing processes incongruently as nouns rather than congruently as verbs, activities can enter into 'taxonomic relations' as they are separated from their context in time and place (Halliday & Matthiessen, 1999). This can be observed from the example in L2, where the process-entity *perubahan bunyi* (sound change) enters the taxonomy and is further classified into several types, i.e., sound weakening, sound elidation, and sound addition. Each type of class can then function in topic sentences or what Martin & Rose (2003) have call hyperTheme. At the paragraph level, hyperThemes organize and predict what is coming. These hyperThemes provide a point of departure for further elaboration of each type of sound change and form the start to these new sections as in sentence (1) and (2). The occurrences of each type in the Indonesian phonological system are later construed through the series of Medium-Process-Circumstance construction or Circumstance-Process-Medium to explain the environment where this phonological change occurs. This also occurs in L2, which employs the Range-Process or Process-Range, followed by an enhancing hypotactic clause. It explains the manner of the activity, for example, in the sentence (7).

7. *Resistansi* terhadap Bahasa Jepang **dilakukan** *dengan mengubah kata-kata Bahasa Jawa atau Bahasa Indonesia sedemikian rupa sehingga menyerupai sistem fonologis atau ortografis bahasa Jepang.* (L1:87)
'The resistance to Japanese language is done by changing the words in Javanese or Indonesian in such a way to resemble the Japanese phonological or orthographical language system'

Thus, it can be constructed the class membership taxonomy of process-entities in L2 that govern the flow of explanation in the discussion section of the RA as such in Figure 2.
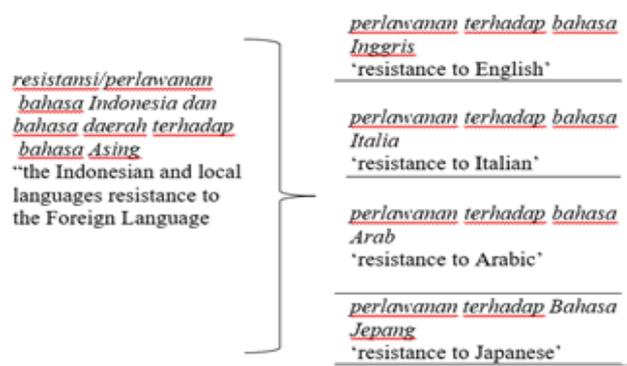

Figure 2 Process-entities Taxonomy in L2

Besides the ideational function, there is a textual function of the GM syndrome, the rhetorical strategy to build text coherence. The GM syndrome can also be used as an effective rhetoric strategy to build textual coherence by managing the flow of information in the clause through the theme-rheme patterns, the given/new patterns, and the rhetorical structure. Similarly, the text as a whole usually has a macro theme that introduces what the text is going to be about (Martin & Rose, 2003). This can be best observed in the A2, which has the title *"Analisis produksi pengetahuan dan praktik politik gerakan sosial komunitas peduli kali Loji"* (The analysis of knowledge production and the political practices of the Loji river community's social movement), which also functions as the macro theme of the text. It means that it tells the readers that the topic of the RA is 'knowledge production' and 'political practice'. These are abstracted activity entities that build readers' expectancy that the RA will elaborately describe the community's actions through the lens of an Anthropologist. By employing the repeated structure of generic process 'do', which is followed by or preceded by (in the case of passive voice) Range, the reader can easily follow the arguments in the RAs and see the activities as the listed series of activities with the 'how' question being answered in the Circumstance position. Those repeated structures can be seen in these sentences (GM syndromes are bolded).

8. *Dalam aktivitasnya menggalakkan kepedulian warga kota KPKL **melakukan penetrasi pengetahuan** mengenai konsepsi ruang yang ideal atas wilayah aliran sungai di kota pekalongan secara umum.* (A2: 25)
'In its activities to promote the city residents' concern, KPKL **do penetration** about the conception of ideal space for the watershed area in Pekalongan City.'

9. ***Reproduksi ruang dilakukan*** *berdasarkan perangkat pengetahuan dalam tubuh gerakan* (..) (A2: 66)
'Space production is done based on the set of knowledge in the body of the movement.'

10. ***Distribusi pengetahuan ini mula-mula dilakukan*** *oleh KPKL melalui penetrasi skema-skema pengetahuan yang dimiliki.* (A2: 144)
'The distribution of knowledge is first done by KPKL trough the penetration to the knowledge schemes they have'

In addition to providing the list of the series of abstracted key activities that the KPKL does, which have been described theoretically at the beginning of the RA, these clauses also function as hyper themes of the subsequent sentences and paragraphs because they explain more about the activity construed in the Range position. This strategy of foregrounding the topic is also used in the L1, which has briefly described in the previous section.

The next is the interpersonal function of the GM syndrome, managing graduation. Although many Indonesian academics are encouraged to avoid subjective positioning in their writing, every writer inevitably positions their reader to view phenomena in particular ways. Various SFL research studies have discussed the language resources that express writers' evaluation by deploying resources from the appraisal system, such as Munday (2015) and White (2015). In relation to the GM syndromes under analysis, it is found that these also provide the writers with a tool to manage graduation. Graduation is one part of the appraisal system used for grading force as well as focus. Graduation resources enable writers to intensify or lessen the meaning of propositions. Graduation is the force that is commonly instantiated by intensifier adverbs or adjectives such as 'very', 'strong', 'solid', 'weak', etc. What the researchers argue here, however, is that the nominalization of the process can lessen the intensity of meaning. This can be seen in examples from L1, which talks about language power and domination.

11. *Walaupun bahasa Jawa masih jauh dari kategori bahasa yang akan **mengalami kepunahan,** dominasi yang terus mengancam eksistensi kebudayaan daerah dan nasional ini tidak boleh dibiarkan.* (L1:97)
'While Javanese is still far from the category of languages that will experience extinction, domi-

nation that continues to threaten the existence of regional and national culture should not be allowed.'

12. *Hanya ada satu contoh nama badan usaha yang* **menunjukkan perlawanan** *terhadap bahasa Cina* (..) (L1: 88)
    'There is only one example of a business entity's name that shows resistance to Chinese (...)'

The sentences of (13) and (14) can be compared to these more congruent forms.

13. *'Walaupun bahasa Jawa masih jauh dari kategori bahasa yang akan punah* (..).
    'Even though Javanese is still far from the category of a language that will become extinct (..)

14. *'Hanya ada satu contoh nama badan usaha yang melawan bahasa Cina (..)*
    'There is only one example of a business entity name that resists Chinese language (..)'

Nominalization of this kind has undergone a metaphoric process, which has resulted in abstraction. Here, a specific concrete actual process or happening tied to the time and space is abstracted into a conceptual category and can be used as a generalization of any similar happening. The result is the meaning becomes less congruent, less tied to its material context, and therefore less forceful than the congruent form. In sentence (11), the noun *kepunahan* (extinction) has a broader spectrum than simply *punah* (extinct), which can include 'almost extinct' to 'totally extinct'. This is also true with the sentence (12) in which the congruent *melawan* (resist) shows more intensive and motivated resistance than *menunjukkan perlawanan* (show resistance), a desired semantic consequence as there is only one case found by the researcher. It is argued here that by shifting the meaning from the process to the nominalized entity, not only does the congruence decrease, but the force of the evaluative meaning also decreases.

CONCLUSIONS

The research has attempted to show how the GM syndrome; Process+Range and Process+Medium metaphor works in Indonesian RAs. It shows that these GMs make meaning across all three metafunctions. Ideationally, this GM functions to emphasize the characteristics of academic discourse through the use of abstraction and technicality, both of which are used in disciplines as a point of departure to indicate the progression of knowledge. The use of GM also enables writers to later develop classification and conceptual taxonomies in the RAs, especially in the Linguistics ones. Textually, this GM syndrome can facilitate text coherence through hyperTheme organization and highlight topical information through repetitive

clause structure with repetitive use of generic verbs. Interpersonally, the syndrome has the potential to weaken the intensity of meaning, as one resource of graduation in the appraisal system.

The research has shown that the GM syndromes being analyzed are functional in developing academically valued writing. Their use cannot be taken for granted as only a matter of following certain conventions but also has some unrealized potential as a resource to produce highly effective writing. This work, therefore, has some pedagogical implications, especially in academic writing. It is expected that with a targeted instruction toward the use and the effect of these GM syndromes textually, students can use this resource more successfully. However, it is also important to mention that people can overuse this language feature to no particular effect, even creating some wordy and ineffective language structures in the endeavor to become good academic writers. More examination of the effectivity of the syndromes' use in a larger corpus with various types of texts is needed to be pursued in further research. This will give us a better outlook on how to determine which use of the GM syndromes can be considered productive and unproductive.

REFERENCES

Ayomi, P. N. (2018). Proses relasional dan konstruksinya dalam klausa bahasa Indonesia. *Struktural Seminar Universitas Dian Nuswantoro*. Semarang, Indonesia. pp. 114-124.

Cigankova, N. (2016). Grammatical expression of impersonality in LSP texts and translations. *Procedia - Social and Behavioral Sciences, 231*, 99-106. https://doi.org/10.1016/j.sbspro.2016.09.077.

Derewianka, B. (2003). Grammatical metaphor in the transition to adolescence. In A. M. Simon-Vandenbergen, M. Taverniers, & L. Ravelli (Eds.), *Grammatical Metaphor: Views from Systemic Functional Linguistics* (pp. 185-220). Amsterdam: John Benjamins Publishing.

Devrim, D. Y. (2015). *Teaching grammatical metaphor: Designing pedagogical intervention*. Newcastle: Cambridge Scholar Publishing.

Dreyfus, S. (2017). 'Mum, the pot broke': Taking responsibility (or not) in language. *Discourse & Society, 28*(4), 374-391. https://doi.org/10.1177/0957926517703222.

Ezeifeka, C. R. (2015). Grammatical Metaphor. *SAGE Open, 5*(1), 1-14. https://doi.org/10.1177/2158244015577667.

Ferreira, A. A. (2019). Sociocultural development in the

spectrum of concrete and abstract ideation. *Mind, Culture, and Activity, 27*(1), 50-69, https://doi.org/10.1080/10749039.2019.1686027.

Halliday, M. A. K., & Matthiessen, C. M. I. (1999). *Construing experience through meaning: A language-based approach to cognition*. London: Cassell.

Halliday, M. A. K., & Matthiessen, C. M. I. (2014). *An introduction to functional grammar* (4th Ed.). London: Edward Arnold Publishers Ltd.

Hao, J., & Humphrey, S. L. (2019). Reading nominalizations in senior science. *Journal of English for Academic Purposes, 42.* https://doi.org/10.1016/j.jeap.2019.100793.

He, Q., & Yang, B. (2018). A corpus-based study of the correlation between text technicality and ideational metaphor in English. *Lingua, 203*, 51-65. https://doi.org/10.1016/j.lingua.2017.10.005.

Jalilifar, A., White, P., & Malekizadeh, N. (2017). Exploring nominalization in scientific textbooks: A cross-disciplinary study of hard and soft sciences. *International Journal of English Studies, 17*(2), 1-20. https://doi.org/10.6018/ijes/2017/2/272781.

Liardét, C. L. (2015). Academic literacy and grammatical metaphor: Mapping development. *TESOL International Journal, 10*(1), 29-46

Liardét, C. L. (2016a). Grammatical metaphor: Distinguishing success. *Journal of English for Academic Purposes, 22,* 109-118. https://doi.org/10.1016/j.jeap.2016.01.009.

Liardèt, C. L. (2016b). Nominalization and grammatical metaphor: Elaborating the theory. *English for Specific Purposes, 44*, 16-29.

Martin, J. R., & Rose, D. (2003). *Working with discourse.* London: Continuum International Publishing Ltd.

Martin, J. R. (2004). Technicality and abstraction: The language for the creation of specialized texts. In M. A. K. Halliday & J. R. Martin (Eds.), *The Language of science* (pp. 267-291). Metehmio.

Munday, J. (2015). Engagement and graduation resources as markers of translator/interpreter positioning. *Target, 27*(3), 406-421. https://doi.org/10.1075/target.27.3.05mun.

Larsson, P. N. (2018). "We're talking about mobility": Discourse strategies for promoting disciplinary knowledge and language in educational contexts. *Linguistics and Education, 48*, 61-75. https://doi.org/10.1016/j.linged.2018.10.001.

Ryshina-Pankova, M. (2015). A meaning-based approach to the study of complexity in L2 writing: The case of grammatical metaphor. *Journal of Second Language Writing, 29,* 51-63. https://doi.org/10.1016/j.jslw.2015.06.005.

To, V. (2018). Linguistic complexity analysis: A case study of commonly-used textbooks in Vietnam. *SAGE Open, 8*(3), 1-13. https://doi.org/10.1177/2158244018787586.

Velázquez-Mendoza, O. (2015). The role of grammatical metaphor in the development of advanced literacy in Spanish as a first, second, and heritage language. *Functional Linguistics, 2*(7), 1-13. https://doi.org/10.1186/s40554-015-0020-y.

Walsh Marr, J. (2019). Making the mechanics of paraphrasing more explicit through Grammatical Metaphor. *Journal of English for Academic Purposes*, 42. https://doi.org/10.1016/j.jeap.2019.100783.

White, P. R. R. (2015). Appraisal theory. In T. Tracy, Karen; Ilie, Cornelia ; Sandel (Eds.), *The International Encyclopedia of Language and Social Interaction*. New Jersey: John Wiley & Sons, Inc.

Zhao, J. (2017). Native speaker advantage in academic writing? Conjunctive realizations in EAP writing by four groups of writers. *Ampersand, 4*, 47-57. https://doi.org/10.1016/j.amper.2017.07.001

Zhu, C., & Zhang, J. (2016). Dancing with ideology: Grammatical metaphor and identity presentation in translation. *Meta, 60*(3), 387-405. https://doi.org/10.7202/1036135ar.