Reimagining *Panahon* : Exploring the Nexus of Time and Weather in Philippine Languages

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The multiple natures of *panahon* ('time' and 'weather' in Filipino) have already been discussed by several scholars. However, past studies focused mostly on Tagalog, with other Philippine languages and subgroupings not dealt with in depth. This study attempts to expand the discussion using elicited data from 12 languages (Ivatan, Ibanag, Ilokano, Ifugao, Pangasinan, Kapampangan, Agutaynen, Rinconada, Capiznon, Waray, Ilianen Manobo, and Saranggani Blaan), as well as lexical items from published wordlists and dictionaries (mostly before the 1900s) related to weather and time in the Philippines. Existing reconstructions of proto-morphemes (at the levels of PAn, PMP, PPh, etc.) will also be taken into consideration. Through contrasts and comparisons, the present study tries to reconstruct further the experiences of subgroups, especially in relation to weather phenomena that are not discussed in past studies.

Analysis of vocabulary items reiterates that "the metonymy of *panahon*" (and its possible doublet *taon* 'year') for human activities and the "relativity of time" extend beyond the Tagalog ethnolinguistic subgroup. Instances of borrowing, innovation, and semantic change further reveal not only the intricacies of the nexus of time and weather, but also the varying experiences of different ethnolinguistic groups in the Philippines. An example would be the Ivatan innovation/retention of specific words for particular winds. Lastly, it reveals the nature of Philippine indigenous knowledge systems where time and weather are not only connected to each other, but are integrated as one domain.

Keywords: Philippine languages, historical linguistics, weather patterns, subgrouping, borrowing

1. TIMELINE OF STUDIES ON *PANAHON*. The Tagalog word *panahon* renders different meanings when used in different contexts. It can mean either 'time' or 'weather'. This semantic flexibility has made it a curious topic for research. Much of the interest is on how time is reckoned or measured and its relation to human activities and natural phenomena. Consequently, observations are then extended to ideas on the Filipino cultural psyche (e.g., "Filipino time") in its narrowest and indigenous cosmology in its widest.

The first attempt to discuss the cultural notions of time was Victor Badillo in his essay "Time keeping: Philippine style" (1980). He discusses how different groups in the Philippines divide time into units of days, months, and years; and how these units are reckoned and further subdivided. Filipinos use natural units to divide time in varying ways and degrees, and keeping time is of greater importance than understanding the nature of time itself. Days are divided according to the positions of the sun while a month is divided according to the phases of the moon. The year, on the other hand, is an assembly of months or "seasons". He also emphasizes how months are named after natural phenomena like the blooming of flowers among the Ilokano or the presence of particular wild birds by the Bontoc.[1]

This relationship between celestial bodies and time keeping is further explored by Dante Ambrosio in his book *Balatik* (2010).[2] In this work, he introduces the use of ethnoastronomy in understanding the indigenous knowledge within Philippine ethnolinguistic groups. He elaborates on how the sun, the moon, and the stars are used in reckoning time and timing human activities. However, he emphasized that 12-13 indigenous "months" or lunar cycles do not clearly constitute a "year". Rather, the latter category is strongly associated with planting and harvest, which is usually reckoned by the appearance of constellations (p. 115).

Ricardo Manapat discusses the cosmology of precolonial and early colonial Philippines through Spanish and secondary sources in the essay, "Mathematical ideas in early Philippine society" (2011).[3] In describing how the early Filipinos

[1] Badillo, V. (1980). Time keeping: Philippine style. *Philippine Studies, 28*(3), 354-362.
[2] Ambrosio, D. L. (2010). *Balatik: Etnoastronomiya, kalangitan sa kabihasnang Pilipino.* University of Philippines Press.
[3] Manapat, R. (2011). Mathematical ideas in early Philippine society. *Philippine Studies: Historical and ethnographic viewpoints, 59*(3), 291-336.

understand time, he cites *Cronica* where Fray Juan de San Antonio said that "it is not known whether they divide time into hours, days, or weeks, etc.". Furthermore, San Antonio notes that the Tagalog word *taon* does not exactly correspond to Spanish *aňo* 'year' but rather refers to an "assembling of many"— which is "to mark a new season", as Manapat adds. The word *panahon* also does not refer to *tiempo* 'time' but corresponds more to "seasons and climates"; the early Filipinos instead use the "corrupted word" *tiyempo* to refer to chronological time.[4] Manapat uses the Greek concept *kaironos* 'subjective time' to refer to the Filipino's concept of time versus *kronos* 'measurable time' of their colonizers. He also expands his discussion to other groups such as the Bisaya and makes inferences on the affinity of the Bisayan word *tuig* 'year' with Tagalog *tuwing* 'every' (p. 303).

The interplay between colonial influence and native concepts of time is further explored by Damon Woods in his essay "Counting and marking time from the precolonial to the contemporary Tagalog world" (2011).[5] In order to track the changes on how time is reckoned by the Tagalogs, Woods compared concepts recorded in early Spanish chronicles, most especially in Tomas Pinpin's *Ang librong pagaaaralan nang mga Tagalog ng Uicang Castila*, with later documents and to present usage. He notes that precolonial Tagalogs' concept of time is highly relational. He connects this to the practice of animism which gives great importance to the natural world. Furthermore, he asserts that this relative notion of time is not unique but is generally Southeast Asian as he notes similarities with the Javanese (p. 346). However, he notes that marking time began to hybridize with foreign systems as colonialism commenced, as evidenced by documents being dated in the course of the Spanish occupation.

Shifts in usage can also mean changes in meanings which can be observed in different texts from different eras. In his essay "Panahon and bagay" (2019), Christian Jil Benitez does a close reading of the word *panahon* in old and

[4] From Juan de San Antonio's *Crónicas de la Provincia de San Gregorio Magno*. In E. Blair & J. Robertson (Eds.), *The Philippine Islands, 1493-1898* (Vol. 40, 1690-1691, pp. 296-373). Arthur H. Clark.

[5] Woods, D. (2011). Counting and marking time from precolonial to contemporary Tagalog world. *Philippine Studies: Historical and ethnographic viewpoints , 59*(3), 337-365.

contemporary dictionaries in an attempt to unravel Filipino temporality.[6] He tries to relate the different definitions of the word (or words) *panahon* to one another and expound on the nuances in meaning.[7] As for the etymological root of the word, he supposes two possible sources: *nahon* and *taon*. For *nahon*, he cites Resil Mojares' (1997) work which points to an entry in Fr. Matheo Sanchez's *Vocabulario dela lengua Bisaia* (1711) which defines it as "to rent a property in a given period of time".[8] In explaining the word *taon*, he uses the extensions of its usage to seasons and agricultural practices among different Philippine ethnolinguistic groups and its descent from the Malay word *tahun*. Due to its overlapping meanings, the word *taon* appears as a metonym to represent things in nature and human activities associated with them (p. 474).

These studies provide good jumping points from the discussion of *panahon* as both time and weather in Philippine languages. However, there is still much to be done. First, most of these studies are focused on Tagalog with other Philippine languages only analyzed in passing to make comparisons and strengthen generalizations. At present, the word *panahon* does not only exist in Tagalog, it (and its cognates) is of common usage among other groups. Second, when non-Tagalog languages are included, linguistic subgrouping is not taken into consideration, thereby falling short of a more representative picture of the Philippine perspective. Third, the changing semantics of *panahon* and related words as discussed in the previous studies is limited to the natives' interaction with their colonizers. This leaves the prospect of borrowing or innovation between and among Philippine

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[6] Benitez, C. J. (2019). Panahon and bagay: Metonymy and the close reading of dictionaries to understand Filipino temporality. *Philippine Studies: Historical and Ethnographic Viewpoints, 67*(3-4), 457-488.

[7] Benitez misses distinguishing the differences between lemmas listed as *panahon* in Sanlucar and Noceda's *Vocabulario dela lengua Tagala* (2013 translation, compared with the 1832 edition). The third item, which was defined as "*hosepedarse en casa de otro con toda su hacienda, para que le ampare*" (to live in another person's house to take care of it), has a long penultima *pana:hon* (indicated by *p.p.*, meaning *penultima producta*), which is lexically different from the first two words which were indicated as having unlengthened penultimas *panahon* (indicated by *p.c.* for *penultima correpta*). Tagalog contrasts words by vowel (and therefore syllable) length as in the example *ga:bi* 'yam' vs *gabi* 'night' (see Schachter & Otanes, 1972, pp. 15-16) . Therefore, attempts to relate *panahon* to *pananahan* 'domicile' would be quite a stretch.

[8] Mojares, R.B. (1997). *House of memory: Essays*. Anvil.

languages almost unmentioned. Lastly, other aspects of the phenomena that encompass *panahon*, especially as weather, is relatively unexplored. It is worth exploring whether elements such as winds and clouds have potential relationships with the other dimension of *panahon* which is time.

Given these challenges, this study attempts to broaden the discussion on the nature of *panahon*. It employs elicited data from 13 languages, i.e., lexical items related to *panahon* in the senses of both "time" and "weather". These languages are chosen to represent the different Philippine subgroups. Elicited data are supported by entries from dictionaries of different periods and published wordlists from linguistic studies. Proto-morpheme reconstructions from different levels and nodes of the Austronesian language family tree are also used as references. In this paper, comparisons and contrasts are made which allow the reimagination of experiences of particular groups. For example, borrowings may signify contact and interaction between groups, which lead to more than what is recorded in historical literature. Lastly, by exploring the multidimensionality of the concept of *panahon* and its cognates, across groups and across time periods, this paper can hopefully contribute to a better understanding of indigenous knowledge systems in the Philippines. This relates to the role of localized weather knowledge in understanding disaster risk reduction and management and climate change adaptation.

2. METHODOLOGY. This study employed mixed methods for inquiry, data collection, and analysis. The first step was to develop a list of words or vocabulary to be elicited from the respondents. The list was developed by enumerating as many words as possible in connection to *panahon* both as time and as weather. The initial list was composed of more than a hundred words; however, it was cut down to about 50 items and later to about 20. Compound words and idioms were removed. Deictics were initially included but were removed as they merit a separate paper of their own. The list was written in English with glosses in Cebuano, Hiligaynon, and Tagalog to avoid the possibility of misinterpretation of the English gloss.

The initial plan was to elicit data from at least 10 languages (excluding Tagalog) but in the end 12 languages were chosen. Primary consideration was given to the accessibility of mother tongue speakers of the languages who would serve as respondents. These languages should also be representative of the major subgroups

of Philippine Languages based on the classification by Robert Blust (1991, refer to FIGURE 1).[9] These languages with their respective ISO 639-3 codes are the following: Ivatan (Ivv, Itbayat variant), Tuwali Ifugao (Ifk), Ibanag (Ibg), Ilokano (Ilo), Pangasinan (Pag), Kapampangan (Pam), Agutaynen (Agn), Waray (War), Bato-Rinconada Bikol (Bto), Capisnon (Cps), Ilianen Manobo (Mbi), and Saranggani Blaan (Bps). Data from Tagalog (Tgl) were derived from the researcher's proficiency in the language. Ivv represents the Bashiic Languages of the Batanes Islands, while Ifk, Ibg, Ilo, and Pag are members of the Cordilleran Group of Northern Luzon. Pam is the lone representative of the Sambalic/Central Luzon Group while Agn belongs to the group called Kalamianic. Bps represents the Bilic/ Southern Mindanao Group. The largest group is the Greater Central Philippine Group (GCP) which is represented in this study by Tgl, War, Bto, Cps, and Mbi. Other Philippine subgroups such as Inati, Sangiric, and Minahasan are not represented in this study due to the lack of available respondents.

Within the Greater Central Philippine Subgroup, Tgl constitutes its own branch; Bto represents the Bikol Group; Cps and War the Bisayan Group; and Mbi, the Manobo Group. Within the Bisayan Group, War consequently represents the Warayan Subgroup of Central Bisayan and Cps represents the Peripheral Subgroup.[10]

The respondents are aged between 20 to 69 years old and most are residing in Metro Manila at the time of the study (see TABLE 1). They have finished at least secondary school. They were given the wordlist in advance for them to complete or consult with their co-speakers of the language. An appointment was set where each respondent was asked to read out the English gloss and then say the equivalent term/s in their language. Elicitation was digitally recorded, with a proctor transcribing each word in the International Phonetic Alphabet (IPA). Nuances in meaning were also noted and included in the data sheet.

[9] Blust, R. (1991). The Greater Central Philippines hypothesis. *Oceanic Linguistics, 30*(2), 73-129.

[10] Bisayan subgrouping based on Zorc (1977).

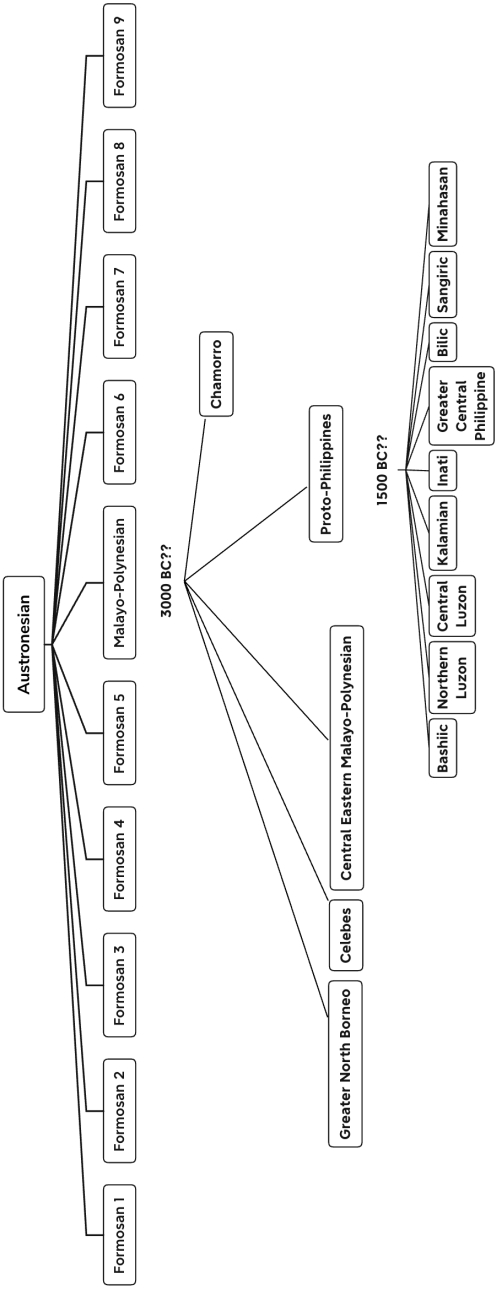

FIGURE 1. Position and subgroups of Philippine languages according to Blust (derived from Reid, 2018).

TABLE 1. Respondents' profile.

	Respondents' Hometown	Gender	Age Bracket
Ivv	Itbayat, Batanes	M	30-39
Ifk	Lagawe, Ifugao	F	30-39
Ibg	Tuguegarao, Cagayan	M	20-29
Ilo	San Narciso, Zambales	M	60-69
Pag	Alaminos, Pangasinan	F	60-69
Pam	Macabebe, Pampanga	M	20-29
Agn	Brooke's Point, Palawan	F	60-69
War	Carigara, Leyte	M	40-49
Bto	Bato, Camarines Sur	F	20-29
Cps	Panit-an, Capiz	M	40-49
Mbi	Carmen, North Cotabato	F	20-29
Bps	Malapatan, Saranggani	F	20-29

The data elicited were arranged in tables, with the gloss in English as column headings and the language ISO 639-3 codes as row labels. Data were categorized based on synonymy (having similar gloss or meaning) and/or cognacy (possible derivation from a common origin). The data are presented in this study using modified IPA.[11]

Analysis of similarities and differences in form and meaning was done as soon as the data were arranged in groups. For groups based on synonymy, possible

[11] The voiced palatal approximant is presented as [y]. This is to conform with the conventions used in earlier reconstructions of Austronesian languages.

morpheme subgroups were identified. For groups that were deemed possible cognates, first to be checked was the regularity of sound correspondences among cognates with particular attention to irregular correspondences that might indicate borrowing. The borrowed forms were removed from the tables to illustrate to which other subgroup they might show affinity. This study does not attempt to do proto-morphemic reconstructions. Hence, borrowings were included in the analysis. Second, semantic differences were noted, possible explanations of which were discussed in relation to the history, culture, and geographical location of particular languages and larger subgroups. At this point, the methodology used in the study resembles the comparative method in diachronic linguistics; however, rather than coming up with new proto-morphemes, common cognates were checked with existing linguistic reconstructions.[12] The following abbreviations are used to indicate the proto-language represented by the reconstructions: PAn for Proto-Austronesian, PMP for Proto-Malayo-Polynesian, PWMP for Proto-Western Malayo-Polynesian, PPh for Proto-Philippine, PGCP for Proto-Greater Central Philippine, PB for Proto-Bisayan, PC for Proto-Cordilleran, and PSM for Proto-Southern Mindanao.

Data from supplementary sources such as dictionaries and wordlists were also used in the discussion, especially if the equivalences were not available in the elicited data or in the 12 languages included.[13] The points revealed from the data were used to revisit the premise of *panahon* as both weather and time, and to see if there is indeed a nexus between these domains.

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[12] The main sources for the reconstructions are the following:
1) Lopez, C. (1976). A comparative Philippine wordlist (Sequels I & II) [Special Monograph Issue]. *The Archive, 1*.
2) Paz, C. J. (1981). A reconstruction of proto-Philippine phonemes and morphemes. *The Archive, 3*.
3) Blust, R. (1980). Austronesian etymologies. *Oceanic Linguistics, 19*(1), 1-181.
4) Blust, R. (1983-1984). Austronesian etymologies II. *Oceanic Linguistics, 22*(1), 29-149.
5) Blust, R. (1986). Austronesian etymologies III. *Oceanic Linguistics, 25*(1), 1-123.
6) Blust, R. (1989). Austronesian etymologies IV. *Oceanic Linguistics, 28*(2), 111-180.
7) Blust, R. & Trussel, S. (2020). *Austronesian Comparative Dictionary (ACD)*. Retrieved from https://www.trussel2.com/acd/

[13] This study consulted old dictionaries which used antiquated notations to indicate the pronunciation of a lexical entry. For example in Mentrida's *Bocabulario* (1639), notations indicated whether words have "acute accent" on the first (p.a., *prima acuta*) vs. the last

3. CLOUDS OF DARKNESS. The words for *clouds* (and similar weather phenomena like *fog* or *dew*) in Philippine languages display a huge variation in form, perhaps signifying descent from different proto-morphemes or specific innovations within language groups (see TABLE 2). We see that some of the cognates for *clouds* in one language mean 'dark'/'shade' or 'afternoon'/'evening' in other languages (see APPENDIX A for the full table). In addition, we also see the common morphemes, word endings in particular, **-ləm/dəm*, **-uləp*, and **-apun* in many of these items across the domains of *cloud*, *fog/dew*, and *raincloud*.

TABLE 2. Words for *cloud*, *fog/dew*, and *raincloud.*

	'Cloud'	'Fog/Dew'	'Raincloud'
Ivv	*kaχəpkup*	*hapun*	*rəmdəm*
Ilo	*ʔuləp*	*linaʔew*	
Pag	*lurem*	*kəlpa*	
Tgl	*ʔuːlap*	*hamug*	
Mbi	*səhulapun*	*rəmug*	*kivel*
Pam	*bigaʔ*	*ʔuːlap*	
Ifk	*bugut*	*dulnuh*	
Bto	*paŋanuron*		*dagʔum*
Cps	*paŋaːnud*	*tunʔug*	*galʔum*
War	*dampug*	*tunʔug*	
Ibg	*kunam*	*namug*	
Agn	*galəm*	*tugpuʔ*	*galəm*
Bps	*labun*	*amgat labun*	*ʔamluŋab*

syllable (u.a., *ultima acuta*), or if they have long (p.p., *penultima producta*) vs. short (p.c., *penultima correpta*) penultimate syllables. This is important in trying to ascertain the historicity and identity of the word. However, to economize on the discussion, accent is assumed to be realized simply as syllable lengthening in Philippine languages where it serves

The morpheme *-ləm/-dəm* appears to be the most versatile in meaning as it crosses several semantic domains (see TABLE 3). It is represented as 'cloud' or 'raincloud' by *lurem* (Pag), *rəmdəm* (Ivv), *galəm* (Agn), and *galʔum* (War, Cps); as 'darkness' or 'shady' by *dalumdum* and *silim* (Pam), *dilim* (Tgl), *dulum* (Cps, War), *marumiːrom* (Bto), *lirum* (Ilo), *sərləm* (Pag), *hidum* (Ifk), and *masiram* (Ibg); and as 'evening' or 'afternoon' by *kalem* (Ilo), *ŋarəm* (Pag), and *merukilem* (Mbi). Given the limited data in relation to the other morphemes, their meanings are difficult to determine at this moment.

TABLE 3. Words ending in *-lem/-dem*.

	'Cloud'	'Raincloud'	'Darkness'	'Shade/Shady'	'Afternoon'	'Evening'
Ivv		*rəmdəm*				
Ifk				*hidum*		
Ibg				*masiram*		
Ilo				*lirum*	*kaləm*	
Pag	*lurem*			*sərləm*	*ŋarəm*	
Pam			*dalumdum*	*sisilim*		
Tgl			*dilim*			
Agn	*galəm*	*galəm*				
War			*dulum*			
Bto		*dagʔum*		*marumiːrom*		
Cps		*galʔum*	*dulum*			
Mbi						*mərukiləm*

as a form of phonemic contrast (see Zorc, 1977, pp. 216-217 and Schachter & Otanes, 1972, pp. 15-16). Most of the morphemes discussed in this study are either disyllabic or trisyllabic. Therefore, *prima acuta* and *penultima producta* are quite the same (in comparison with final syllables that are relatively shorter). Meanwhile, a short penultima (*penultima correpta*) would roughly correspond to an indication of "accent" on the final

For the set of words ending in *-lem/-dem*, several proto-morphemes have been suggested with various semantic reconstructions. Lopez (1976, pp. 25, 55, 88) reconstructs four proto-morphemes at the PPh level with related meanings: **Dalem* 'interior, depth', **lemlem* 'be dark', **malem* 'evening/night', and **Si(r)uN* 'be dark'. Blust has higher level reconstructions: PWMP **seDem* 'evening, fall of day' (1983-1984, p. 114) and PAn **kuDem* 'darkened by clouds' (1989, p.145). The Austronesian Comparative Dictionary also lists the PAn proto-morphemes **demdem* 'gloom, darkness; dark, overcast, gloomy', **dudem* 'obscured by clouds', **qudem* 'dim, obscure dark', and **kelem* 'dark'. It also presents a PMP innovation **malem* for 'night, darkness'.

Possible cognates ending in *-ulep/-ulap* are also found across domains but are less in number compared with those within the *-lem/-dem* category (see TABLE 4). This further strengthens the idea that the different semantic divisions are porous or overlapping. They signify 'clouds' or 'dew/fog' as in *ʔuːləp* (Ilo), *kəlpa* (Pag), *ʔuːlap* (Pam, Tag), *sehulaːpun* (Mbi), and (probably) *kaχəpkup* (Ivv); 'darkness' as in *kiːləp* (Agn); and 'evening' or 'afternoon' as in *ʔaːχəp* (Ivv), *kifu* (Bps), and *kulup* (War). A possible origin is PWMP **kelap* or **kelep* 'dim of light' (Blust, 1989, p.143).

Items ending in *-apun* are more limited in distribution than the earlier sets (see TABLE 5). The majority of them mean 'afternoon' in Philippine languages: *haːpun* (Tag, Cps), *ʔaːpun* (Bto, Agn), *gatnapun* (Pam), *meapun* (Mbi); while at least one crosses over another domain as 'fog': *hapun* (Ivv). Paz (1976, p. 162) reconstructs **hatpun* while Blust (2005, p. 60) reconstructs **hapun* using the same set of cognates to mean 'afternoon, roosting time' for PPh. However, the reconstruction of Blust's **hapun* and Paz's **hatpun* for PPh can be put into question for several reasons. First, *hapun* and its cognates that mean 'afternoon' are mostly found in Greater Central Philippine languages or in languages that have had borrowing relationships with GCP languages. Pam has strong interaction with Tag while Agn with Cuyunon, hence the strong possibility of borrowing.[14] Second, the interloping

syllable (*ultima acuta*). Additionally, the notation systems in the old dictionaries are based on Latin, where the apex <ˊ> is used to denote the acute accent which in turn represents lengthening of vowels (Oliver, 1966, p. 129).

[14] See Gonzalez (2005) for an extensive discussion on the borrowing relationship between Tgl and Pam. Himes (2007, pp. 18-19) notes the high percentage of shared innovations

of Ivv *hapun* into the cloud/fog domain and the GCP language War with *kulup* for 'afternoon' indicates that *hapun* and its cognates are moving across different domains, similar to the *-lem/-dem* and *-ulep/-ulap* sets. Lastly, it is possible that *hapun* as 'roosting' is different from *hapun* as 'afternoon'. In Cps, they actually exist as minimal pairs, with *hapun* for 'afternoon' having a longer first syllable [*ha:pun*] than 'roosting' [*hapun*].[15] Thus, the association between the two might have been a case of folk etymology which conflated two semantically and phonologically distinct morphemes into one that acquired a "figurative" meaning.

TABLE 4. Possible cognates ending in *-ulep/-ulap*.

	'Cloud'	'Fog/Dew'	'Darkness'	'Shade/Shady'	'Afternoon'	'Evening'
Ivv	*kaχəpkup*					*ʔa:χəp*
Ilo	*ʔu:ləp*					
Pag		*kəlpa*				
Pam		*ʔu:lap*				
Tgl	*ʔu:lap*					
Agn			*ki:ləp*			
War					*kulup*	
Mbi	*səhula:pun*					
Bps				*ʔamkifu*		*kifu*

between the Kalamian Group (which includes Agn) and the Central Philippine Group (which includes Cps, War, and Cuyunon, all of which are Bisayan languages) and attributes this to undetected borrowing. This relationship also results in a high level of similarity with Inati which also has Bisayan influence.

[15] Cps is a Bisayan language which Zorc (1977, pp. 216-217) says to have inherited the "historical accent" that consists of length and stress as phonemic contrasts.

TABLE 5. Possible cognates ending in *-apun.*

	'Dew'	'Afternoon'
Ivv	*hapun*	
Pam		*gatnapun*
Tgl		*ha:pun*
Agn		*ʔa:pun*
Bto		*ʔa:pun*
Cps		*ha:pun*
Mbi		*meʔa:pun*

Analysis of old dictionaries yields varied results. The *Bocabulario de la lengua Bisaia Hiligueyna* (1637, p. 286) by Alonso de Mentrida has an entry for *hapun* p.a. which reads *la tarde cerca la ponerse del sol* or 'the afternoon, around sunset'. [16] [17] Similarly, Matheo de Sanchez's *Vocabulario de la lengua Bisaia* (1711, p. 227) defines *hapon* p.a. as *la tarde* 'afternoon'. There was no mention of anything in connection with "roosting".[18]

On the other hand, the association of *hapun* with roosting fowls is seen in early Tgl, Bikol, and Pam dictionaries. Fr. Diego Bergaño's *Bocabulario de Pampango en Romance* (1732, p. 35) defines Pam *apon* p.p. as *la cena*, *acostarse las gallinas* 'evening

[16] This item in the *Bocabulario* is followed by another *hapon* p.c., defined as *cordel de pescar* 'fishing line'. This dictionary serves as an early corpus of Cps vocabulary items enumerated in Pototanon (2016) which points to the possibility that the language presented in the dictionary is closer to Cps than to Hiligaynon.

[17] Refer to Footnote 13 henceforth for the notation system in relation to accent/length.

[18] There is also *hapun* (p.c.) in Sanchez's *Vocabulario*. Like in Mentrida's *Bocabulario*, the entry is defined as *cordel de pescar* 'fishing line'. Sanchez indicates that data for his dictionary come from the islands of "Leite, Samar, and Ibabao", which refer to the present-day distribution of War.

(dinner time), roosting of fowls'. The same is found in Fr. Marcos de Lisboa's work *Vocabulario de la lengua Bikol* (1754, p. 307) where he defines one entry for *hapon* p.p. as *la tarde de dia* 'late in the day (afternoon)' and another entry with the same pronunciation as *recogerle o acostarse las gallinas a la tarde o otras aves* 'gathering or roosting of fowls in the afternoon or other birds'.[19] "Afternoon" and "roosting" are also listed as separate entries in Santos's *Vocabulario dela lengua Tagala* (1794) but with the same pronunciation as *hapon* p.p. However, the addition of the dative/locative suffix *-an* to both entries results in difference in pronunciation, with the "afternoon" *hapunan* p.p. defined as *cena* 'dinner' while the "roosting" *hapunan* p.c. defined as *gallinera* 'chicken coop'.[20]

The status of **hapun* as a PPh proto-morpheme that connects afternoon with roosting is also questioned by Blust himself. In the recent edits of the ACD (as of 21 June 2020), he notes the irregular reflex of **u>o* in Ivv and Cordilleran languages and hints at the possibility of borrowing from GCP languages. He further adds a new PMP proto-morpheme **hapun* for 'fog, dew'. This morpheme is also considered as a triplet of PWMP **embun* and **ambun*.[21]

The connection between clouds and other forms of atmospheric precipitation with "darkness" or "shade" seems easy to understand as clouds can block off sunlight. However, what is the basis for the connection between clouds and "afternoon"? W. H. Scott (1994, p. 125) notes that the Bisaya use clouds for weather forecasting — dark clouds are taken as sign of a squally storm while a "leaden sky" is a sign of a coming typhoon.

With the tropical weather and water cycle at play, the sun heats the earth's surface causing moist air to rise into the atmosphere becoming clouds. Among these, rainclouds or cumulonimbus clouds are the ubiquitous sign of an incoming downpour. These dark clouds usually take hours of daylight to form and only

[19] Sanchez's dictionary describes the language as being spoken in Camarines, making it possible to be used as reference for Bto.
[20] Complete list from Santos (1794: 29, *Segunda Parte*):
hapun (p.p.) *cenar* 'eat dinner', *hapun* (p.p.) *tarde* 'afternoon', *hapun* (p.p.) *todo el día* 'whole day', *hapun* (p.p.) *acostarse* 'to settle (to roost)', *hapun* (p.c.) *cultivar* 'to cultivate', *hapunan* (p.p.) *cena* 'dinner', *hapunan* (p.c.) *establo* 'barn', *hapunan* (p.c.) *gallinero* 'chicken coop'
[21] See https://www.trussel2.com/acd/acd-s_h.htm#2586

become fully visible in the afternoon or early evening, later to fall as rain.[22] The "leaden sky" may have referred to nimbostratus clouds which take days to form yet produce longer episodes of downpour.[23] Afternoons do not only become the summary of a day (as most Philippine languages derive their word for "yesterday" from their word for afternoon)[24] but also serve as the best time to watch the clouds as they predict the weather of days to come.

4. CHARTING THE WINDS. The words for wind in the twelve Philippine languages are more similar in form than those for clouds. There is also some commonality in the identification of particular winds especially the monsoons which affect the weather in the archipelago. All the languages also have some word for typhoon or storm.

Most of the languages included in this study have a general term for "wind" that is derived from **haŋin: ʔa:ŋin* (Ilo, Bto, Pag), *maya:ŋin* (Pam), and *ha:ŋin* (Tgl, War, Cps) (see TABLE 6). The ACD describes **haŋin* as a PMP innovation common in languages outside Taiwan, which replaced the PAn **bali* common among Formosan languages. Worth noting is the Ivv cognate *haŋin* which intensified to 'typhoon'.

The words for "wind" (TABLE 7) in Ifk *tuyup* and Agt *magʔeyep* closely resemble Tag *ihip* and Bisayan *huyup* which both mean 'to blow'. These innovations may have been coined independently, referring to the fact that the wind blows. They can be traced further to the PAn proto-morpheme **Seyup* and PMP **heyup* 'blowing (on a fire, etc.)' as indicated in the ACD. Bps *nus* appears to be cognate with Tgl *ʔunus* which Paz (1981, p. 197) reconstructs as **ʔənus* 'strong wind, squall'. This appears to be a reverse of what has happened to Ivv *haŋin*.

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[22] Due to the heat of the sun, white, supposedly harmless clouds can become dark rainclouds or cumulonimbus clouds associated with "supercells" that cause strong storms in the afternoon ("Cumulonimbus Clouds", 1997).

[23] See Mertins, B. (n.d.). How to predict weather with clouds. *Nature Mentor.* https://nature-mentor.com/predict-weather-using-clouds/

[24] E.g., Ivv *kakuyab*, Tgl and Cps *kahapon*, War *kakulup*. Badillo (1980, p. 356) makes the same observation.

TABLE 6. Possible cognates from **haŋin*.

	'Wind'	'Typhoon'
Ivv		*haŋin*
Ilo	*ʔaŋin*	
Pam	*maya:ŋin*	
Tgl	*ha:ŋin*	
War	*ha:ŋin*	
Bto	*ʔa:ŋin*	
Cps	*ha:ŋin*	

TABLE 7. Other words for "wind".

	'Wind'
Agn	*magʔəyəp*
Ifk	*tuyup*
Bps	*nus*
Pag	*dagəm*
Ivv	*sarawsaw*
Ibg	*paddad*
Mbi	*kəramag*

The vocabulary for the monsoons also crosses into the domain of cardinal directions. The cognates *habagat* (Tgl, War, Cps), *ʔabagatən* (Pag), and *abagat* (Pam, Agn) do not only refer to the southwest monsoon but also to the direction of south or southwest (TABLE 8). However, *havayat* (Ivv) and *ʔabagatan* (Ilo)

exclusively denote the south cardinal direction.[25] Bps *balat*, on the other hand, refers to a typhoon or a tornado. This association of the southwest monsoon with extreme weather can be attributed to the fact that the southwest monsoon is the most humid air stream in the country which causes rain showers; its increased speed may also indicate a coming typhoon (Deppermann, 1954, p. 109-110). Most of all, majority of these storms occur during the *habagat* season, from June to September (Cinco et al., 2016, p. 4644).

TABLE 8. Possible cognates from **SabaRat*.

	'Southwest Monsoon'	**'South/Southwest'**	**'Typhoon'**
Ivv		*havayat*	
Ibg	*ʔabagaʔ*		
Ilo		*ʔabaga:tan*	
Pag	*ʔabaga:tən*		
Pam	*ʔabagat*		
Tgl	*haba:gat*		
Agn	*ʔabagat*		
War	*haba:gat*		
Cps	*haba:gat*		
Bps			*ba:lat*

The cognates above can be traced to Blust's (1984-1985, p. 52) tentative reconstruction of PAn (but securely PMP) **SabaRat* glossed as 'monsoon'.

[25] Gallego (2018) argues that these were names of wind systems first and provides an extensive discussion as to how their meaning shifted into cardinal directions (see pp. 77-81). These shifts in meaning are connected to the effects of the wind systems on the weather and to the directions they blow in a certain location with respect to the speakers of a language.

However, if this is to be considered as the origin for most Philippine languages, then the cognates for Pam, Ilo, Agn, and Pag are irregular and may be borrowings from GCP languages. Following Conant's (1911) analysis, the last syllable *-*Rat* should have been *-yat* in Pam, *-rat* in Ilo, and *-lat* in Pag and Agn.[26] Therefore the expected reflexes should be ***abayat* in Pam, ***abarat* in Ilo, and **abalat* in Agn.[27] However, these languages seem to have abandoned their own vocabulary and borrowed from GCP languages which have /g/ for **R* (probably from Tag for Pam and from Cuyunon for Agn), or from neighboring languages such as Ibg (in the case of Ilo and Pag) which also has /g/ as regular reflex of *R.

Borrowing is even more evident in Pag as Cosgaya's *Diccionario Pangasinan-Español* (1865, p. 2) shows the presence of doublets — *abagat* defined as *el viento oeste, sudoeste*, 'western/southwestern wind' and *abalaten* defined as *lugar del sur* 'south'. This shows that Pag speakers lost the association of their own indigenous word *abalaten* with the monsoon and later borrowed from a neighboring language.

The words *ʔami:han* (Tgl, War, Cps) and *amyan* (Pam, Pag, Agn) refer to the northeast monsoon as well as the north and northeast directions, while Ilo *ʔamyan* refers exclusively to the northern direction (TABLE 9). On the other hand, the Ivv *amyan* means the 'cold season' which runs from October to March (Yamada, 1976, p. 162). In addition, the Ilongot (or Bogkalot) use the term *amiyan* 'rainy season' for counting years (Reid, 1971, p. 239). These words can be traced to PAn **qamiSan* 'north wind, cold weather' (Blust, 1984-85). The association of the north wind with cold weather is due to the fact that the northeast monsoon dominates the weather in parts of Luzon from September to February, and the whole country from December to January which are considered the coldest months. The northeast monsoon also brings to North Luzon (where the Ivv and Ilongot speakers live) the coldest stream of air that can drop to as low as 16 degrees Celsius (Deppermann, 1954, p. 104-105).

Almost all the words for 'rain' in the Philippine language data (TABLE 10) form a cognate set which can be traced to PAn **quzaN* 'rain' (Blust and Trussel, 2020). These are *ʔudan* (Ifk), *ʔuran* (Ibg, Pag, Pam,War, Bto, Mbi), *kuran* (Agn), *ʔulan*

[26] See Conant (1911) for an initial discussion of *R in Philippine languages.

[27] For this paper, the symbol <**> indicates an ungrammatical or unattested word, usually expected reflexes but are not found in the languages at present.

(Cps, Tgl), and *ʔulen*. However, two forms — Ilk *tudu* and Ivv *timuy* — do not belong to this cognate set.

TABLE 9. Possible cognates from **qamiSan.*

	'Northeast Monsoon'	'North'	'Cold Season'
Ivv			*ʔamyan*
Ibg	*ʔamyan*		
Ilo		*ʔamyan*	
Pag	*ʔamyan(ən)*		
Pam	*ʔamyan*		
Tgl	*ʔami:han*		
Agn	*ʔamyan*		
War	*ʔami:han*		
Cps	*ʔami:han*		

Ilk *tudu* is a probable cognate of Tgl *tuluʔ* 'drip', which Paz (1981, p. 222) reconstructs as PPh **tadru* 'leak, drip, rain'. On the other hand, Ivv *timuy* is cognate with Tgl *timog* 'south', which Lopez (1976, p. 102) reconstructs as PPh **timuR* 'rainy wind'. According to Scott (1994, p.124-125), *timog* is also used by the Bisayans to refer to the northeast trade wind which blows from different directions due to the earth's rotation. A similar form is also present in Malay *timur* which refers to the eastern cardinal direction. All these can be traced to Blust's (1984-1985) tentative PAn (but securely PMP) reconstruction **timuR* to which he gives a probable gloss 'monsoon'.

The forms for typhoon or storm in the twelve Philippine languages also show high cognacy (TABLE 11) — *bagyu* (Ilo, Pag, Pam, Tgl, War, Cps, Bto), *badʒu* (Ibg), and *balyu* (Agn) reflect the ACD PAn **BaRius* 'typhoon'. However, like the PAn

**SabaRat*, it contains the *R proto-phoneme, which should have the expected correspondences ***balyu* for Pag, ***bayyu* for Pam, and ***baryu* for Ilo. We can say, therefore, that the word *bagyu* in Ilo, Pag, and Pam are loans from other languages, the source of which could probably be again GCP languages like Tgl, Bisayan or Bikol languages, or a /g/ language like Ibg. Ibg *badzu*, on the other hand, may be a result of fricativization of Ibg consonants, where the stop+affricate cluster /gy/was reanalyzed as /dʒ/.

TABLE 10. Other words for "rain".

	'Rain'
Ifk	*ʔudan*
Ibg	*ʔuran*
Pag	*ʔuran*
Pam	*ʔuran*
Tgl	*ʔulan*
Agn	*kuran-*
War	*ʔuran*
Bto	*ʔuran*
Cps	*ʔulan*
Mbi	*ʔuran*
Bps	*ʔulən*
Ivv	*timuy*
Ilo	*tudu*

TABLE 11. Words for "typhoon".

	'Typhoon'
Ibg	*badʒu*
Ilo	*bagyu*
Pag	*bagyu*
Pam	*bagyu*
Tgl	*bagyu*
Agn	*balyu*
War	*bagyu*
Bto	*bagyu*
Cps	*bagyu*
Ivv	*haɲin*
Bps	*balat*
Ifk	*puʔok*
Mbi	*belisusu*

The Philippines, surrounded by bodies of water (the Pacific Ocean, the West Philippine Sea, and the Indian Ocean), has its weather greatly influenced by different wind currents and phenomena.[28] Gallego (2018) emphasizes the importance of the monsoons in establishing directional systems for Philippine language speakers as maritime peoples. Together with the land-sea axis (PAn **daya*

[28] As an archipelago within the geographic range of Austronesian languages, Ross (2007, pp. 120-125) identifies two major seasonal variations based on prevailing wind systems for the Philippines (and the rest of the Pacific) in the context of a global climate system. He terms these periods as the Southern Hemisphere Winter (SHW) that peaks in January and the Southern Hemisphere Summer (SHS) that peaks in July. The effect of each varies according to location and thus have a strong influence on the retention or semantic change in

'upriver' vs PAn **lahud*'seaward'), cognates pertaining to winds have been encoded as cardinal directions still in use today.[29]

This is evidenced further in the languages having relevant vocabulary for them. Of all the Philippine language subgroups however, of great interest is the Bashiic group. Ivv has specific vocabulary not just for the monsoons but also for winds that blow from different directions. Aside from *havayat* that blows from the west, it has *paŋalitan* blowing from the east, *sumra* from the south, *kuvih* from the southeast, *itaw* from the southwest, *munmu* from the northwest, and *hayukayam* from the northeast. Some winds also move towards different directions, such as *palahanitan* that blows from east to northeast. Some winds are associated with a particular activity or phenomenon. Fishing becomes difficult (except in sheltered sites) when the *hilawod* or the north wind blows. The same wind is also believed to cause allergies that is curable by eating dried shrimp. Fishing is also avoided when the *hayukayam* blows during the cold season. During the other seasons, fishing is possible on the western side of Itbayat Island when the *hayukayam*, *pangalitan*, or *kuvih* blow. However, *sumra* is considered the most favorable wind for fishing while the *havayat*, which brings rain, is strong from the end of July to September making the sea rough (Yamada, 1967, p. 166-167).

Typhoons are common in the Philippines. Every year from 1951-2013, an average of 19 tropical cyclones entered the Philippine Area of Responsibility with nine of them making landfall on the islands (Cinco et. al, 2016, p. 4640-4642). But why is it that some languages seem to have lost their own indigenous words for typhoon? The same question can also be asked for the names referring to the rain-bearing southwest monsoon. One hypothesis is "disuse". The speakers perhaps did not see the use of these words in their languages as the languages were developing in their homelands.

The possible homelands of these groups were said to be found in bigger landmasses like Luzon or up in the mountains far from the sea. Himes (2012, p. 532) hypothesizes the initial settlement of Central Luzon speakers (which includes

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vocabulary related to wind. In the case of the Philippines, the SHW refers to weather dominated by the southwest monsoon during the wet season, while the SHS is associated with the northeast trade wind during the dry season.

[29] In this work, data from more than 40 languages were collected to study the origin of directional systems in Philippine languages.

Pam) to be on the western coast of Luzon, south of the present Ilocos Region. The languages then spread into the interior parts of Luzon from Manila Bay. The same can also be imagined for the Cordilleran languages (Ilo, Pag, Ibg, and Ifg in this paper) which have their origin and center of diversity in the peaks of Northern Luzon. Movement was either by foot or by watercraft that plied rivers, not reliant on winds and maritime technology that drove movement in open seas.

In contrast, Ivv speakers live in small islands where knowledge of winds is important for survival and navigating the windy sea is an integral part of their everyday lives. So, at some point in their pasts, Cordilleran and Central Luzon language speakers must have abandoned their "wind vocabulary" only to adopt them again when they moved down the coasts.[30] This time, borrowing terms was more convenient. The best proof for this is the presence of the doublets *abaga* and *abalaten* in Pag. Their sources of borrowing were the GCP languages whose origins lie in the Central Philippines, perhaps in Northern Mindanao or Southern Visayas (Blust, 1991, pp. 103-104), where there is better proximity to the sea as is the case with Ivv speakers. Quite coincidentally, these languages have /g/ for the PAn *R (as in **SabaRat* and **baRius*), which contributes to the "stereotyped g"[31] in Philippine languages. On the other hand, speakers of Bilic languages are familiar with the effects of the southwest monsoon in Southern Mindanao which they associate with typhoons or typhoon-like conditions.

5. ASSEMBLING AND TRANSLATING *PANAHON/TAON.* The words for "sun" and "moon" are similar in all the languages in this study. The names for these celestial bodies are also used to refer to 'day' and 'month' respectively.

The words for "sun/day" in all the languages appear to be cognates (TABLE 12). However, the ACD suggests that they could have come from doublets. One is the PAn **qajaw* which accounts for Mbi *ʔandəw* while the rest comes from PMP **qalejaw*. Both these reconstructed forms are glossed as 'day'.

[30] Abandoning what used to be vital wind names is not unique to Philippine languages. Ross (2007, p. 135) notes that Austronesian speakers lost their words for the northeast trade wind (cognates of **qamiSan*) when they crossed into the southern hemisphere. These include speakers of most languages in the Malayo-Polynesian subgroup but not Philippine language speakers.

[31] Conant, 1911, p. 82 as cited by Blust, 1991, pp. 100-101.

TABLE 12. Words for "sun".

	'Sun'
Ivv	*ʔaraw*
Ifk	*ʔalgo*
Ibg	*ʔaggaw-*
Ilo	*ʔaldaw*
Pag	*ʔagəw*
Pam	*ʔaldo*
Tgl	*ʔaraw*
Agn	*kaldaw*
War	*ʔadlaw*
Bto	*ʔaldow*
Cps	*ʔadlaw*
Mbi	*ʔandəw*
Bps	*du*

The words for "moon/month" (TABLE 13) come from PAn **bulaN* which the ACD not only glosses as 'moon' and 'month', but also 'menstruation'. This is probably attributed to the fact that the menstrual cycle of women corresponds to the lunar cycle. Furthermore, the inseparability of "moon"/"month" and "sun"/"day" reiterates the points of past studies about the concept of time — the positions of the sun become important markers during the day while the phases of the moon constitute a cycle which eventually is construed as a "month".

Words for "sky" are also almost similar among the Philippine languages analyzed (TABLE 14). Except for Ifk *lagud*, Pag *tawen*, and Pam *banwa*, all the other

TABLE 13. Words for "moon".

	'Moon'
Ivv	*vuːxan*
Ifk	*bulan*
Ibg	*vulan*
Ilo	*bulan*
Pag	*bulan*
Pam	*buːlan*
Tgl	*buwan*
Agn	*bulan*
War	*buːlan*
Bto	*buːlan*
Cps	*buːlan*
Mbi	*vulan*
Bps	*bulen*

items are cognates that can be traced to PAn **laŋiC* (Blust and Trussel, 2020). Ifk *lagud* also refers to the east where the sun rises. The Pam word *banwa* is the same word for 'year' in the language. This word can be traced to PMP **banua* glossed in the ACD as 'inhabited land, territory supporting the life of a community'. This concept is very common in Philippine languages across the different subgroups. In Ivv *vanua* means 'port' while in Bisayan languages it refers to 'village' or 'hometown'. It appears as *benua* in Malay which refers to a large expanse of land, and in some Oceanic languages as *whenua* in Hawaiian and *fenua* in Samoan where both mean 'placenta'. This range of meanings illustrates the vast semantic domain that the word *banwa* and its cognates occupy.[32]

[32] For the full list of meanings, see https://www.trussel2.com/ACD/acd-s_b.htm#25129

TABLE 14. Words for "sky".

	'Sky'
Ivv	*χaŋit*
Ibg	*la:ŋiʔ*
Ilo	*la:ŋit*
Tgl	*la:ŋit*
Agn	*la:ŋit*
War	*la:ŋit*
Bto	*la:ŋit*
Cps	*la:ŋit*
Mbi	*la:ŋit*
Bps	*la:ŋit*
Pag	*tawən*
Pam	*banwa*
Ifk	*lagud*

The words for "year" are also quite similar to each other although they are not as uniform as the words for "sky" (refer to TABLE 15). The cognates *tawən* (Ilk), *tawun* (Ifk), *taʔon* (Tgl, Pag, Bto), and *takun* (Agn) can be easily traced to PMP **taqun* 'year, season'. Among those that do not appear to be cognates with the above forms are Ivv *hawan*, Ibg *dagun*, and Mbi *ragun*. Cps and War *tuʔig* is probably an innovation within the Bisayan languages; while Bps *faːli* is also the same word for 'rice' in the language.

Many words for weather (and also time) appear to be derived from the word for "year" with the addition of the prefix *paN-*. It seems, therefore, that the two (or more) domains are connected. Looking closely at the definitions of the root *taʔon*

and its equivalents can provide a clearer explanation of this connection. In the ACD, Blust and Trussel (2020) explain that the gloss for PMP **taqun* 'year, season' may have stronger associations with "the growing cycle of food plants and with greater or lesser rainfall" than with "the vegetative changes in the natural environment… associated with the seasons in temperate climates". They cite the languages of the Solomon Islands as examples where the words for year reflect PMP **qubi* 'yam'. A similar case in Philippine languages is the Bps *fa:li* which means both 'rice' and 'year, season'.

TABLE 15. Words for "year".

	'Year'
Ifk	*tawun*
Ilo	*tawən*
Pag	*taʔon*
Tgl	*taʔon*
Agn	*takun*
Bto	*taʔon*
Ibg	*dagun*
Mbi	*rahun*
Ivv	*hawan-*
War	*tu:ʔig*
Cps	*bu:lan*
Pam	*banwa*
Bps	*fa:li*

[33] For the full explanation see https://www.trussel2.com/ACD/acd-s_t.htm#30921

TABLE 16. Words for "weather" and "time".

	'Weather'	'Time'
Ilo	*panawən*	
Pag	*panaʔon*	
Pam	*panahun*	
Tgl	*panahun*	
War	*panahun*	
Cps	*panahun*	*panahun, tiʔon*
Bps	*kagkadu*	
Ivv	*kawan*	

An examination of old dictionaries also reveals the connection among agricultural events, time/weather, and year.[34] Mentrida's *Bocabulario de la lengua Bisaia Hiligueyna* (1637, pp. 13, 159) notes that the Spanish word *aňo* 'year' has several equivalents in the language — *tuig*, *taon*, and *dag-on*, while the Spanish *tiempo* 'time' is *tuig*. In a sample sentence for *tuig*, the word refers to 'temporal season' when affixed with *paN-…-on* to form *panuigon*. In the same section, *paN+taon* becomes *panaon* while *pan+dag-on* becomes *panag-on*, all used to mean 'time' or 'season', particularly of fruits and the monsoon, e.g., *panuigon sang habagat* 'southwest monsoon season' and *panag-on/panaon sang mga cacahuyan* 'time for the trees (to bear fruit)'.[35]

The *Vocabulario de la lengua Tagala* (1794, *Segunda Parte*, p. 53) by Santos defines *panahon* as *cosecha* 'harvest', *tiempo* 'time', and *temporal* 'season'; and *taon* as *aňo* 'year'. Although the words appear similar, the derivation of *panahon* from

[34] Except for Seinadel (1909), all of these dictionaries were written for and by Spanish speakers. These dictionaries contained the lemma *tiempo* which denotes both 'weather' and 'time' in English.

[35] There are two items for *tuig* in Mentrida (1637, p. 725). The first one refers to *tuig* as 'season' while the other refers to *tuig* as 'year'.

taʔon in Tgl has raised questions due to their minute phonological difference. Benitez (2019) entertains two possibilities: derivation from Bisaya *nahon* and borrowing from Malay *tahun*. The latter however is more plausible as there is evidence of borrowing from Malay to Tgl. Thus, panahon is *paN+tahun*. Furthermore, this is not the only borrowed form found within this domain. Santos (1794, *Primera Parte*, p. 794) indicates that among the equivalents of *tiempo* 'time' is *camasahan*, which, if examined closer, is actually a derivation from the Malay word *masa* meaning 'time'.[36] The sample sentence reads *camasahan nang santol* 'fruiting season for *santol* (Sandoricum koetjape)'.

The words in the Bisaya varieties of Samar and Leyte according to Sanchez (1711, pp. 533, 505) have almost similar definitions. *Tuig* is defined as *tiempo*, *menstruo de muger* 'time, a woman's menstruation' while *taon* is rendered as *el tiempo o el año* 'time or year'. However, a sample sentence reads *taon na didto dila* which is translated to Spanish as *ya cosecha en su tierra* 'it is already harvest (in the land)'.

The *Diccionario Ibanag Español* (Bugarin, 1854, p. 85) defines *dagun* as *año*, *verano*, *primavera* 'year, summer, spring'. From this word derive *dagunun* and *jinagun* defined as *lo veraniego* 'summer crops' and *siembra de ultimo verano* 'sowing at the end of summer' respectively. In Cps, a similar word *dinagʔun* is used to refer to the rice sown in June and harvested in August (which coincides with the *habagat* season), in contrast to *ami* which is grain harvested during the *amihan* season.

With the link among "time", "weather", "year", and "harvest" somehow established, a more crucial question to answer now is whether *taʔon* and its cognates indeed translate to the word for "year" or the concept of a division of time that is equal to 365 ¼ days or 12 months. Badillo (1980) first compared the names for "months" of different groups in the Philippines. He presented data from Ilo, Lepanto/Bauco (Ifg?), Igorot (unspecified), Buguias/Sagada (Kankanaey?), Pag, Panay (Cps or Hiligaynon?), and Lake Lanao (Magindanao) and compared them with names for months of the Gregorian Calendar. He notes that in some languages

[36] In his close reading of the third definition of *panahon* in the *UP Diksyonaryo ng Filipino* (1971), Benitez (2019, p. 463) misreads the word "masa". He relates it to "masses" rather than recognizing that it is the Malay equivalent as per the style of the dictionary.

TABLE 17. Words for "weather/year" and "time" found in some dictionaries of Philippine languages.

Source	'Time/Weather'	'Year'
Mentrida, A. (1637). *Bocabulario de lengua Bisaia Hiligueyna y haraia de la isla Panai y Sugbu.*	*panaon, panag-on, panuigon*	*taon, dag-on, tuig*
Bergaño, D. (1732). *Bocabulario de Pampango en Romance, y diccionario de Romance en Pampango.*	*panaon*	*balictaun, banua*
Lisboa, M. (1754). *Vocabulario de la lengua Bicol.*	*banua, anua*	*taon*
Sanchez, M. (1711). *Vocabulario de la lengua Bisaya.*	*taon, tuig*	*taon*
Santos, D. (1794). *Vocabulario de la lengua Tagala.*	*panahon, camasahan*	*taon*
Bugarin, J. (1854). *Diccionario Ibanag Español.*	*languit*	*dagun*
Carro, A. (1849). *Vocabulario de la lengua Ilocana.*		*taoen*
Seinadel, C.W. (1909). *The first grammar of the language spoken by the Bontoc Igorot.*	*talon*	*tawin*

like Ilo, there are names relating to the blooming of plants or abundance of fish.[37] The list also shows little commonality across groups. However, the first four languages show the most similarities as they are most likely Cordilleran languages.[38] He also mentions that Bisaya has 12 months but only seven of which have names.[39]

Ambrosio (2010, pp. 114, 166-168) provides additional challenges to the notion of "year" as equivalent to *taon*. He gives the Bisaya of Panay as an example of groups who synchronize planting with the appearance of the constellation of stars they call *Moroporo*, rather than counting days or months.[40] Therefore, Tgl *taon* and its doublet *panahon* (and their equivalents) both serve as metonyms (according to Benitez, 2019) for the cycle of various human activities synchronized with the natural environment.[41] Likewise, doublets like Pag *tawen* and *taʔon* and the semantic flexibility of Pam *banwa* put emphasis on the skies (the viewing pane for both celestial bodies and meteorological events) as source of markers for the beginning and end of these cycles.

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[37] Badillo does not clearly indicate his sources but the section on Ilo months bears close resemblance to an excerpt from Andres Carro's *Vocabulario de la Lengua Ilocana* published in 1849. The months are listed and defined in Section 21 of the *Prologo*.

[38] The similarities are few. The name for the 11th month *kiling/kiring* in Ilo, Lepanto/Bauco, and Igorot is similar to the name of the 9th month in Buguias/Sagada and the 4th month in Panay. In Ilo, the name corresponds to the latter part of the rainy season, while in Panay it refers to the time of burning the fields. Badillo further adds that in the Mountain Province, *kiling* is a bird that cries after a strong typhoon (also called *kiling*) during the last days of November (the period called *kiling*). Lepanto and Igorot have *tiway/tioay* to refer to the 9th month while Lepanto and Buguias have *adug/adog* for the 10th month.

[39] There is some confusion in his work. He says that the Bisaya only have seven months with names but he lists 12 month-names for Panay, which is in fact within the designation of Bisaya. This inconsistency is perhaps the result of having to cull from different sources, the first one from Miguel de Loarca's *Relacion* and the other from Pedro Monteclaro's semi-historical *Maragtas* (first appeared in 1907, see 1957 edition).

[40] Ambrosio further elaborates that the *Moroporo* (the Pleiades) is not limited to the Bisaya in Panay but is recognized among Bikol, Tagbanwa (Palawan), Bukidnon, Mbi, Palawan, and even Tgl speakers. They all have similar sounding names but with different descriptions.

[41] Manapat (2011, p. 302) and Benitez (2019, pp. 475-476) both cited this excerpt from Fray San Antonio's *Chronicas* (1738, p. 165): "*El año le explican en su idioma antiguo con este termino taon. Es metaforico, proque en rigor significa ajuntamiento de muchos*" to illustrate the notion of *taon* as the 'assembly of many' to relate the different activities to the concept of *taon*.

Additionally, *panahon* and *taon* are not the only doublets that resulted from possible loans. The co-existence of Pag *tawen* and *taʔon* may have also resulted from borrowing, with the latter having the greater probability of being a loan. The word *tawen* has a schwa commonly found in Pag, while *taʔon* is perhaps from Tgl, coming with the introduction of the concept of "year". The same can also be observed in Bontoc where a set of triplets is found — *ʧakon* 'season for planting and harvesting rice' (probable cognate with Ibg *dagun*) which coexists with *taːlon* 'weather/time' and *tawən* 'year' which is a probable borrowing from Ilo or other neighboring Cordilleran languages.[42]

6. LESSONS FOR THE FUTURE FROM THE PAST. The comparison and analysis of words from different Philippine languages reveal an undeniable nexus between the domains of weather phenomena and the reckoning of time. It has been observed that cognates usually cross semantic borders that are now perceived to exist. Clouds and other words for atmospheric precipitation relate to words for darkness and even the later parts of the day. Winds are associated with directions and with seasons and weather systems like typhoons and rain. Lastly, the concept of time itself is a derivative of human activities tied to natural signs observed through the skies.

Aside from these connections, the past experiences of different ethnolinguistic subgroups can be extracted from tracking the words they used to refer to different weather phenomena. Taking inspiration from Robert Blust's work on theorizing the Austronesian homeland (1984-1985), vocabulary items provide hints on the origin of certain groups. Utilizing the *Wörter und Sachen* technique, the presence (or absence) of certain words relating to the environment can provide clues to the origin of groups. Do they have words for particular winds? For typhoons? With which plant/s do they reckon their seasons? Furthermore, the irregular sound correspondences provide a hint about borrowings and therefore of persistent contact between groups. Doublets in some languages also provide interesting discussion points on how meanings of words can change and how new words are borrowed alongside them.

[42] See Jenks (1905) for the Bontoc Igorot calendar and description of *ʧakon* or <cha-kon>. Seinadel (1909) defines *talon* as the equivalent of 'time' and 'weather' in idioms. It is also used to refer to the fields surrounding the village (p. 466).

The nuances of words relating to *panahon* also reveal the nature of indigenous knowledge systems. How do winds relate to seasons? What do the clouds tell us about the weather? Recording and transcribing these meanings and correlations are important because they suggest the Philippine ancestors' adaptations and survival mechanisms in a harsh archipelagic climate. Folk knowledge on weather prediction may actually have scientific bases as illustrated in the study of Galacgac and Balisacan (2009) on traditional weather forecasting in Ilocos Norte. The study shows that the obvious shape of clouds or, quite strangely, the place where dogs defecate can warn humans of impending rain or possible stormy weather. At the risk of a changing climate, Filipinos should adopt an approach that is culturally compatible, and which takes its cues from hundreds or thousands of years of experience.

In the course of this study, new points for discussion have emerged. Fray Juan de Plasencia (as cited by Manapat, 2010, p. 299) derides the Filipino natives as *plebe imperita* 'ignorant plebes' due to their lack of devices or concepts of timekeeping similar to what Europeans had during that time. He forgets that in Spanish itself (and by extension, Latin), the word for "time" and "weather" is the same — *tiempo*, from which the word *temporal* 'seasons' is derived. Hence, the Western concept of time, like *panahon*, was originally not easily divided into discrete units, until the invention of clocks and calendars which paved the way for it to be perceived as such. Likewise, among speakers of Philippine languages, the introduction of these devices led to the appropriation of the words *tiyempo* and *oras* to grasp a new perception of temporal dimension.

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