Measurement of Time by the Ancient Slavs

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The paper explores time measurements and perception of time by the ancient Slavs in the pre-Migration Period and Slavic settlement of Central and Southern Europe. It attempts to reconstruct a year, seasonal, month-like division and naming, as well as lunar and solar time measurement. Moreover, it explores and attempts to reconstruct what were the common Slavic month names that, is before 5th–7th centuries. It also, discusses the issue of adoption of Julian calendar across the Slavdom in the period between the 9th–11th centuries. The research is based on scarce limited written historical records as it explores the times before writing came to the Slavs. Hence to a large degree it relies on abundant ethnographic sources, as well as on linguistics. Therefore, in principle it employs a comparative methodology and often draws from Indo-European examples.

Keywords: Slavs, Slavic calendar, year, seasons, months, weeks, days

Introduction

Since the earliest days people have measured time in some way. After all, some form of keeping track of time distinguishes human beings from other living creatures. Nonetheless, we have to keep in mind that the calendar, so natural and obvious for us, is an abstract concept, constructed by humans for their benefit. As American anthropologist Anthony Aveni pointed out there was no year 1945 or 1969. These dates are merely intellectual constructs that modern people take for granted. There were of course events such as the end of the 2nd World War, and the landing of humans on the Moon, and the dates and years are really a tool to create a more manageable time frame (Aveni 1989:3).

Days and nights are too obvious not to be noticed as they regulate the life-cycle of all living things. The same goes for phases of the Moon, and seasonal annual changes vital for farmers. For the early, ancient Slavs there are no written historical records about any form of organised and formal calendar. However, we can say with certainty that some kind of informal method of time measurement must have been in use. The early Slavs of the migration period of 6th-7th centuries were a simple agrarian society, and because of this their daily life heavily related to the seasons and weather changes. As a matter of fact, the knowledge of seasons and changing weather conditions must have been of vital importance, like in the case of any traditional farmers then and now, as their lives largely revolved around agriculture and animal husbandry. Bluntly speaking, for Slavs in ancient and early mediaeval times it was simply a matter of survival. There is also no doubt that like any traditional society they must have associated the passage of time, days,

nights and years, with the supernatural. In their world, supernatural forces influenced life and seasonal cycles, but people could influence and bargain with gods. Hence in their agricultural society appropriate rituals, offerings and magical spells must have played an important part in their lives.

It has to be acknowledged here that attempting to reconstruct pre-Christian Slavic measurement of time encounters a serious obstacle. Above all, as it was said, we do not have any direct records or evidence to support any claim. In such circumstances, to address this issue, we are practically left with just three avenues. The obvious one is a comparative analysis. So, we will look into time measurement known to be in use by other, sometimes remote Indo-European people. Similarities in such systems could be a hint for establishing a broad framework for time measurement practices of the Indo-Europeans and consequently it will allow us to postulate a system that with a high degree of probability was used by the pre-Christian Slavs. The second avenue is the linguistic analysis of relevant terminology across the Slavdom and other Indo-European people. Thirdly, we have to work with vast volumes of ethnographic data and records. We should be fully aware that such an attempt at reconstructing the principles by which the ancient Slavs related to and used to measure the passage of time, seasons, years, and so on, will only give us a very general insight, allowing the creation of a broad framework for further and much more complex research and analysis.

The Year and Seasons

The Slavs like all other human beings observed seasonal climatic changes, as well as life cycles of plants and animals. Like all other people they were aware of the passage of time, human birth, growth, adulthood and death. So, in the Slavic world the solar year was also recognised as a principal division of time. Slavic languages have three terms denoting the year (see Table 1). The Southern Slavs, with the exception of Slovenians, use the term "година (godina)". They share this name "год (god)" with Russians and Belorussians. The name derives from the proto-Slavic "godъ" denoting the time (Brückner 1985: 147–148). The Slovenes use the term "léto", which also means summer, which derives from proto-Slavic "léto" – summer, year (Boryś 2006: 280), which appears in OCS as "лѣто (lěto)" (Slocum & Krause, 2014) It is shared by Upper and Lower Sorbian as "lěto" and Polabian which was recorded as "l'otü", but most likely also pronounced "lěto/ljoto" (Polański 2010: 62). On the other hand, Czechs, Poles, Slovaks and Kashubians have the word "rok", from the proto-Slavic "rokь", which can be translated as fate, fatum, or a defined period (Boryś 2006: 517). It is worth noting that Ukrainians and Ruthenians use the same name – "рик (rik)", but it is likely they are borrowing this from Polish. It is also worth noting here that the Russian Primary Chronicle written in Kiev is originally titled "Повесть Временных Лет (Poviest' vremyennikh ljet)". Therefore, when looking at these three terms the word "lěto" seems to be the oldest form. This claim can be supported not only by its wide usage from northern Germany (Polabian) to the Adriatic coast (Slovenian), but the term also appears for example in Polish in the phrase "ile masz lat?" or in the Russian "сколько вам лет?" – both meaning "how old are you?", with the literal translation meaning – "how many years do you have?" Also, the word "letopis" in Croatian and "летопис" in Bulgarian and Russian, a combination of the words "leto" and "pisat'" - to write, means

annals. Therefore, it is clear that the term "lěto" is an ancient one. It is worth noting here that in Polish "godzina" and Czech "hodina" means "an hour" again clearly linking the term with time only. In light of the above, the term "god/godina" must have emerged among the Southern Slavs, and most likely entered the Russian language via Old Church Slavonic. As for the term "rok", which is conceptually cognate to "god/godina", it appears to be a later development within the Czech, Kashubian, Polish and Slovak linguistic hub. As previously stated it must have entered Belorussian, Ruthenian and Ukrainian through Polish influence. We can therefore conclude here, that the Slavonic pre-migration word for a year was "lěto".

TABLE 1 - Slavic names for the year

Eastern Slavic

	OCS	Belorussian	Russian	Ruthenian	Ukrainian
Year	лѣто	год	год	рік	рік

Southern Slavic

	Bulgarian	Croatian	Macedonian	Serbian	Slovene
Year	година	Godina	година	година	léto

Western Slavic

	Czech	Kashubian	Polish	Polabian	Silesian	Slovak	Lower Sorbian	Upper Sorbian
Year	rok	rok	rok, but in plural lata	ľotü (lěto//ljoto)	rok	rok	lěto	lěto

The Slavs appear to be much lesser stargazers, not only compared to the ancient people of Mesopotamia or Egypt, but also when compared to their fellow Indo-Europeans. Nonetheless, there is evidence that they observed equinoxes and solstices as well as celestial bodies. The name for the star in all Slavonic languages is close to the proto-Slavic "*gvězda". The variations are slight where we have for example Russian "звезда (zvyezda)", Polish "gwiazda", Czech "hvězda", Croatian "zvjezda" and Macedonian "ѕвезда (svjezda)". Only in Belorussian is a star called "зорка" (zorka)". The term can be traced back to common Balto-Slavic as we have "*žvaigždė" in Lithuanian (Boryś 2006: 189-190; Brückner 1985: 165; Trubachev 1980: 181-182). There is strong evidence that the Slavs worshipped the Sky and Sun naming them Svarog and Dazhbog/Dažbog respectively (Zaroff 1999: 50-55), and the Polish name for the Moon "Księżyc" meaning son of a prince, in a solar context indicates its religious affiliation (Leciejewicz 1990: 161). The planet Venus was perceived as two objects and named in Russian folklore as "зоря утренная (zorja utrennaja)" – a Morning Star, and seen as a sister of the Sun, and "зоря вечерная (zorja večernaja") - an Evening Star, and sister of the Moon. The Slavs believed that the star Polaris is the axis of the universe or axis of the sky, and called the constellation of Ursa Major a "big wagon" and Ursa Minor a "small wagon". The Milky Way was called the "way of the ancestors" or "way of the heroes" which may suggest some chthonic association or one with an Underworld (Leciejewicz 1990: 133). The Pleiades, as well as the constellation of Orion, Sirius and many other celestial objects were also known, named and sometimes venerated, but that topic goes beyond the scope of this work.

The seasons were well recognised by the ancient Slavs and associated with equinoxes and solstices (see Table 2). They were celebrated with various, rich and colourful celebrations and festivities. They will not be addressed in detail here simply because they are already comprehensively described by many scholars and ethnographers such as the Czech Lubomir Niderle, or Oskar Kolberg and Kazimierz Moszyński from Poland, the Russian Aleksandr Afanasjev, the Croatian Vatroslav Jagić and many others.

TABLE 2 - Slavic names for the seasons

Eastern Slavic

	OCS	Belorussian	Russian	Ruthenian	Ukrainian
Spring	весна	восень, вясна	весна	весна	весна
Summer	лѣто	лета	лето	літо	літо
Autumn	есень	осень	осень	осін	осінь
Winter	зима	зіма	зима	зима	зима

Southern Slavic

	Bulgarian	Croatian	Macedonian	Serbian	Slovene
Spring	пролет	proljeće	пролет	пролеће	pomlad
Summer	лято	ljeto	лето	лето	poletje
Autumn	есен	jesen	есен	есен	jesen
Winter	зима	zima	зима	зима	zima

*Bosnian seasons are spelled the same like in Croatian

Western Slavic

	Czech	Kashubian	Polish	Polabian	Silesian	Slovak	Lower Sorbian	Upper Sorbian
Spring	jaro	zymk	wiosna	Püzaimă (pozima), Prülotü (prolěto)	wiosna	jar	Naléše, jaro	naléćo
Summer	lěto	lato	lato	ľotü (prolěto)	lato	leto	léše	léćo
Autumn	podzim	jeséń	jesień	jisin	jesień	jeseň	nazyma	nazyma
Winter	zima	zëma	zima	zaimă	zima	zima	zyma, zymje	zyma

* In Polabian - words in brackets are most likely pronunciation

Let's begin from the first seasonal change in the modern calendar, that is, from Spring. This season comes with the Vernal Equinox that can fall between the 19th and 21st of March. The Eastern and Western Slavs share the name "vjesna/wiosna" for Spring. It derives from the proto-Slavic "vesna" and further from the proto-Indo-European "*vesr̥/vosr̥", and in the genitive case "*vesn[e]s" – meaning Spring. It is cognate to Old Indian "vasantáh" of the same meaning (Boryś 2006: 702; Moszyński 1968: 92). Also, we have another word for Spring – "prolěto" - meaning before Summer, in various spellings and pronunciations among the Southern Slavs, with the exception of Slovenes who call Spring "pomlad". The name "prolěto" appears in the Western Slavic languages of Upper Sorbian and, surprisingly, in the extinct Polabian language. One oddity is the word "zymk" in Kashubian, which evidently is related to word "zima" – meaning winter. At the same time some other terms are used such as "jar" in Czech and Slovak and "jaro" in Lower Sorbian. The reconstruction of the original Slavic name for Spring is a complex matter. Both terms "vesna" and "jar/jaro" are ancient. The proto-Slavic "jarъ" and OCS "ꙗра (jara)" does

denote Spring. We find "jaro" in Old Polish for Spring and it survived till modern times in Polish "jare zboże" - "spring sown grain". It has the same meaning as the Kashubian "jari" - of spring, from this year. It is found regionally in Ukrainian - "йар (jar)" – again meaning Spring. The word has rather ancient roots given that in proto-Indo-European - "*jēro/*jōro" - has a double meaning, that is, both "Year" and "Spring" (Boryś 2006: 204; Trubachev 1981: 75; Vasmer 1987: II:560). At the same time in Avestan "jārə" denotes a year, and we have the Old Greek "hōros", Gothic "jēr" and English "year" meaning just the same (Brückner 1985: 199). Considering the presented evidence, the most plausible theory seems to be that in proto-Slavic the term "jaro/jara" initially referred to Year, but also to Spring. This in turn strongly suggests that by association, the new year was counted by Slavs from Springtime. At the same time "vesna" was used alternatively for Spring, such as the Old Indian "vasantáh" - the Spring, indicates. So, throughout the course of time, probably not long before ancient Slavs dispersed all over Central, Eastern and Southern Europe, the term "jaro/jara" became less used to denote a year, and was replaced by the word "lěto". In parallel, around the same time, its usage as a name for Spring began to fade away and the name "vesna" became more common. This linguistic change must have taken place around the middle of the 1st Millennium C.E. however the term "jar/jaro" survived in some Slavonic languages as a term for Spring, and in numerous sayings describing something new or associated with Spring (as mentioned earlier). Some unusual evidence also originates from Scandinavia. A certain Visna - a Slavic female warrior and standard bearer - took part in the semi-legendary battle of Bravalla in Gotland around the middle of the 8th century (Saxo Grammaticusa VIII.214). Saxo has written his account in the late 12th century, but he relied on earlier written sources or spoken sagas. The importance of this account is not its historical value, but the fact that the female name Visna definitively derives from "vesna" - the Spring. Also, the name Vesna is a very popular female first name among the Southern Slavs. Both of these points are of great significance, firstly because the aforementioned Visna must have been a Northern Polabian as they interacted with Scandinavians for centuries. It is therefore highly likely that "vesna" was a term for Spring in Polabian. If so, the Polabian name for Spring "prolěto", recorded in scarce surviving texts might have been a later borrowing from the South, possibly from Great Moravia (a topic to be discussed later). At the same time the popularity of the name Vesna among the Southern Slavs is a witness that the term "vesna" for the Spring was widely used by this branch of Slavdom prior to the change to "proljeće" terminology. So, the cumulative evidence strongly indicates that when Slavic Migration gained impetus, usage of the term "vesna" for Spring was most commonly used. The Slavonic Spring celebrations are obscured by the celebration of the Christian Easter, taking place shortly after the vernal equinox, and it is clear that Easter took over many old customs and rites (Aveni 1989: 462). The pre-Christian residue is visible in many Easter customs. Just to cite a few: Easter egg painting, and consecrating food with Holy Water in Church, are both remnants of the tradition of making offerings to the Spring deity or deities. Both Easter eggs and rabbits symbolise the rejuvenation of nature, as well as the renewal of plant and animal life, regrowth and fertility. Some other customs also indicate pre-Christian affiliations, for example, water fights and splashing on Easter Monday in Poland, or beating with a bunch of twigs in Bohemia. No doubt, they are the echo of old pagan spring purification rituals. The most common custom is a ritual involving the drowning, burning or killing of an effigy of the demon Morana, called so in Czech and Slovenian, Marzanna in Polish, and Morena in

Russian and Slovak. The ceremony appears also among Lithuanians where she is called Morė. This clearly indicates the antiquity of the custom going well into times before Balto-Slavic linguistic separation. The particular folk ritual may vary from region to region and from country to country but it universally symbolises killing or getting rid of winter and the beginning of spring (Potkański, 1924:II:42–62). In modern folklore she is a demon, but she might have been a much more important chthonic deity in pre-Christian times, as the name Morena most likely derives from the proto-Slavic "*morъ/mrъtvъ" - death/dead (Trubachev 1993: XVIII: 101–102).

In all Slavic languages the name for summer derives from the same OCS root "лѣто (lěto)". It is identical with the Slavic name for a year, albeit with some minor vocalisation and spelling differences (Boryś 2006: 280). Its meaning, summer or a year, depends on the context in which it is used, in a similar fashion to how the word for week and Sunday "nedjela" is sometimes applied. The summer for ancient Slavs began on the Northern Summer Solstice on the 21st or 22nd of June. It was celebrated with overnight festivities during the shortest night of the year. As darkness would come, bbonfires were lit on beaches as well as the banks of rivers and lakes throughout the land while effigies and fireworks are thrown into the fires. Young females floated maiden wreaths often with lit candles. A ritual bathing took place which might have some purification and fertility aspects. The night festivities often involved promiscuous behaviors among the young and old and were socially accepted on that night (SSS, 1964, II:566). Among the Eastern Slavs and Poles, this celebration was called "Kupała" or "Noc Kupalna" - Kupala's Night, a term most likely derived from the proto-Slavic "*kǫpati" - to bath (Strzelczyk 2007: 104). No doubt it is an ancient, common Slavic pre-Christian tradition as it's celebrated across the Slavdom. It is celebrated under the name of "Еньовден" (Jenovden)" - John's day, in Bulgaria: as "Ивањдан (Ivańdan)" in Serbia; "Ivanjski krijesovi" in Croatia and "Kres" in Slovenia. Its antiquity is supported by evidence from the Baltic people. The Lithuanians celebrated Summer Solstice in a similar fashion and called it "Kupolė". In later times under pressure from the Christian clergy this celebration became associated with John the Baptist, and moved to the 24th of June, which is Saint John's Day. In pre-Christian times celebration of the Summer Solstice definitely had a religious and mystical character, but it was ground down by Christianity so much that only some folk elements survived till modern times.

A single name is used for Autumn across almost all of Slavdom. It is a noun deriving from the proto-Slavic "*esenь" or "*osenь" (see Table 2). The word is cognate to Gothic "asans", and Old Prussian "assanis"- a time of harvest – and all deriving from the proto-Indo-European "*esen-" also denoting harvest (Boryś 2006: 212-213; Brückner 1985: 206). Hence, we have the Russian "осень (asień)", Slovene "jesen" and Polish "jesień", and so on. The exceptions are Czech with "podzim" and Lower and Upper Sorbian with "nazyma", with all three literally meaning - before winter. It began on the autumnal equinox on 22nd or 23rd of September and was associated with celebration of the concluding harvest. It was a merry time with festivities, banquets and feasts with dances. Ethnographic data from Poland shows that offerings of wreaths made of ears of grain, fruits, vegetables and flowers as well as loaves of bread from this last harvest were given to the landlord (Kuchowicz 1975: 401). In modern times it was strongly associated with Christianity and a special mass was performed in church. This clearly indicates that in the pre-Christian, and in the pre-Migration Period this celebration involved offerings to some Slavonic

deity associated with harvest. Similar harvest oriented practices and celebrations were not unique to the Slavs and were widespread among many Indo-European people. A good example is a the ancient Celtic harvest festival called "Samhain" in Irish Gaelic, which means "summer's end", and which was celebrated on the 31st of October (McKillop 1998: 377–378). As a matter of fact, practically all agricultural societies across the World had some sort of harvest celebrations. Returning now to Slavdom, the autumn harvest festival was practised by Eastern and Western Slavs and by the Baltic people. Apparently it is much less visible ethnographically in Southern Slavdom. Nonetheless, it has been recorded that in Bulgaria the last sheaf of grain harvested was plaited into a decorated bunch called a "brada", then taken home or left on the field. Sometimes this "brada" was also used in fortune telling. In some districts the custom of burying bread made from the new season's flour in the harvested field existed. Making this bread was performed in a ritual fashion. Often the bread was decorated and offered to other villagers or passers by (MacDermott 1998: 247–249), which echoes the ancient rituals of offerings to pre-Christian deities. The celebrations, despite numerous regional differences, revolved around very similar concepts and ideas and often had similar expressions. If it had a specific, common Slavic name it is practically impossible to reconstruct. We know that in Poland the harvest festival was, and still is, most commonly called "Dożynki", from OCS "жѧти (žęti)" - to mow grain, then "жиньꙗ (žinjǫ)" – they mowing grain, with the added prefix do-, literally meaning - last grain mowing (Brückner 1985: 662–663). In regional Poland it was also called with cognate names such as „wyżynki, obrzynki, wieniec, wieńcowe, okrężne" and in Opole district - "żniwniok" (Kuchowicz 1975: 401). Harvest celebrations also had similar or identical names elsewhere. For example in Czech "Dožínky", in Russian "Дожин, Дожинки (Dožin, Dožinki)", in Ukrainian "Обжинки, Дожинки (Obžinki, Dožinki)" and in Byelorussian ":Дажынкі (Dažynki)" (Trubachev 1978: Vol. 5: 91), albeit some other cognate names were also in use. As for the Southern Slavdom no pronounced celebrations of harvest survived, perhaps due to the strong Christian influence. Perhaps they became autumn wine festivals, such as the one held in modern Bulgaria on the 18th October.

Winter in all Slavic languages is called "zima" or very similar and the term derives from a common proto-Slavic noun. It is an ancient word cognate with the Avestan "zyam" of the same meaning (Brückner 1985: 654). It was associated with the Winter Solstice on the 21st or 22nd of December. The Slavs also celebrated the longest night of the year in the Northern Hemisphere and the beginning of the period when days become longer. The celebration lasted most likely for a week or so. Such a tradition is also very common among other European people. In Scandinavian tradition it was "Yule" festivities held in Norway of pre 10th century on a day called "höku" night, which is on the Winter Solstice (Jones & Pennick 1995: 124). The term "Giuli" referring to the months of December and January was also recorded by Venerable Bede around 730 C.E. in Anglo-Saxon England (Jones & Pennick 1995: 122). Generally, Yule was celebrated by feasts and festivities. It appears that the Slavs called the festive period around midwinter's night "Gody" from the proto-Slavic "godъ" - meaning in this context a holiday. The term is most common among the Western Slavs with Polish "Gody", Kashubian "Gòdë" and "Hodnik" in Upper Serbian. Also, we have "Godnik" and "Hodnik" for December in Kashubian and Upper Sorbian respectively. In Czech and Slovak it is called "Kračun", but regionally also "Hody" in both languages (Boryś 206: 169–170). In Russian it is called "Коляда (koljada)" and similarly in Byelorussian and Ukrainian. In Bulgarian we find names like "Коледа, Божик, Божич (Koleda,

Bôžik, Bôžič)", in Croatian "Božić", Macedonian "Божик (Bôžik)", while Slovenes use the name "Bôžič", and Serbs use "Божић - (Božić)". So, as we can see all Southern Slavic terms refer clearly to God, or rather son of God. Therefore, it is reasonable to accept a linguistic Christian origin. Similarly the Eastern Slavic "Koljada" derives from the Latin word "calendae" - the first day. Hence, the form "Gody" with its ancient etymology must have been an original term**.** "Gody" fitted well into European traditions with its holiday mood, feasts, festivities, a friendly positive approach to other people, and gift giving. It is worth noting that the Roman Saturnalia, also held at the end of December, besides being a merry time for all people, had its highlight event of midwinter's night associated with the Sun deity Mithra and a celebration of the Unconquered Sun. On that occasion ancient Romans greeted each other by saying "Sol Invictus!" – the Sun is unconquered! So strong was this tradition in Rome that the Christian Church was unable to eradicate it, so they arbitrarily declared the day of birth of Jesus of Nazareth on that very day. Hence by creating Christmas Day at the same time, many ancient pagan tradition were incorporated into this Christian celebration. It is worth noting at this point, that Christmas Day falls on the 25th of December instead of the initial Winter Solstice due to some calendar miscalculations (Jones & Pennick 1995: 76, 125). After Christianisation, the Slavic "Gody", Germanic "Yule" as well as the Roman "Saturnalia", were easily replaced by Christmas celebrations with a very strong pagan expression of a festive season with Christian "varnish". There is one more interesting similarity between the association of the Roman "Saturnalia" and Lithuanian "Kaladosis" (the term most likely to have been borrowed from the Eastern Slavs) with Sun worship and the foretelling of future harvest (Jones & Pennick 1995: 174). This similarity, the remoteness of those two peoples, and cultural and linguistic closeness of the Balts and Slavs appears to have a strong indication. It clearly indicates that the celebration of some solar deity was a focal part of pre-Christian "Gody".

Beginning of the Year

We now turn to the crucial topic of when the Slavic year began. It is needless to say that all societies, whether hunter-gatherers or farmers, recognised seasonal changes, as one way or another their life depended on them. Most of the traditional societies place the beginning of the New Year at the vernal equinox in late March, which at present falls on the 21st or 22nd day of this month (Aveni 1989: 114). This should not be surprising given that for farming societies, spring and the rebirth of vegetation was perceived as the beginning of the annual life cycle. The Indian year began at the entry of the Sun into the zodiac sign of Aries that corresponds with the March spring equinox. Also, in ancient Persia of around 3rd century B.C.E. the year began with the rise of Sirius. This occurred at this altitude around the vernal equinox in March (Holford-Strevens 2005: 98–99). It is well documented that in the Ancient Roman calendar, the New Year started on the vernal equinox, then on the 25th of March. The Greek seasonal calendar was also celestially based. Harvest began when the constellation of Pleiades rose over the horizon, and Sirius made its annual appearance, which also falls around that time (Aveni 1989: 125). Among other Europeans the Anglo-Saxons celebrated the New Year on the 25th of March around the Vernal Equinox. In some areas this custom survived well into the Middle Ages in some monastic traditions (Holford-Strevens 2005: 127).

In the case of the Slavs we have to explore two possibilities. Firstly, that the Slavic year started in the northern hemisphere on the Vernal Equinox, which falls on the 20th or 21st of March each year. Secondly, that it began with the Summer Solstice on the 21st or 22nd of June. It has been argued by some scholars, including Russian Victor Gusev, that the Slavic year began in June, as the widely celebrated Summer Solstice is supposed to indicate (Gusev 1978: 136–137). While it is true in the case of the most prominent survival of pre-Christian celebrations in June, it has to be taken into consideration that Vernal Equinox festivities were almost entirely subdued by the most important Christian holy period of Easter. It is also the case that Scandinavians had two seasons, summer and winter, and their new year began at the beginning of their winter sometime around November (Holford-Strevens 2005: 82–83). Still, this may reflect the climatic conditions of the North where during the course of the year it is simply either cold, or very cold. The strongest argument for the year beginning in Summer is that the same name is used by Slavs to denote both a year and Summer by the term "lěto". Also, the question "how old are you?" in Polish and Russian is "ile masz lat" and "сколька вам лет? (Boryś 2006: 280). If we however take into account that overwhelmingly among the Indo-European people the year begins around the time of the Vernal Equinox, especially as was the case among the pre-Christian Balts who were culturally and linguistically closest to the Slavs, it is most likely that the Spring Equinox was the beginning of the new year, as postulated by Vladimir Šaur (Šaur 1973: 94). This notion is not only strongly supported by ethnographic data of the previously discussed common Slavic celebrations of Vernal Equinox, but also by some other accounts. For, example, the Eastern Slavs celebrated a new calendar year on 1st of March well into the 12th century, nearly two hundred years after the formal adoption of Christianity in 988 (Zenkovsky 1984: XXXVIII; Cherepnin 1944: 27; SSS, 1961: 260), which very likely reflects an older pre-Christian tradition. It is also worth noting that not long ago in rural Poland after asking how old someone is, the common answer would be how many Springs - "wiosen" that person has (Boryś 2006: 280). It has to be stressed again that the Vernal Equinox must have had special meaning for the simple agricultural and husbandry societies such as the early Slavs. The renewal of plant and animal life, as well as the weather warming up after long, harsh winter would both have great importance and would perfectly fit the beginning of a new year. Therefore, all of this cumulative evidence strongly points to Spring as being the beginning of the ancient Slavic new year.

The Months

We do know that since the adoption of Christianity, all Slavic people were using a seven day week like the rest of Christendom. The question remains as to what manner the passing days were grouped into a larger unit, and what that unit might have been in the case of the pre-Christian Slavs. Unfortunately we have practically no direct written evidence and have to rely on ethnographic data. Additionally, we have to employ a comparative methodology, which involves looking into time measurement systems of other people, and especially speakers of Indo-European languages.

It should go without saying that people have always been aware of lunar cycles, and observing them was the easiest and most natural choice for measuring the passage of time. In many cultures over time the lunar cycle was a basic, larger unit. For example, in ancient Sumer, each month began at the night of the New Moon. Their calendar was basically Lunar

and each month was either 29 or 30 days long. They differentiated the year into the two seasons of winter and summer. The year had 12 months giving 360 days. The remaining days accumulated until they interpolated an additional month to keep pace with the solar year (James & Thorpe 1994: 489). As was already stated, most cultures developed some form of time reckoning based on the lunar cycle. In Ancient Greece according to Hesiod's *Works and Days* written in the 8th century B.C.E., the lunar month was a basic unit of time measurement. It was an agricultural calendar assigning particular days to farmer's activities, sometimes linking them with mythological events or deities. The month numbered 30 days and the cycle began when the first Moon Crescent appeared in the west at the sunset after the new Moon (Hesiod 11: 770–821). The Romans and ancient Germanic people also measured time by the lunar month (Duncan 1998: 11–13). Ethnographic data strongly indicates that the Slavic month began with the New Moon, or rather when it appeared in the Sky after three days of absence. According to Kazimierz Moszyński, Polish peasants greeted the first appearance of the Moon with spells, prayers, pleas, sayings, and in many cases with some rituals and celebrations. The day prior to the New Moon was perceived as a bad day full of fear and uncertainty. It cannot be excluded that this was due to the discrepancy between the 28 day-long month (4 x 7 days) and the lunar cycle. It is possible that this particular day was not counted by the ancient Slavs. He also recorded that in the South-Eastern Polish district of Chełm, many people felt obliged to go to church on the first Sunday after the New Moon. This is no doubt an ancient tradition incorporated into Christianity (Moszyński 1967: 438, 452–455, 801; SSS 1961: I.II.35).

The word for month in Upper Sorbian is "měsac" and is cognate to the Old Church Slavonic "мѣсѧцъ (mjesǫc)" (Brückner 1985: 334). It is practically the same with some spelling and pronunciation variations across all Slavdom. The name is also cognate to the English word month, German "monat", Latin "mensis", Greek "μήνας (menas)", Lithuanian "mėnuo", and so on in many other Indo-European languages. It derives from the Indo-European root "*meh$_1$"- to measure, hence "*méh$_1$nōt" - the Moon. At the same time, Germanic, Slavic and Baltic speakers refer to the Moon with a cognate name implicating the association of Earth's natural satellite with time measurement. For example, Slavic "Měsac", German "Mond" and Lithuanian "Mėnulis" all mean the Moon. The same association was also preserved in Iranian languages where we have Avestan "Mong", Persian "Maah" and Ossetian "Maaj" (Brückner 1985: 334–335; Boryś 2006: 326; Hannah 2005: 16). It is worth noting that only in Polish is the Moon called "Księżyc", which literally means "a little prince". Therefore, it should not come as a surprise that in many cultures, the common names for the concept of a month are derived from the Moon.

The months of the Slavic calendar

We can assume that the introduction of Christianity in Great Moravia by Cyril and Methodius' mission in the 9th century also formalised the names of days (this topic to be discussed later), and also involved the introduction of a strict 12 month yearly cycle. It appears that with the Julian calendar, Greek month terminology was also introduced. The Greek calendar of the 9th century was practically the Julian Calendar with Latin names for the months, simply in Greek transcript, for example, "Ιανουάριος (Ianuaros)" for January. This is reflected in the official names of months in modern Russian, Byelorussian, Slovak,

Bulgarian, Macedonian, Slovene and Serbian that follow Julian terminology. However, it appears that for most Slavic people the Latin (via 9th century Greek) based month names were just meaningless sounds. It is worth noting, that in the Russian Primary Chronicle, in the original Laurentian text in Old Church Slavonic, we read: "бо тогда мѣсѧць грудень рекше ноѧбрь - "for it was then the month of Gruden, called November" (RPC, 1097). Therefore in the case of some languages they were replaced by native, Slavic names corresponding to particular activities or seasonal features occurring during the year. This is the case with Czech, Ukrainian and Croatian. Also, Polish month names are basically Slavic, but some are Julian. For example, the Polish name for March is "marzec" while for May it is "maj". At the same time historical and ethnographic data shows that even in the countries using Julian names at present there is a rich, older underlying layer of purely Slavic terminology. In some calendars Slavic month names, while etymologically the same, do not correspond to each other. For example, "kwiecień" in Polish is April, while "květen" in Czech is May. The Macedonian traditional name for October is "листопад" and in Polish and Czech "listopad" is the month of November. Also, Slovene "prosinec" for January is the same as December in Czech, the Prekmurian Slovenian dialect and Croatian (Prosinac) (Brückner 1980: 347). There is no point in listing all such discrepancies, but suffice to say that they are numerous across the entire Slavdom (see Tables 3A, 3B and 3C).

TABLE 3A - MONTH NAMES IN SLAVIC LANGUAGES; EASTERN SLAVIC

	OLD CHURCH SLAVONIC	OLD & REGIONAL RUSSIAN	BELORUSSIAN	UKRAINIAN
JANUARY	ПРОСИНИЦЪ	ПРОСИНЕЦ, ЛЮТОВЕЙ, СЕЧЕНЬ	СТУДЕНЬ, стычань, сечень	СІЧЕНЬ, студень, просинець, сніговик, тріскун, вогневик, льодовик, щипун, сніжень, лютовій
FEBRUARY	СѢЧЬНЬ, сухъ	ЛЮТЕНЬ, СУХИЙ	ЛЮТЫ	ЛЮТИЙ, крутень, зимобор, криводоріг, казибрід, межень
MARCH	БРѢЗОКЪ	БЕРЕЗОЗОЛ	САКАВІК	БЕРЕЗЕНЬ
APRIL		ЦВЕТЕНЬ	КРСАВІК, кветень	КВІТЕНЬ
MAY		ТРАВЕНЬ, ТРАВЕНЫЙ	МАЙ	ТРАВЕНЬ
JUNE	ИЗОК чьрвьцъ	ИЗОК, ЧЕРВЕНЬ, червец	ЧЭРВЕНЬ	ЧЕРВЕНЬ, кресень, гедзень, червивий місяць, гнилець, ізок
JULY		ЧЕРВЕН	ЛІПЕНЬ	ЛИПЕНЬ,
AUGUST		ЗАРЕВ, СЕРПЕНЬ	ЖНІВЕНЬ	СЕРПЕНЬ, жнивець
SEPTEMBER	РЮИНЪ	РЮЕН, РЕВУН, ВЕРЕСЕНЬ	ВЕРАСЕНЬ	ВЕРЕСЕНЬ, ревун, зарев
OCTOBER		РЮЕН, ЛИСТОПАД	КАСТРЫЧНІК, листопад, паздерник	ЖОВТЕНЬ, листопадник, зазимник, паздерник
NOVEMBER	ГРУДЪНЬ	ГРУДЕНЬ, овсень	ЛІСТАПАД	ЛИСТОПАД, грудкотрус, листопадець
DECEMBER		СТУДЕНЫЙ	СНЕЖАНЬ, грудзень, прасинець	ХРУДЕНЬ,

TABLE 3B - MONTH NAMES IN SLAVIC LANGUAGES; SOUTHERN SLAVIC

	BULGARIAN old & traditional	CROATIAN	MACEDONIAN	SERBIAN old & traditional	SLOVENE old	PREKMURIAN dialect/language
JANUARY	ГОЛЯМ СЕЧКО, ПРОСИНЕЦ, СТУДЕНИ	SIJEČANJ	КОЛОЖЕГ	КОЛОЖЕГ, сечењ, сечањ	PROSINEC lednik, snežnik, sečén	SEČÉN
FEBRUARY	МАЛЪК СЕЧКО, СЪЧЕНЪ, сух	VELJAČA, sušac	СЕЧКО	СЕЧКО	SVEČAN, sečan, sičan	SÜŠEC, süca
MARCH	СУХИЙ	OŽUJAK	ЦУТАР	СУХИ, дерикожа, брезен, летник,	SUŠEC, brezen, breznik	MALI TRAVEN
APRIL	БРЯЗОК, БРЕЗОВ	TRAVANJ	ТРЕВЕН, ТРЕВЕ	ТРАВАЊ, лежитрава	MALI TRAVEN, travnjek	VELIKI TRAVEN
MAY	ТЪРВЕН,	SVIBANJ, rožnjak	КОСАР	ЦВЕТАЊ, цветаљ, цветник	VELIKI TRAVEN	RISÁLŠČEK
JUNE	ИЗОК, ЧЪРВЕНИК	LIPANJ	ЖИТАР	ТРЕШЊАР, црвеник	ROŽNIK	IVÁNŠČEK
JULY	ЧЪРВЕНЪ, СЪРПЕН, ЖЪТВАР	SRPANJ, srpen	ЗЛАТЕЦ, црвеник	СРПАЊ, жртван, черен	MALI SRPAN	JAKOPŠČEK
AUGUST	ОРАЧ, ЗАРЕЕВ	KOLOVOZ osemnik	ЖЕТВАР	КОЛОВОЗ, гумник	VELIKI SRPAN	MÉŠNJEK
SEPTEMBER	РУЕН, РУЙ	RUJAN, rujen	ГРОЗДОБЕР	РУЈЕН, гроздобер	KIMAVAC	MIHALŠČEK
OCTOBER	ЛИСТОПАД	LISTOPAD	ЛИСТОПАД	ЛИСТОПАД, шумопад	VINOTOK	VSESVÉŠČEK
NOVEMBER	ГРУДЕН	STUDENI	СТУДЕН	ГРУДЕН, студени	LISTOPAD	ANDREJŠČEK
DECEMBER	СНЕГОВЕЙ	PROSINAC, gruden	СНЕЖНИК	ПРОСИНАЦ, коледар	GRUDEN	PROSINEC

TABLE 3C - MONTH NAMES IN SLAVIC LANGUAGES; WESTERN SLAVIC

	CZECH	KASHUBIAN	POLABIAN (extinct)	POLISH	SLOVAK old & traditional	SORBIAN (LOWER) traditional	SORBIAN (UPPER) traditional
JANUARY	LEDEN	STËCZNIK, sticzéń	LEDE MÔN	STYCZEŃ tyczeń, godnik, ledeń	VELKÝ SEČEN leden	WEZYMSKI	WULKI RÓŽK
FEBRUARY	ÚNOR	GROMICZNIK, wtóran, luti	SWĚCKOWNY	LUTY sieczeń, strąpacz	MALÝ SEČEN	SWĚCKOWNY	MAŁY RÓŽK
MARCH	BŘEZEN	STRËMIANNIK strumian, marc	ZÜR MÔN	MARZEC Brzezień, brzezeń	BREZON	PÓZYMSKI nalětnik	NALĚTNIK
APRIL	DUBEN	ŁŻËKWIÔT, kwietnik, kwiecéń	CHOIDË MÔN	KWIECIEŃ łżykwiat, dębień	DUBON	JATŠOWNIK nalětny	JUTROWNIK
MAY	KVĚTEN	MÔJ, gòran, maj	LAISTË MÔN	MAJ trawień	MAG, traveň	ROZHELONY rožownik	RÓŽOWNIK
JUNE	ČERVEN	CZERWIŃC, jigrzan, czerwc	PĄTJUSTË MÔN	CZERWIEC ugornik	TURÝČI, LIPEŇ	SMAŽKI smažnik	SMAŽNIK
JULY	ČERVENEC	LËPINC miodownik, reżan, lipc	ZEMINIK	LIPIEC	LIPEŇ, KLASEŇ	ŽNJOJSKI	PRAŽNIK
AUGUST	SRPEN	ZËLNIK, zelan, sërpiń	HAI MÔN	SIERPIEŃ	SRPEŇ	JACMJEŃSKI	ŽNJEC
SEPTEMBER	ZÁŘI vřesen	SËWNIK, sewan, wrzesnik, wrzeséń	PRENJĂ ZAIMA MÔN jisin môn	WRZESIEŃ	JASEŇ, HRUDEŇ, MALI RUJEN,	POŽNJENC	POŽNJENC
OCTOBER	ŘIJEN	RUJAN pajicznik, paklepnik, pazdzérznik	WAINJĂ MÔN	PAŹDZIERNIK	SEVEŇ, RJGEN, VELKÝ RUJEN	WINSKI winowc	WINOWC
NOVEMBER	LISTOPAD hruden	LËSTOPADNIK smùtan, lëstopad	ZAIMĂ MÔN	LISTOPAD grudzień	LYSTOPAD, STUDEŇ	MŁOŚNY	NAZYMNIK listopad
DECEMBER	PROSINEC	GÒDNIK gòdan, grëdzéń, prosimec	TRUBNË MÔN	GRUDZIEŃ prosień, prosiniec	PRASYNEC MRAZEŇ	ZYMSKI	HODOWNIK

Please note: SILESIAN dialect month names are basically like in Polish, with some variation in spelling and pronunciation. Therefore, it is not included in the Table.

There is no written evidence for the division of a year into months among the pre-Christian Slavs or from the pre-migration period of 5th-6th centuries C.E. Nonetheless, it seems to be very likely that the Slavs could have a form of closely related, month-like division of the year. It appears that such names for particular periods of time were associated with various agricultural and seasonal practices and climatic conditions. Their echo is found today in modern folk festivals, some of which were replaced or incorporated into the Christian celebrations and feasts. This is common not only among the Indo-European people but also across the entire World. For example, in the case of Slavdom some summer months have names associated with harvest and derived from the word for sickle, such as the Slovenian "mali srpan" and "veliki srpan", for July and August respectively. August in Croatian is said as "Srpanj", in Czech it is "srpen" and in Ukrainian it is "серпень". Also, the terms "жетвар (zhetvar)" in Serbian for July and "житвень (zhitvienь)" in some regional Russian dialects for August are cognate.

The reconstruction of a month-like division of the year among the pre-Christian Slavs is a challenging task. The biggest obstacle is the simple fact that nearly all such names recorded come from or after the 11th century, and this is five to six hundred years after the Migration Period. Although such an analysis poses serious difficulties, it is not an impossible enterprise. Using a comparative methodology, the basic Slavic division of the year can be reconstructed with a reasonable probability or it can at least create a framework for further study. This will involve a comparison of all known month names used by the modern Slavs as well as the forms recorded in ethnographic and historical sources. This will allow any archaic, regional and historical variations and differences to be sorted out. Special attention will be paid to those names that appear in three different branches of Slavic languages (Eastern, Southern and Western). It seems to be reasonable to assume that if all three branches of Slavic languages retain the same or similar names, there is a strong possibility that the terms pre-date not only Christianisation but may have Pre-Migration common roots. The following analysis resulted in isolating 14 month names that meet these criteria. For clearer distribution of the following month names across the year (see Table 4).

TABLE 4 – The distribution of Slavic month names over the year.

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OKT	NOV	DEC	JAN
Sječeň	X	X											
Ledeň	X												
Brezeň			X	X									
Květeň				X	X								
Traveň				X	X								
Červeň						X	X						
Lipěň							X						
Serpeň							X	X					
Rujan									X	X			
Vreseň									X				
Listopad										X	X		
Studeň	X										X	X	X
Gruděň										X	X	X	
Prosinec												X	X

1. Sječeň - "сѣчнь (sječň)" in OCS. The name derives from the proto-Slavic "*sěča" - cutting, cutting trees (Boryś, 2006:585). In OCS and Old Russia it was the name used for February and January respectively. The term is common Slavic and appears among the Western Slavs in the Slovak dialect as "velký sečeň" for January and "malý sečeň" for February. Among the Eastern Slavs we also have the Ukrainian "сїчень (sičeň)", and in Byelorussian dialect "сечень (sečeň)" for January. In Southern Slavdom we have Croatian "Siječanj", Slovene "sečén", Bulgarian "голам сечко (golam sečko)" and regional Serbian "сечењ (sečeň)" for January. At the same time, in Serbian and Macedonian "сечко (sečko)", and Bulgarian "малък сечко (malk sečko)" denotes the month of February (Boryś, 2006:585; Brückner, 1985:335). Only in Polish do we have "styczeń" for January. However, it has been shown by Wiesław Boryś that, by a weird association with "tyka" - the pole, "sieczeń" turned into "styczeń". This is supported by the name "sieczeń" having been recorded in 15th century Poland to denote February (Boryś 2006: 585).

2. "Ledeň" - from OCS „лѣдъ (ljed)" - literally ice (Boryś 2006: 290). "Leden" is an official name for January in Czech. It refers to the first month of the year in the form "ledeň, leden" in old regional Slovak, "ledeń" in old regional Polish and as "lede môn" in Polabian. It appeared as "льодовик - (lodovik)" in folk, regional Ukrainian, and "lednik" in regional Slovene dialect.

3. "Brezeň" - from the proto-Slavic "*berza" - birch tree, denoting the period when birches become green (Miklosich 1867: 2). In Czech "březen" and in Slovak "brezon" is the name for March, and it also appears in Old Polish in the form "brzezień" (*Staropolska Online*, 2015), as well as "березень (berezeň)" in Ukrainian. It denotes April in regional and old Russian "березен, березозол (berezeň, berezozol)"; and in Old Bulgarian in the form "брезов, брязок (bryezov, bryazok)" (Šaur 1973: 95).

4. "Květeň" - from proto-Slavic "květъ" - the blossom, flower, and "květьnь" means blossoming time. In Czech "květen" is the name for month of May. In Ukrainian "квітень (kviteň)", in regional Russian "цветень (cvěteň)", and in Polish "kwiecień" all refer to April. This term also appears among the Southern Slavs where we have the Serbian "цветањ (cvetaň)" and regional Bulgarian "цветенъ (cveten)" for May (Boryś 2006: 278).

5. "Traveň" – from OCS "травъа (trava)" – grass, hence the name "traveň", denotes a period of grass growing. Among the Western Slavs the name "traveň" only appears in Slovak in some 19th century calendars denoting May. In Old Russian - "травный (travnyj)", Ukrainian and Byelorussian - "травень (traveň)", and in regional Bulgarian - "тръвен (trъven)" - all refer to May. At the same time in traditional Slovenian we have "mali traven" for April and "veliki traven" for May. In Croatian "travnj", Serbian "травењ (travnj)", and Macedonian "тревен (treven)" all denote April (Gusev 1978: 137–138).

6. "Červeň" – from OCS "чръвъ (červ)" is a general name for insects, and insect larvae. It may particularly refer to Polish cochineal (*Porphyrophora polonica*) which was extracted for obtaining red and crimson dye (Brückner 1985: 334). The month names deriving from "červ" are very common across the entire Slavdom. Among the Western Slavs we find Polish "czerwiec", Kashubian "czervinc, czerwc" and Czech "červen" for June but also Czech "červenec" for July. Ukrainian "червень (červeň)" and Byelorussian "чэрвень (červeň)"

also refer to June, while old regional Russian "червен (červen)" denoted July (Boryś 2006: 96, Karmazin 1818). At the same time in regional traditional Bulgarian we have "чървеник (červenik)" and "чървенъ (červen)" for June and July respectively. The term "изок (izok)" for June recorded in OCS sources is cognate with "červ" (Vasmer 1987: II:123).

7. "Lipěň" – from proto-Slavic "lipa" - the linden tree. In temperate climates linden trees blossom around July and the end of June. Therefore, we have "lipiec" for July in Polish, though the form "lipień" was also recorded. In Ukrainian and Byelorussian the month of July is also called "липень (lipień)" and "(ліпень (lipień)" respectively, and we also have the Croatian "lipanj" for July (Boryś 2006: 288).

8. "Serpeň" - This was already partly described above. Recalling it again, the name derives from OCS "срьпъ (sьrpь)"- the sickle - and denotes a time of harvest (Boryś 2006: 547). In Western Slavic Czech "srpen" and in Polish "sierpień" are the names for August. This is also the case for Eastern Slavic Ukrainian "серпень (srpeň)". The term is also used among the Southern Slavs, where we have Slovenian "mali srpan" and "veliki srpan" for July and August respectively, while "Srpanj" in Croatian, "српањ (srpanj)" in Serbian and "сърпен (srpen)" in Bulgarian dialect all denote July. Also cognate are the terms "жетвар (zhetvar)" in Serbian for July, "жнівень (žniviень)" in Byelorussian for August, and "žnjenc" in Upper Sorbian, also for August.

9. "Rujan" – from the proto-Slavic "ruja" – meaning animal breeding time, but usually applied to the characteristic mating calls of deer (Boryś 2006: 526–527). In Czech "říjen", in regional Slovak "velký rujen", and in Kashubian "rujan" are the names for October, while in regional Slovak "rujen" itself denotes September. In Old Russian the terms "рюен, ревун (rujen, revun)" both denote September (Karamzin 1818: V.1.III). Also, in Croatian "rujan", in Serbian "рујан (rujan)" and regional Old Bulgarian "руйен, руй (rujen, ruj)" are the names for September.

10. "Vreseň" – from OCS "врѣсьнь (vrjeśň)", comes from the purple heather plant "вѣрѣскъ (vjerjesk)", also known as the common heather, ling, or simply as heather (Miklosich 1867: 6). The name "wrzesień" in Polish, "wrześéń" in Kashubian and a word recorded as "vřesen" in Old Czech, are all terms for September. It was also "вересень - vjerjeseň" in Old Russian, Ukrainian and Ruthenian, and "вересань – (vjerjesaň)" in Byelorussian (Miklosich 1867: 6). Records also exist in Southern Slavdom in an old Croatian dialect where "vreseň" is used for September (Šaur 1973: 97).

11. "Listopad" - literally "time of falling leaves, foliage" - appears in Czech and Polish as the name for November. Similarly it denotes the same month in Byelorussian and Ukrainian, but is also used in some regional Russian dialects for October. In Southern Slavic languages the same term is used for November in Slovene, and for October in Croatian, Bulgarian and Macedonian.

12. "Studeň" – from the proto-Slavic "студ (stud)", means cold or a chill (Boryś 2006: 585). In the form "студень (studeň)" it denominates January in Byelorussian and in regional, traditional Ukrainian. It was also recorded in traditional, old Russian in the

form of "студень, студеный (studeň, studenyj)" denoting December. In Western Slavdom it appears only as "studeň" for November in regional Slovak. However, the term is very common in Southern Slavic languages. It took the form of "студени, студени (studeni, studen)" in Bulgarian for January. It denotes November as "studeni" in Croatian, as "студен (studen)" in Macedonian and "студени (studeni)" in regional Serbian (Miklosich 1867: 16).

13. "Gruděň" - from the proto-Slavic "grudьnь", comes from "gruda" – a frozen bit or clump of soil. The name reflects frosty winter conditions. "Grudzień" is the name for December in Polish and so does "grëdzéń" in Kashubian. In some Slovak dialects, the form "hrudeň" has been used for October, which seems rather odd. In Old Russian "грудень (gruděň)", like in OCS "грудѣнь (gruděň)" denotes November. The name appears in Ukrainian dialects in the form of "хгрудень (hruděň)" for both November and December, and in Byelorussian as "грудзень (grudzěň)" for December. We also have this month name in Bulgarian and Serbian "груден (gruden)" for November, and in Croatian and Slovene dialects "gruden" for December (Boryś 2006: 182).

14. "Prosinec" – appears in various forms, but all similar to the OCS "просиницъ (prosinic)". Examples include the Czech "prosinec" and Slovak "prasinec". The word appears also in Polish dialects as "prosiniec, prosiń". In regional Russian we have "просинець (prosinec)", regional Byelorussian "прасинець (prasinec)", Ukrainian dialects "просинець (prosinec)", Slovenian and its Prekmurian dialect "prosinec", Croatian "prosinac", and Serbian and Bulgarian "просинац (prosinac)". The name refers to the months of either December or January. Polish linguist and historian Aleksander Brückner derived the name from "proso" - millet or "prosię" – piglet, from OCS "прасе (prasě)", and linked it with the winter solstice feast (Brückner 1985: 335). This link is however doubtful. The name most likely derives from the OCS word "просить (prosit)" - meaning to plea, a pleading prayer, or offering. This claim is supported by the name of December in the extinct Polabian language - "trebně môn". The word "trebně" derives from the OCS "тръба (trieba)", a rite of pleading offerings, sacrifice (Rybakov 1981: 274–275; Gardiner 1984: 175). It is therefore associated with offerings to gods or deities (possibly solar) during the winter solstice festivals. The notion is also supported by the usage of term "Tribě" by the Polabians to denote Christmas (Polański 1967: 151). This evidence is important as Polabian Slavs lived in isolation from other Slavs for centuries and no doubt their vocabulary retained many old Slavic words. The usage of this term for December by the Slovincians, an extinct branch of Kashubians, also points towards this explanation. It appears that in the case of the Slovincians, the original "prosinec" changed to "prosimec" through a change of the root to "prosim" - meaning plea.

From the evidence presented, it is clear that within Slavdom at least 14 month-like periods have mostly the same or similar names. Therefore, as those 14 appear in all three branches of Slavdom, they must have derived from the same, common Slavic, pre-migration traditions. It can again be clearly seen here that the names arose from agricultural activities and natural phenomena. Table 4 shows the distribution of these 14 month-like periods against the modern Latin-based calendar. Despite the fact that the different names were not always applied to exactly the same months, the table shows a remarkable consistency in practically all cases where particular names refer to two adjoining months. This can be easily attributed to the fact that they were recorded at least 500 years after the Migration Period, and the different geographical and climatic conditions various Slavic people found themselves in.

The list in Table 4 omits a month called "Ljutyj" which exists in Western and Eastern Slavic languages, but is absent among the Southern Slavs. It derives from the OCS "лютъ (ljut)" – meaning cruel, terrible, wild - but also in some contexts sad or cold. The term perfectly fits Eastern and Central European conditions in February. The term is present in Eastern and Western Slavdom, where we have "Luty" as the name for February in Polish, "luti" in Kashubian, "лютїй (liutij)" in Ukrainian and "люты (ljuty)" in Byelorussian. Also, it has been recorded as referring to January and February in Russian folklore and proverbs in the forms "лютовей (lutověj)", "лютень (luteň)" and "лютой (lutoj)" (Ryzhenkov 1991; Šaur 1973: 99). The name is absent in Southern Slavdom, while February and March appear in Old Bulgarian and certain dialects as "сух, сухи, сухий (such, sukhi, sukhij)", and "сухи (sukhi)" in Serbian for March. For February we have "sušac" in Old Croatian, and "süšec, süca" in the Prekmurian dialect of Slovenian. It was also recorded as "сухъ – (suh)" in OCS denoting February (Šaur 1973: 99). As the term does not appear in Eastern Slavic languages the OCS record appears to be of Southern Slavic origin. This could be possibly as a consequence of different climatic conditions in the Balkans.

The Lunar and Solar Year Issue

As already demonstrated in this work, the ancient Slavs recognised and celebrated Equinoxes and Solstices and reckoned their years from the Vernal Equinox. At the same time they observed lunar cycles and counted their months accordingly. They undoubtedly recognised a discrepancy between the Lunar and Solar years, and like all other human societies across the globe they had to somehow deal with it. For example, early allusions to a lunisolar calendar with intercalated months are found in hymns from the Rig Veda, dating from the second millennium B.C.E. Later Vedic sources provide information about a five-year lunisolar calendar which coordinated solar years with synodic and sidereal lunar months (Seidelmann 2006: 595). In the case of the Slavs however, there is no evidence to link the four significant annual astronomical events with the month-like units of time associated mainly with peoples' farming, husbandry and other domestic activities. Therefore, the only reasonable conclusion seems to be that the Slavs perceived those phenomena somehow in parallel, and the months and astronomical seasons did not correspond to each other.

It has to be acknowledged that the following reconstruction is hypothetical. Nonetheless, we can postulate that their year started on the first New Moon after the Vernal Equinox in late March and it was called "brezeň" as it is associated with birch trees, which develop their buds in the second half of March, or in early April. This applies to the region which was the Slavonic cradle, that is, the area corresponding to modern Western Ukraine and possibly south-eastern Poland. This region was located north of the Carpathian slopes and south of the heavily forested and swampy region of Polesye, and is roughly the area between the 47th and 52nd parallels. As has been demonstrated, the Slavs conceptually and linguistically associated the month with the Moon. Moreover, it is worth noting that although the now-extinct Polabian Slavs used the term "mon", from the German "monat", to denote a month, the term "citěr nidel'ă" - four weeks, was also used in reference to the month (Polański 1967: 46).

After twelve lunar months the Slavs were faced with about 10 odd days each year before the Vernal Equinox. This was a time of uncertainty, and perceived as a bad time, however every three years they could fit in an extra month before the Equinox. It is therefore completely plausible that they did so, resulting in the addition of a 13th month. This hypothesis is in line with the findings of the late Czech scholar Vladimir Šaur, and the Russian Victor Gusev, albeit Gusev postulated an irregular intercalation of the additional month (Šaur 1973: 99–100; Gusev 1978: 140-141).

Postulated distribution of months within annual lunar cycles

1.	Brezeň	- late March/ early April
2.	Květeň	- April/early May
3.	Traveň	- May/early June
4.	Červeň	- June/early July
5.	Lipěň	- July/early August
6.	Serpeň	- August/early September
7.	Rujan/Vreseň	- September/early October. Both interchangeable terms were likely to emerge prior to the Slavic Migration Period.
8.	Listopad	- October/early November
9.	Gruděň/ Studeň	- November/early December. Both interchangeable terms very likely emerged prior to the Slavic Migration Period.
10.	Prosinec	- December/early January
11.	Sječeň	- January/early February
12/ 13.	Ledeň/Luty & possibly Suh	- February, early and mid March. Possibly all three terms were used if an extra month had to be inserted. It may reflect the evolution of a different, regional or tribal way to intercalate an extra month well before the Slavic Migration Period.

Many other names listed in Tables 3A, 3B and 3C show no common Slavic origin and it can be assumed that they emerged independently in a local or regional context. Their origin and etymology will not be addressed in this work.

The Fortnight and the Week

The Moon phases and cycle are so obvious that again it would be surprising if they would not be used for time measurement. It appears that among most Indo-European people, lunar months were divided into 14 day or 15 night periods. Here, comparative Indo-European studies again come in handy. In ancient Vedic India the "half moon" was used as basic unit of time, and in Sanskrit the term „pakṣa" denotes a fortnight (AHD, 2011). Among the ancient Greeks the days of "half moon" had no day names but were numbered. For example the 13th day after the "New Moon" was called the "13th day of the waxing moon" (Hesiod 11.780-781). The Roman system differed from that of the Greeks as it recognised "calends" - the first day of the month, "nones" and "ides". The term "ides" derives from "iduare" meaning - to divide. The other days were simply numbered. Ides

fell on the middle of the month which indicates that a fortnightly system of division was originally present (Aveni 1989: 104). According to Tacitus, the "Thing", or Germanic tribal assembly, met either around the New or the Full Moon, unless the meeting was an urgent one (Tacitus, XI). This too suggests a period of fourteen nights as a basic unit of time measurement. It is worth noting that the term fortnight in modern English derives from the phrase "fourteen nights" and appears to be an echo of an ancient Germanic way of time reckoning (Aveni 1989: 102). There is evidence that at least some Celtic people used the fortnight as a measurement of passing time (Holford-Strevens 2005: 1) and there is a term - "pythefnos" - in Welsh meaning fifteen nights, also denoting a fortnight (King 2000: 88). Therefore, taking into consideration this two week/half moon system forming the basis of the division of months among the ancient Indians, Greeks, Romans, Germanic people and Celts, it is reasonable to assume that a similar fortnightly system existed among the ancient Slavs. The Slavs counted time from the New Moon, and recognized four of its phases. The first was known as "nów" in Polish, "nov" in Czech and Slovak, and "nüvo" in Polabian. All meant a New Moon though in practical terms applied to the moment where part of the Moon is visible for the first time, being roughly three days after its disappearance from the sky (SSS 1961: I: 261; Polański 1967: 104). The term derives from the proto-Slavic "novъ" - literally meaning new (Moon) (Boryś 2006: 367). Other cognate names were used: "новолуние (novolunje)" in Russian; "молодик (molodik)" in Ukrainian; "маладзік (mladzik)" - in Byelorussian; "новолуние (novolunje)" in Bulgarian; "Mladi mjesec" – young Moon, in Croatian and "mladi mesec" - young Moon, in Slovene (Moszyński 1968: 902-908). The fortnight period ended at the Full Moon. It is called "pełnia" in Polish, from "pełny" – meaning full; from OCS "плънъ (plъnъ)"; and Russian "полнолуние (polʹnolʹunie)". It is worth noting that the Sanskrit term "pūrṇimā" meant day of the full moon, which derives from the proto-Indo-European suffixed root "*pl̥no-" also meaning full (Gardener 1984: 166; SSS 1961: I:261; AHD 2011). We cannot be certain what day names were used for the half Moon period. By analogy with other Indo-European languages we can assume that they were numbered.

As there are four phases of the Moon, a further division into weeks seems to be a logical conclusion. Hebdomadism, the sacredness and uniqueness of the number "7", was well embodied not only into Sumerian and Babylonian cultures, but no doubt in the cultures of all prehistoric people. This is no surprise as people sought to associate the seven celestial objects visible with the naked eye (Sun, Moon, Venus, Mars, Jupiter, Saturn and Mercury) and which do not follow the movement of other stars in the Sky, with the seven day quarters of the lunar cycle. Among Indo-European speakers, the English term "week" derives from the Proto-Germanic "wikon", most likely originally denoting a turning, succession or series (Hoad 1986: 536). An obsolete English term - "senninght" - denotes a seven day period and must have been an ancient description similar to the Old English "seofon nihta", meaning seven nights (Holford-Strevens, 2005:1). In modern Welsh a similar word - "wythnos" - means a week, or literally an eight-night period, since it started and ended with a night bordering seven days (King 2000: 99). In the case of Germanic and Celtic people however, although they must have recognised lunar quarters there is no clear evidence for a weekly 7 day counting system.

In the case of Slavs we encounter a similar problem of a lack of hard data. There are basically three terms used for naming a week (See Table 5). Most common in Slavic languages is "týždeň" (in Upper Sorbian) or very similar terms in other languages. It derives from the

OCS “тѣдьнъ (tjedn)” - a week, which is a word most likely comprised of two parts: from the proto-Slavic “тъјь (tej)” - this, and “дьпь (děň)” - day, with the meaning of “this same day” (after the passing of a week) (Boryś 2006: 657, 588). It appears mainly in Western Slavic languages, but also in Croatian and Slovenian. Additionally, the Byelorussians, Ukrainians and Ruthenians also use it. The second term appeared in OCS as “нєдѣлꙗ (nedjelja)”. It is the same as the name for Sunday in practically all Slavic languages and means “a day of no work”. It appears in all branches of Slavic languages. The third term recorded in OCS is “сєдъми́ца (sedmica)”, which derives from the word for seven “сєдъмъ (sedm)”. This obviously refers to the seven days of the week, and evidently does not require further explanation. It is used at present by the Bulgarians, Macedonians and Serbs.

TABLE 5 - Slavic names for the week.

Eastern Slavic

	OCS	Belorussian	Russian	Ruthenian	Ukrainian
Week	Тѣдьнъ, Сєдъми́ца	Тыдзень	Неде́ля	Тыждень	Ти́ждень

Southern Slavic

	Bulgarian	Croatian	Macedonian	Serbian	Slovene
Week	Седмица	Tjedan	Седмица, недела	Седмица, недеља	Téden

Western Slavic

	Czech	Kashubian	Polish	Polabian	Silesian	Slovak	Lower Sorbian	Upper Sorbian
Week	týden	tidzéń	tydzień, niedziela	nidel’ă	tydźyń	týždeň	týždeń	tydźeń, njedźela

As it has been shown, all three terms - “tydeň”, “nedjela” and “sedmica” - were widely used by Slavs. Each of them could have been a common Slavic word for a week, and there are arguments for and against each of them, albeit all weak. “Tydeň” as used by all branches of Slavdom looks like a very good candidate. Its usage in Byelorussian, Ukrainian and Ruthenian may however be a borrowing from Polish, which had a strong cultural influence on these languages. Hence, this issue requires further investigation. Similarly “nedjelja” has been used and is still in use by all branches of Slavdom, and is still commonly applied to both Sunday and a week. This appears to be conceptually cognate to the meaning of the term “tydeň” - this same day (after the passing of the week). The strongest argument for the name “nedjelja” being used as a common Slavic name for a week comes from North-Eastern Germany. The term “nidel’ă” existed in the now extinct Polabian language, and denoted a week as well as Sunday (Polański 1967: 101). This is important as Polabian Slavs were for a long time culturally, linguistically and politically separated from the rest of Slavdom. On the other hand, it can be argued that this name for Sunday and Week entered Slavic languages together with the introduction of Christianity via Cyril and Methodius’ mission (to be discussed with day names), and was somehow also adopted by the Polabians. Moreover, it has been suggested that it is a calque from the old Greek “ἀ-πρακτος ήμέρα (a-praktos imera)” – meaning a no working, idle day (Trubachev 1997: V.24:116). Baltic examples do not help either. Although in Latvian “nedēļa” and in Latgalian “nedeļa” both denote a week, it’s a clear borrowing from Slavic as in Old

Prussian it was called "sawayte, savaite" (see Table 6). So, here again the case is not clear. As for "sedmica", the argument for it being an original Slavic term arises from the fact that, as it appears, ancient Slavs only numbered week days, without giving them particular names. Therefore it would be logical to call a seven day period "sedmica". An argument against this however is that it is confined to the Southern Slavs. As for its appearance in OCS the author was unable to determine in what particular source it was used and from where geographically the term came from. On the other hand, this claim is supported by evidence from Sanskrit, where "saptaha" means the week, and it derives from the word "sapta" - seven (Monier-Williams 1899). It is evidently clear that it is cognate and conceptually related to the Slavic "sedmica". Whatever the case, logically, "sedmica" seems to be the most probable name. Nonetheless, uncertainty remains, and further evidence and research are needed to solve this puzzle.

TABLE 6 – Names of Slavic and Baltic weekdays.

Eastern Slavic

	Old Church Slavonic	Belorussian	Russian	Ruthenian or Rusyn	Ukrainian
Monday	понєдѣ́л҃ьникъ (ponedě́l҃ĭnikŭ)	панядзелак (panjadzielak)	понедельник (ponedel'nik)	понеді́лёк (ponedïljok)	понеді́лок (ponedilok)
Tuesday	въто́рьникъ (vŭtórĭnikŭ)	аўторак (aŭtorak)	вторник (vtornik)	віторок (vitorok)	вівторок (vivtorok)
Wednesday	Сре́да (sréda)	серада (sierada)	среда (sreda)	середа (sereda)	середа (sereda)
Thursday	чєтвръ́тъкъ (četvrĭ́tŭkŭ)	чацьвер (čac'vier)	четверг (chetverk)	четверь (cetver')	четвер (chetver)
Friday	пѧ́тъкъ (pę́tŭkŭ)	пятніца (pjatnica)	пятница (pyatnitsa)	пятніця (pjatnicja)	п'ятниця (p'jatnycja)
Saturday	сѫбо́та; собо́та (sǫbóta; sobóta)	сыбота (sybota)	суббота (subbota)	субота (subota)	субота (subota)
Sunday	нєдѣ́лꙗ (nedě́lja)	нядзеля (njadzielja)	воскресенье (voskresenye)	Неді́ля (nedïlja)	неділя (nedilya)

Southern Slavic

	Bulgarian	Croatian *	Macedonian	Prekmurian Slovene dialect	Serbian	Slovene
Monday	понеделник (ponedelnik)	ponedjeljak	понеделник (ponedelnik)	ponedeljek	понедељак (ponedeljak)	ponedeljek
Tuesday	вторник (vtornik)	utorak	вторник (vtornik)	tòrk	уторак (utorak)	torek
Wednesday	Сряда (srjada)	srijeda	среда (sreda)	sŕ̩da	среда (sreda)	sreda
Thursday	четвъртък (četvărtăk)	četvrtak	четврток (chetvrtok)	čètrtek	четвртак (četvrtak)	četrtek
Friday	Петък (petăk)	petak	петок (petok)	pétek	петак (petak)	petek
Saturday	Събота (săbota)	subota	сабота (sabota)	sobǫ́ta	субота (subota)	sobota
Sunday	Неделя (nedelja)	nedjelja	недела (nedela)	nedę́lja	недеља (nedelja)	nedelja

* Bosnian name days are the same like Croatian and are also written in Latin script

Western Slavic

	Czech	Kashubian	Polish	Polabian	Silesian	Slovak	Sorbian Lower	Sorbian Upper
Monday	pondělí	pòniedzôłk	poniedziałek	pěnideľă	pyńdźouek	pondelok	pónjeźele	póndźela
Tuesday	Úterý	wtórk	wtorek	töre	wtorek	utorok	wałtora	wutora
Wednesday	Středa	strzoda	środa	sredă	střoda	streda	srjoda	srjeda
Thursday	Čtvrtek	czwiôrtk	czwartek	perěndan	štwortek	štvrtok	stwórtk	štwórtk
Friday	Pátek	piątk	piątek	skǫpě	pjůntek	piatok	pětk	pjatk
Saturday	Sobota	sobòta	sobota	sübötă	sobota	sobota	sobota	sobota
Sunday	Neděle	niedzela	niedziela	nideľă	ńydźela	nedeľa	njeźela	njedźela

Baltic Languages

Weekdays	Latgalian	Latvian	Lithuanian	Old Prussian	Samogitian
Monday	pyrmūdīne	pirmdiena	Pirmadienis	ponadele	panedielis
Tuesday	ūtardīne	otrdiena	Antradienis	visasedis	oterninks
Wednesday	trešdīne	trešdiena	Trečiadienis	pusisavayte	sereda
Thursday	catūrtdīne	ceturtdiena	Ketvirtadienis	ketvirtiks	ketvergs
Friday	pīktdīne	piektdiena	Penktadienis	pentiks	pernīčė
Saturday	sastdīne	sestdiena	Šeštadienis	sabatika	sobata
Sunday	svātdīne	svētdiena	Sekmadienis	nadele	nedielės dėina

Days of the Week

In modern times the passage of days is obvious. A particular day starts after midnight, ends at midnight and comprises 24 hours. However, in the past it was not necessarily so. The Ancient Greeks reckoned the day from dawn to dusk, while the Romans counted them from dawn to dawn (Aveni 1989: 6). At the same time, according to Tacitus the Germanic people counted the passing days starting from nights, that is from dusk to dusk (Tacitus, *Germania*, XI). According to Julius Caesar, days were counted in this same fashion, that is from dusk to dusk, by the Celtic Gauls in the 1st Century B.C.E., (Julius Caesar VI.18). As for the Slavs, ethnographic data indicates that both dusk as well as dawn were marked with numerous superstitious rites, spells, pleas, rituals and associated sayings in most of Slavdom. In many regions, for example in Byelorussia, dusk was acknowledged by a short time of silence and inactivity. Shortly after, a fire or light was set up in a ritual manner. Sometimes it included a short prayer. Many of those traditions were mingled with Christian prayers, however pre-conversion, pagan traits are clearly recognisable under a thin Christian "varnish" (Moszyński 1968 II: 494-495). The idea of starting a day from dusk seems to be a reasonable solution for agrarian people who reckoned their time according to the lunar cycle. Therefore, it appears plausible that they share the same idea with the Germanic and Celtic people, and counted their days from dusk. After all, the Slavs lived in proximity to, for centuries were in contact with, and shared an Indo-European background and heritage with, the Germanic and Celtic people. The Polish and Czech custom of having a Christmas meal when the sun sets on Christmas Eve may be a reflection of this tradition transferred into a Christian celebration.

The seven or eight day week is a common feature in many cultures. The importance of the number 7, and the 7 day week, is usually attributed to the ancient Sumerians. The explanation given to its origins is generally attributed to the seven celestial objects which

are visible with the naked eye and do not move across the Sky conjointly with the other stars. They are also the brightest objects in the Northern Sky. We have no direct evidence for the 7 day week being used by the Sumerians, but it is known that the Akkaddian and Babylonian people borrowed many deities from their pantheon. At the same time, in the Babylonian calendar we have a direct association of various deities with these objects and with 7 weekdays. The origins of the 7 day week and their association with Sun, Moon and five visible planets can be traced to the ancient Sumerians. This Middle Eastern pattern of a 7 day week and their naming was transferred abroad, and adopted by the Romans through the Greeks and Phoenicians, and consequently introduced in the rest of the Europe. In late Antiquity and the Middle Ages it was usually adopted together with a conversion to Christianity. Weekdays have retained their celestially associated names in most of the Romance languages while Germanic people replaced some Roman deities with Germanic ones. So, Tiw replaced Mars in Tuesday, Wodan - Mercury in Wednesday, Thor - Iove/Jupiter in Thursday, the goddess Frigg - Venus in Friday. Sunday, Monday and Saturday preserved their Roman association with the Sun (Sol), Moon (Lunae) and Saturn (Saturnus) (See Table 7).

TABLE 7 – Some examples of celestial objects and deities, and their association with weekdays.

Celestial object	Babylonian deity	Roman deity	Roman name day	English day name
SUN	SAMASH	SOL	DIES SOLIS	SUNDAY
MOON	SIN	LUNA	DIES LUNAE	MONDAY
MARS	NERGAL	MARS	DIES MARTIS	TUESDAY
MERCURY	NABU	MERCURIUS	DIES MERCURII	WEDNESDAY
JUPITER	MARDUK	JOVE	DIES IOVIS	THURSDSAY
VENUS	ISHTAR	VENUS	DIES VENERIS	FRIDAY
SATURN	NINURTA	SATURNUS	DIES SATURNI	SATURDAY

All Slavic speaking countries also use a 7 day week, however their names follow a different pattern. In all modern Slavonic languages the day names are practically the same, but with some slight variation in pronunciation and spelling (see Table 6). Slavic day names are partly numerical and partly not. As a courtesy to the smallest Slavonic nation, that is the Sorbs of Lusatia in south-eastern Germany, who still preserve their native tongue, Upper Sorbian names and spellings will be used here. The first day in the Slavic week is Monday - "póndźela", literally meaning "first day after no activities". It is followed by Tuesday - "wutora" - the second day; Wednesday - "srjeda" - the middle day; Thursday - "štwórtk" - the fourth day"; Friday - "pjatk" - the fifth day; Saturday - "sobota" named after the Hebrew Sabbath; and Sunday - "njedźela" – 'a day of no activities" (Trofimowič 1974). Only in the Russian language is Sunday called "воскресенье (voskresenye)", meaning "resurrection", although prior to the 15th century the name "недѣля (nedjela)" was in common usage (Trubachev 1997: XXIV: 116–117). Also, there are two exceptions in the now extinct Polabian language: Thursday, instead of being called "the fourth" was "perěndan" (Polański & Sehnert 1967: 109; and Popowska-Taborska 1981: 07), meaning literally "day of Perun". It was definitely a calque from German, where Thursday is "Donnerstag", meaning the "day of Donar", referring to the continental Germanic war god. The Northern Polabian Slavs therefore substituted the Germanic god of thunder with their

own, namely Perun (Zaroff 1999: 59–60). Yet another Polabian exception is the name for Friday being "skǫpě" (Polański 2009: 29). In this particular case the etymology is uncertain. The name may derive from the Old Church Slavonic "скѫпъ (skǫąp)" - thrift, greed - and in the context of fasting on a Friday may mean „skimpy, scanty day" (Boryś 2006: 551). It is also worth noting that Slavic day naming is quite confused. This is in the sense that if the week starts from Monday, then Wednesday – "srjeda" (the middle day) - is not in the middle of the week. On the other hand if we start counting from Sunday, then Tuesday - "wutora" - meaning the second day, should be the third day of the week. We will explore this discrepancy in the following paragraph.

The evidently uniform pattern of day naming among all the Slavic people points to a single source of its origin, and we have one perfect explanation: that it was created and introduced to Slavdom by Cyril and Methodius in the 9th century during their Christianisation mission to Great Moravia (SSS 1967: III:293). In Old Church Slavonic the day names were as follows, starting from Monday: "понєдѣ́льникъ, вто́рьникъ, сре́да, чєтвръ́тъкъ, пѧ́тъкъ, сѫбо́та or собо́та and нєдѣ́лъ" (see Table 6). The Cyril-Methodius and Greek connection is also supported by the fact that Greek day names of that time were partly numerical. So, Monday "Δευτέρα (Deytéra)" means "the second", Tuesday "Τρίτη (Trítē)" - "the third", Wednesday "Τετάρτη (Tetártē)" - "the fourth" and Thursday "Πέμπτη (Pémptē)" "the fifth". As the modern week is usually counted from Monday, not Sunday like the early Christians did, we can see the numbering of days is shifted in Greek. It is worth noting that the same shifted pattern also exists in the Portuguese language. In Greek, Saturday is known as "Σάββατο (Sávvato)" - the Sabbath, which seems to have been passed on to Slavic languages in that form. In Greek Orthodox liturgy the week starts from Monday (Holford-Strevens, 2005: 72), hence the numerics of Slavic week day names generally follow this rule. There were no inclusions of latin-based day names in the Slavic week, as there are for example in the case of some Germanic speaking people. The only exception may be "srjeda" for Wednesday, which appears to be a translated calque from the German "Mittwoch", meaning "middle of the week", which in turn comes from the Old High German "mittawehha".

This Great Moravian link is also facilitated by studying the names of some weekdays in the Hungarian tongue. The nomadic Magyars, who were Ugro-Finnic speakers, arrived from the East and destroyed Great Moravia around the turn of the 10th century (SSS 1967: III: 276–277). In the modern Hungarian language there are three direct borrowings from the Slavic tongue for the names of weekdays. They are "szerda" for Wednesday, "csütörtök" for Thursday and "péntek" for Friday, while Tuesday is called "kedd", meaning "the second" in Hungarian. It seems that during the course of history wherever a large number of Slavic speakers were magyarised, these names were incorporated into the Hungarian language. All the above evidence strongly indicates that the naming of days of the week was devised and introduced to the Slavs during the Cyril-Methodius Christianisation mission in Moravia in the 9th century. It also indicates that after they were adopted in Great Moravia, during the course of time, they were introduced to and adopted by other Slavs, together with Christianity.

One more issue has to be addressed here, that being the case of the now extinct Polabian language. It belonged to the Western branch of Slavic languages and was spoken in what is now modern Germany, on the west bank of the Elbe River, roughly in the area between Hanover and Lüneburg. The area was inhabited by a tribe called Dřevjanie since

the 6th-7th centuries and came under Germanic domination around the turn of the 9th century, during the reign of Charlemagne. The Polabian language survived in the rural pockets in the area until the late 18th century (SSS 1961: V1: 394). Hence, it could be expected that it retained an archaic structure and many archaic words. It is surprising that, with the exception of Thursday and Friday, it used the same names for days as the rest of the Slavic languages use. For almost a millennium the Polabians were isolated from the rest of Slavdom, were under strong cultural German influence, and were Christianised by the German archbishopric of Hamburg-Bremen. Taking into consideration that Cyril and Methodius' mission in Great Moravia began in 862 there is only one possible explanation, albeit lacking any evidence. This is that the Christianisation of Dřevjanie was carried out by some unknown Slavic speaking missionaries. They were possibly the Sorbs or even the Czechs, who introduced that particular terminology.

The introduction of a basically numerical nomenclature strongly suggests that before the adoption of Christianity the Slavs had no assigned and specific names for days of the week. This notion fits well into an ancient Indo-European pattern given that in the Portuguese and Armenian languages, as well as in ancient India, particular days had no names but only numbers. There is no doubt that the pre-Christian Slavs numbered their days but there is no evidence that they used any special naming system. This claim is supported by the evidence from the Baltic languages. Among the Indo-European languages, the Baltic family of languages is the closest relative to the Slavonic family. In the Baltic languages we can observe a similar numerical pattern, with some variations (see Table 6). Lithuanian is a prime case, where from Monday to Sunday the days are referred to from the "first" to the "seventh day", while Latvian and Latgalian follow the same pattern with the exception that they called Sunday "svētdiena" and "svātdīne" respectively, which literally means "holy day" (Lalis 1915).

It can therefore be postulated that the pre-migration, common Slavic week was strictly numerical and similar to the case of Lithuanian, whereby each day was numbered from the first to the seventh day. Cyril and Methodius' mission systemised this and put it into the context of the Greco-Roman Christian calendar. At the same time they introduced names like "njedela" for Sunday, "ponedjelak" for Monday and "sobota" for Saturday. It cannot be excluded that some of these names were already in use locally in Great Moravia which had long contacts with Christianity and the German Empire. As explained earlier, the origin of term "srjeda" facilitates such a claim. We can assume that pre-Christian names for Tuesday, Thursday and Friday were "vtorek, vtornik" from the proto-Slavic "vъtorъ", the second; "četverk" from "četvrtъ", the fourth; and "pjyatek, pjatok" from "pętъ", the fifth. For the other days, by analogy we can only guess what the names may have been. So, Monday might have been "pervy" from "pŕvъ", the first. So, Tuesday would be "vtury, vtory", Wednesday "treti or tretjak", from "tretьjь", the third; Saturday "šesti, šestjak" from "šestъ", the sixth; and Sunday "sedmy, sedmak" from "sedmъ", the seventh. Remaining in a guessing mode we can postulate that in the same fashion as in the Baltic languages, the word for a day - "deň" from the proto-Slavic "dьnь" - might have been added. In such a case we could have days named like so: "pervy deň, vtory deň, treti deň, četverty deň, pjaty deň, šesti deň" and "sedmy deň" (Boryś 2006; Brückner 1980; Trubachev 1997).

There is no evidence for the standard 24 hour division of each day among the pre-Christian Slavs. Nonetheless, days were arbitrarily divided into the evident cycles of each day: "svit", from the proto-Slavic "*svьtěti" - to light; "*utro" - morning; "polъ dьnь" - half

a day, midday, noon; "*po polъ dьnьa" - afternoon; "*večerъ" - evening; "mr̥kati" - from getting dark, dusk; "*polъ noktь" - half the night, midnight; and so on (Boryś 2006: 477, 624, 742; Wędzki 2008: 228).

Conclusion

Summarising, as it has been shown there was no strictly formalised Slavic calendar in pre-Christian and pre-migration times. No doubt, the year was recognised as the biggest unit of time and it was based on observation of solstices and equinoxes, which divided each year into four seasons. The year began with the Vernal Equinox in March. In the pre-Migration period the Slavs called the year "lěto". The seasons were named "vesna" for Spring, although there is evidence that usage of the term "jar/jaro" did not completely fade away, while Summer shared its name with the year and was also called "lěto". Autumn and Winter were called "jeseň" and "zima" respectively. Also, the solar year was divided into months, named "měsac" and counted from one New Moon to the next, called "nov, novy měsac". To deal with the difference between the lunar and the solar year, the Slavs most likely added a 13th month before the Vernal Equinox every three years. The first month of the year, "brezeň", was probably counted from the first New Moon after the Vernal Equinox. The particular names of Slavic months and their hypothetical position in the modern calendar have been postulated and demonstrated in previous chapters ("The Months" and "The Lunar and Solar Year Issue".)

The Slavs used the half Moon, fortnightly periods as a basic unit of time measurement and almost certainly numbered the days without giving them particular names. There is strong indication based on other Indo-European examples, and especially the Baltic case, that they might have used a seven day week but the week days would have been numbered rather than being named. As there is currently no direct evidence for fortnights and weeks, as such the whole issue is in a hypothetical stage. The days were counted from dusk to dawn and themselves divided into simple, imprecise periods such as dawn, morning, midday, afternoon, evening, dusk, night and midnight.

The Modern calendar was introduced to the Slavs through the mission of St. Cyril and St. Methodius in the middle of the 9th century, being basically a Latin calendar of 12 months with the incorporation of Slavic month names. The 7 day week, if not introduced, was formalised and retained its Slavic linguistic character with some additions and modifications. That specific calendar, with slight modifications, spread across all of Slavdom together with Christianity. It remains in use today from the river Spree (Slavic Sprjeva) in Germany to the Pacific, and from the Baltic coast to the Mediterranean shores.

Author's Note

Once more, it has to be admitted that many findings of this research are not ultimately conclusive and merely show the most plausible explanations. It must also be acknowledged that this work does not cover the entire topic of Slavic measurement of time in pre-Christian or pre-migration periods. It is simply a preliminary attempt at addressing the issue, and an exercise for instigating further research and discussion concerning this

topic. It also has to be admitted that this work does not explore the association of Slavic seasonal festivals with ancient gods and deities in much depth. The author would therefore welcome any feedback and critical comments and can be contacted on zaroffr@gmail.com

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Abbreviations

AHD – The *American Heritage Dictionary of the English Language*
OCS – Old Church Slavonic language
RPC – *Russian Primary Chronicle* - Laurentian Text.
SSS – *Słownik Starożytności Słowiańskich*

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Merjenje časa pri starih Slovanih

Roman Zaroff

Avtor ugotavlja, da v predkrščanskem obdobju in pred selitvijo Slovani niso imeli strogo formaliziranega koledarja. Za največjo časovno enoto so šteli leto, temeljilo pa je na opazovanju solsticijev in enakonočij, ki so ga delila na štiri letne čase, se pravi pomlad, poletje, jesen in zimo. Pričelo se je s pomladnim enakonočjem v marcu. Solarno leto je bilo razdeljeno na mesece, ki so jih šteli od enega mlaja do drugega. Slovani so se z razliko med lunarnim in solarnim letom najverjetneje spoprijeli tako, da so vsako tretje leto pred pomladanskim enakonočjem dodali trinajsti mesec. *Brezeň*, prvi mesec v letu, so verjetno šteli od prvega mlaja po pomladanskem enakonočju. Prispevek predstavlja tudi hipotezo o slovanskih imenih za mesece in njihovo mesto v sodobnem koledarju. Zdi se, da so Slovani uporabili štirinajstdnevno obdobje prvega krajca kot osnovno enoto za merjenje časa. Prav tako je zelo verjetno, da je teden štel sedem dni, ti dnevi pa so bili samo oštevilčeni in niso imeli posebnih imen. Ker pa trenutno ni posebnih dokazov za štirinajstdnevna in tedenska obdobja, je ta domneva za zdaj zgolj hipotetična. Za dan so šteli čas od mraka do zore, razdeljen pa je bil na preprosta in ne natančno opredeljena obdobja: na svit, jutro, poldne, popoldne, večer, mrak, noč in polnoč.

Novi koledar je prišel k Slovanom sredi 9. stoletja preko sv. Cirila in Metoda. To je bil v bistvu latinski koledar z dvanajstimi meseci, vključil pa je slovanska poimenovanja za mesece. Uveden je bil sedemdnevni teden, ki je z nekaterimi dopolnitvami in spremembami obdržal svoj slovanski jezikovni značaj. S krščanstvom se je ta koledar, dopolnjen z manjšimi spremembami, razširil po celotnem slovanskem ozemlju.