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A Study of Color: Uses of לָבֵן in the Hebrew Bible

Carlos Santos Carretero Israel Institute of Biblical Studies/CEPOAT ORCID 0000-0002-6917-2535

Un estudio sobre el color: los usos de לָבֶן en la Biblia hebrea. – El estudio del color permite asumir la correlación (y no correlación) entre elementos psicológicos, sociales, simbólicos y el lenguaje en sí. Y la Biblia Hebrea no es una excepción. Considerando la magnitud de este proyecto, este artículo refleja la primera etapa de mi estudio sobre los colores en el texto masorético, específicamente en לבן, término traducido habitualmente como 'blanco', así como las diferentes formas verbales que contienen la raíz לבן. Si se compara לבן con el resto de términos de color, se llegará a la conclusión de que este es el más común de todos, haciendo que sea considerado un término primario y bien documentado. Pero dicha antigüedad es prueba de su opacidad. Una lectura detallada de לבן refuerza la idea de que la traducción de este término como 'blanco' es incompleta. De hecho se refiere a algo cuyo cromatismo es bajo pero brillante al mismo tiempo. Esta "vaga naturaleza" es lo que hace que לָבֶן esté tan presente en la Biblia Hebrea. Este artículo tiene como objetivo mostrar la percepción cromática de לָבֵנ.

PALABRAS CLAVE: Hebreo Bíblico; texto masorético; blanco; cromatismo; lenguas semíticas; contexto extraverbal; simbolismo.

The study of color allows us to make assumptions about the correlation (and no correlation) between psychological, social, symbolic elements and language itself. And the Hebrew Bible does not escape from this. With regard to the magnitude of this project, this paper reflects the first stage of my work studying colors in the Masoretic text, specifically on לבן, term commonly translated as 'white.' In addition, there are various verbal forms containing the verbal root לבן. If we compare לבן with the rest of terms of color, we find that this is the most common of them all, which makes it to be considered a primary and

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^{**} carlossc@eteachergroup.com

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widely documented term. But its antiquity is also proof of its opacity. A detailed reading of לָבֶן reinforces the idea that the translation of this term as 'white' is incomplete. It actually refers to something whose chromatism is low but bright at the same time. Such "vague nature" is what makes לָבֶן so present throughout the Hebrew Bible. This paper aims to provide a complete picture of the לֶבֶן in the Hebrew Bible, establishing the sensory chromatic perception of the term.

KEYWORDS: Biblical Hebrew; Masoretic Text; White; Chromatism; Semitic Languages; Extraverbal Context; Symbolism.

1. Introduction

Words cannot be understood in isolation or simply on the basis of derivatives and etymological elements. They are options part of language, different elements of a sentence which interact with each other. Regarding color terms, we are allowed to make assumptions whether or not there is some correlation between psychological, social and symbolic elements of language itself. And the Bible does not escape from this. Terms like טָּחֹר, אָדֹם or טָבָּרְ are easily identifiable as colors, but they also allow a variety of combinations of phrases applicable to different lexemes in different contexts. It is very important to be aware that these words provide information and clarify other terms, while some of them are subordinated to others in the hierarchy of a specific semantic field.

The study of the colors in Biblical Hebrew (particularly in the Masoretic Text)¹ is not new: since the second half of the last century, there have been several investigations from the diachronic² and synchronic perspectives.³ After a brief study about the presence of the root /lbn/ in different Semitic languages, my contribution will determine as far as possible the

Henceforth MT.

² R. Gradwohl, *Die Farben in Alten Testament: Eine Terminologische Studie* (Berlin: Walter de Gruyter, 1963) and M. Bulakh, "Basic Color Terms of Biblical Hebrew in Diachronic Aspect," in *Babel und Bibel 3. Annual of Ancient Near Eastern, Old Testament, and Semitic Studies*, eds. L. Kogan, N. Koslova, S. Loesov and S. Tishchenko (Indiana: Eisenbrauns, 2006) pp. 181-216.

³ A. Guillaumont, "La designation des couleurs en Hebreu et Arameen," in *Problèmes de la couleur*, ed. I. Meyerson (Paris: S.E.V.P.E.N., 1957) pp. 339-348; A. Brenner, *Colour Terms in the Old Testament* (Sheffield: The University of Sheffield Department of Biblical Studies, 1982), and J. E. Hartley, *The Semantics of Ancient Hebrew Colour Lexemes* (Leuven: Peeters, 2010).

latent color nuances of /lbn/, considering both previous studies and different translations of the Bible, aiming to shed new light on this blurred matter. As we know, color terms in ancient times included themselves a wide range of colors. For those nuances expressed in Antiquity only with a single term, today we have a wide range of vocabulary. In fact, in any color catalogue there is an extensive menu to designate several kinds of white: white smoke, snow, ivory, linen, beige, cream, vanilla, etc.

Regarding methodology and starting from the grammatical reality of the language units (verbs, nouns or adjectives), we will semantically analyze the terms taking into account their discursive context, following the semantic analysis method developed by Mateos. ⁴ According to Rodríguez Adrados "words have no existence other than within the syntagma, which only exists within the sentence. Therefore, the meaning of a word in the sentence depends on its context, in addition to the extraverbal context and other data." This refers to the object impregnated with color. As García Ureña expresses, once this is determined, it is necessary to take into account the extratextual context that will allow to determine the coloration of the object, or at least approach to it.

Although there are other terms usually translated as 'white' (אָבָּר), we have chosen לָבָּן for the following reasons: Throughout all the MT there are twenty nine mentions of לָבָּן as adjective in twenty four verses. In addition to this, there are five verbal forms containing the same root (לבֹן), usually with a causative nuance. Besides of this, there are also four times where the root לבֹן appears as substantives not linked with color, apparently. At the same time, if we compare לָבֶּן with the rest of "color terms" in the Bible, it will reveal itself as the most common of them all. This frequency makes $\dot{\zeta}$ to be considered as a widely documented "primary" term, and whose origin could go back to the age of Kings.

⁴ J. Mateos, *Método de análisis semántico: aplicado al griego del Nuevo Testamento* (Córdoba: El Almendro, 1989) p. 17.

⁵ F. Rodríguez Adrados, "Reflexiones sobre semántica, sintaxis y estructura profunda," in *Nuevos estudios de Lingüística General y Teoría Literaria*, ed. F. Rodríguez Adrados (Barcelona: Ariel, 1988) pp. 107-121: 116.

⁶ L. García Ureña, "Χλωρός y su riqueza cromática en la Septuaginta," in *Estudios en honor de María Victoria Spottorno* (Córdoba: UCOPress, 2016) pp. 119-131: 120.

⁷ Brenner, *Colour Terms in the Old Testament*, p. 81.

2. Presence of /lbn/ in semitic languages. Current status of research

Thanks to Brenner⁸ and Bulakh⁹ we can see the parallels between the Hebrew לָבָן and similar terms in various Semitic languages, realizing that the root /lbn/ is intrinsically linked to clear and bright meanings.

The term appears only once as /lbn/ in Ugaritic, but in a context that clearly shows its meaning is associated with white, as it appears in a sequence in which the color of the dresses is described: lbš [...] h.lbš.allm. lbnm (white all-garments). /lbn/ (vocalized as lābōn) is a botanical term in Phoenician, quoted by Dioscorides¹⁰ in a treatise on smallpox and measles. In Mandaic, the term /lbina/ means white and bright.

/lbn/ has been a controversial subject in Arabic. In this language לאני means sour milk, yogurt. Gradwohl tried to reconstruct an hypothetical union between «white» and «milk» in Semitic languages. He conceived that nomad tribes would understand the color of milk as the "white" par excellence. And while it is true that the lexemes /lbn/ and /hlb/ are used for different types of milk in Arabic (חלבי, respectively), there is no northwestern Semitic language in which both concepts appear under one lexeme: Aramaic presents /hlb// (חלבא) for 'milk' and /hwr/ (חלבי) for 'white.' Both in Ugaritic and Hebrew the lexeme /lbn/ is linked to white while /hlb/ is used for 'milk.' However, South Arabian languages like Mehri³, Harsusi¹⁴ and Soqotri¹⁵ use the root /lbn/ for 'white.'

There are also certain Hebrew terms that despite of having the root לבן, it seems there is no connection with white. However, confronting

⁸ Brenner, Colour Terms in the Old Testament, pp. 81-82

⁹ Bulakh, "Basic Color Terms of Biblical Hebrew in Diachronic Aspect," pp. 186-187.

¹⁰ M. García Valdés, (ed.), *Dioscórides: Plantas y remedios medicinales. De materia médica. Libros I-III* (Madrid: Editorial Gredos, 1998) p. 122.

GRADWOHL, Die Farben in Alten Testament: Eine Terminologische Studie, p. 34.

¹² J. Ribera-Florit, *Guía para el estudio del Arameo Bíblico* (Madrid: Sociedad Bíblica, 2005) p. 135.

¹³ *awbōn* (feminine *awbanīt*, plural *lēban*).

¹⁴ elbōn (feminine elbenáyt, plural lében).

¹⁵ líbehon.

those terms with other Semitic languages reveals that they are indeed associated with light-colored or whitish tonalities.

לְבְנָהָ this is a cognate present in several Semitic languages (Akkadian, Aramaic and Arabic): /libn/, /lebin/. Its presence in the Hebrew Bible is recorded ten times. ¹⁶ What is the relationship between bricks and white? Archaeological excavations in Egypt have shown that most of the bricks used in antiquity were made of mud and sun-baked straw, which could give a glowing or light shade, low chromaticity, although some researchers apply the term "proto-Semitic" a nature which does not imply any relationship between bricks and white. ¹⁷

לבוֹנָה: frankincense/perfume. Its presence is enormous throughout the entire MT: it appears eighteen times. ¹⁸ Incense referenced as לְבוֹנָה would be an appropriate resin from southern Arabia and northern Somalia ¹⁹ of a tree called boswellia sacra, found in Somalia, Ethiopia, Yemen and Oman. ²⁰ However, keep in mind that the root /lbn/ is applied not only to frankincense, but also to other aromatic resins, such as myrrh, storax and even poplar. Hebrew language is no exception to this, but it has a vowel variant to distinguish storax and frankincense: לִבְּנָה. ²¹ This use of the root /lbn/ for aromatic scents and resins is common throughout antiquity. ²² We

¹⁶ Gn 11:3, Ex 1:14; Ex 5:7-8, 16, 18-19; Is 9:9, 65:3, and Ezek 4:1.

¹⁷ M. Bulakh, "Color Terms of Modern South Arabian Languages: A Diachronic Approach," in *Babel und Bibel 1: Annual of Ancient Near Eastern, Old Testament, and Semitic Studies*, eds. L. Kogan, N. Koslova, S. Loesov and S. Tishchenko (Indiana: Eisenbrauns, 2004) pp. 269-282: 272.

¹⁸ Ex 30:34, Lev 2:1-2, 15-16, 5:11, 24:7; Num 5:15, Is 43:23, 60:6, 66:3; Jer 6:20, 17:26, 41:5; Songs 3:6, 4:6, 14, 4:14; Neh 13:9, and 1Chr 9:29.

¹⁹ Bulakh, "Basic Color Terms of Biblical Hebrew in Diachronic Aspect," p. 187.

Recent investigations clearly suggest that the plant grows in a fairly restricted habitat. The resin is obtained by cutting and incising the trunk, usually once a year in the winter. The exuded sap, white in color (hence Sem. lbn, "milk"), is left to drop to the base of the tree where it hardens and crystalizes. Chemical analysis of frankincense suggests that the plant has certain unique characteristics of composition which may extend to discerning medicinal properties; D. N. FREEDMAN, (gen. ed.), *Eerdmans Dictionary of the Bible* (Michigan: Eerdmans, 2000 [accordance electronic edition, version 3.6]).

²¹ Gn 30:37, and Hos 4:13.

²² labānatu (Akkadian), lubān (Arabic), ləbān (Tigre), libānät (Harari), lubana (Mandaic), luban (Amharic), luban, libānad (Somal), libān (Mehri), libān (Arsusi),

must not forget that trading spices and flavors was huge, and frankincense had (and still has) a high religious value. And what is the link between these aromatic terms and white color? These resins are generally characterized by a whitish or yellowish hue, and so there are some studies which support and even reconstruct the evolution of a proto-Semitic term for white color that would become 'resin.' On the other hand, some scholars seem more skeptical. However, while it is true that there is no conclusive evidence to confirm the evolution of a hypothetical term 'white' in 'resin', clear or yellowish tone of certain resins reinforces a possible connection between the two. Could it be that certain terms derived from color were applied to specific resins and sometime later the term was generalized, thereby encompassing any type of incense or aromatic substance? A similar case could be said of storax, as this does not have to be necessarily white or yellowish, but dark or reddish, although its resin produces a clear tone and its flowers are white.

To sum up, the proto-Semitic root /lbn/ is employed in the botanical field to designate both an aromatic resin (incense, or a particular type of incense) and various trees (storax, poplar). Although some researchers call for a new revision of these terms, ²⁵ clear and whitish tones and frankincense production by storax and poplar lead us to establish a link between these words and the white color.

3. Presence of לָבֶן in the Hebrew bible: uses and nuances

As mentioned earlier, לָבֶן is one of the most used color terms in the Bible. As an adjective it appears twenty-nine times, five times as a verb, and four times as a substantive.

libān-at (Aramaic), líbanos (frankincense), libanōtós (frankincense tree) in Greek. This loan is given by the contact between Sabeans and Greek merchants and sailors; W. Müller, "Zur Herkfunt von λίβανος und λίβανωτός," in Glotta 52 (1974) pp. 53-59: 57.

²³ W. MÜLLER, Weihrauch. Ein arabisches Produkt und seine Bedeutung in der Antike (Munich 1978) p. 705, and G. Banti and R. Contini, "Names of Aromata in Semitic and Cushitic Languages," in *Profumi d'Arabia*, ed. A. Avanzini (Roma: "L'Erma" di Bretschneider, 1997) pp. 169-192: 172-173.

Bulakh, "Basic Color Terms of Biblical Hebrew in Diachronic Aspect," p. 191.

²⁵ Bulakh, "Basic Color Terms of Biblical Hebrew in Diachronic Aspect," p. 192.

We have grouped the use of the root according the various contexts in which it appears and related characteristics, and not in nominal, adjectival and verbal uses. The root לָבֶּנְ is found in five different contexts: animal, botanic, illness, purity and corporal. Besides, the feminine singular form of לָבָנֶה, לֶבֶן is used as the name of the Moon.

3.1. לבן in animal context

Attribution subjects of לָבֶּן are goats and horses: However, as we shall see below, the meaning of לָבֵּן is not exactly the same in both groups.

– *Goats*: In Gn 30:35 Jacob requested Laban to let him return to his own place. Laban, however, entreated him to remain, for he had perceived that Jacob's God had blessed him for his sake; and told him to fix his wages for further service. Jacob reminded him, on the other hand, what service he had rendered him, how God's blessing had followed "at his foot", and asked when he should begin to provide for his own house. But when Laban repeated the question, what should he give him, Jacob offered to feed and keep his flock still, upon one condition, which was founded upon the fact, that in the East the goats, as a rule, are black or dark-brown, rarely white or spotted with white, ²⁶ and that the sheep for the most part are white, very seldom black or speckled.²⁷

Gn 30:35

וַנְּסֵר בַּיּוֹם הַהוּא אֶת הַתְּיָשִׁים הָעֲקָדִים וְהַשְּלָאִים וְאֵת כָּלֹהָעַזִּים הַנְּקָדּוֹת וָהָשָלִאֹת כֹּל אֵשֶׁר לָבָן בּוֹ וְכַל חוּם בַּכְּשַׂבִים וַיִּתַן בְּיָד בַּנִיו:

²⁶ לְּבֶּר could also be seen as a pun on the name of Jacob's father in law: Laban could be referring to the group of weak goats Jacob is trying to get to his father in law. So the weakest goats would be Laban's, while the stongest would be Jacob's. Such wordplay could go even further in Gn 30:37, with the rods that Jacob takes to perform a particular experiment with the goats, so he can get those stronger for himself at the expense of his father in law; J. Skinner, *The International Critical Commentary. A Critical and Exegetical Commentary on Genesis* (New York: Charles Scribner's sons, 1910) p. 392.

²⁷ C. F. Keil and F. Delitzsch, *Biblical Commentary on the Old Testament*, *I* (Edinburgh: Clark's Foreign Theological Library, 1865) p. 292.

Looking how modern Bibles have understood \d in the verse, we can see the term has been unanimously translated as 'white' (NRSV, Cantera-Iglesias, Reina-Valera). But what nuance is hidden behind this? Gn 30:35 has usually been translated as a large sequence with four direct objects: a) male goats striped and spotted; b) female goats speckled and spotted; c) goats that had white on them, and d) black lambs. Hence the usual translation is:

But that day Laban removed the male goats that were striped and spotted, and all the female goats that were speckled and spotted, every one that had white on it, and every lamb that was black, and put them in charge of his sons.

However, looking carefully to the verse, we realize that the narrator mentions three different animals: תְּנִשִׁים (male goats), בְּשָׁבִּים (female goats) (ambs). Each group of animals is described by its color: male goats are striped and spotted, female goats are speckled and spotted and lambs are black. Among the female goats and the lambs the verse adds בּל בּבֶּר בּוֹ (we must not forget Hebrew has a rich vocabulary to describe goats). That is the reason we propose בּל אֲשֶׁר לָבֶן בּוֹ (speckled and spotted), thus specifying the hue of the goats. The NET Bible translation clearly expresses our proposition:

All the speckled and spotted goats, all those which had white on it.

This is stressed because Gn 30:35 repeats the idea expressed in Gn 30:32; it only mentions three groups of animals with their respective colors, but there is no mention to a kind of animals with the adjective ילבן:

-בְּעִוּים וְחָיָה שְׂכָרִי אֶעֱבֹר בְּכָל-צֹאנְךְּ הַיּוֹם הָסֵר מִשָּׁם כָּל-שֶׂה נָקֹד וְטָלוּא וְכָל-שֶׂה חוּם בַּבִּשָּבִים וְטָלוּא וְנַקֹד

Let me pass through all your flock today, removing from it every speckled and spotted sheep and every black lamb, and the spotted and speckled among the goats; and such shall be my wages.

Beyond the general term ' $\bar{e}z$ (pl. ' $izz\hat{i}m$) for female goats, four Hebrew words specifically refer to the he-goat ($s\bar{a}$ 'ir, tayis, ' $att\hat{u}d$ [pl. only], and $s\bar{a}p\hat{i}r$), one to a young he-goat ($g\check{e}d\hat{i}$), and one to the wild goat (' $aqq\hat{o}$); Freedman, Eerdmans Dictionary of the Bible.

Once this point has been understood, Gn 30:35 provides the context we must interpret בָּלָבְוֹ If הַּנְּקְדוֹת וְהַטְּלֵאת (speckled and spotted) indicates low chromaticity, explained through בָּלֶבְוֹ בּוֹ , then בָּל אֲשֶׁר ֹלֶבָן בּוֹ would be referring to a grayish-white hue, because the low chromacity of the goats is being stressed, having a brighter tone than those which were totally black. To confirm our suggestion we need to know which kind of goats are those mentioned by the author of Genesis. There were different kinds of goats in Ancient Canaan: capra membrica and capra hircus are the best known types. It seems the first group does not fit with Gn 30:35: capra membrica is known for its glossy dark hair. ²⁹ Perhaps the author is referring to capra hircus, also known as domestic goat. ³⁰ Its hair usually is a combination of black, white and brown, sometimes with brighter nuances or even white spots. This would confirm the white-gray hue in our proposal.

– Horses: לָבֶּן appears accompanying the term סוסים / horse/s) three times throughout Zech 1-6 (1:8; 6:3, 6), and its use as a color adjective designates a specific type of horse, just like these other terms do: אָדם (red, piebald), שֶּרֹק (black, swarthy), שֶרֹק (red, sorrel) and ברד (thrush).

Zechariah 1-6 contains eight different visions the prophet has in a difficult context for the Israelites. What were the difficulties in Zechariah's day? The Temple was gone. The Persian Empire ruled the region. The number of Jews who had returned to Jerusalem was relatively low, so an encouragement was needed. Of the eight visions of Zechariah, ξ is particularly important in both the first (1x) and the last one (2x). Groups of horses of different colors appears in these verses, representing the way God will deal with Jerusalem (first vision, Zech 1) and the other nations (eighth vision, Zech 6). As we shall see, the symbolic value of ξ is the same through the visions.

First vision:

Zech 1:8

רָאִיתִי הַלּיְלָה וְהִנֵּה ֹאִישׁ רֹכֵב עַלֹסוּס אָדֹם וְהוּא עֹמֵד בֵּין הַהֲדַסִּים אֲשֶׁר בַּמְצֻלָה וְאַחֲרָיו סוּסִים אֲדָמִים שְׂרָקִים וּלְבָנִים:

²⁹ C. Souvay, "Animals in the Bible," in *The Catholic Encyclopedia*, ed. K. Knight (New York: Robert Appleton Company, 1907 [http://www.newadvent.org/cathen/01517a. htm]).

³⁰ Freedman, Eerdmans Dictionary of the Bible.

In the night I saw a man riding on a red horse. He was standing among the myrtle trees in the glen; and behind him were red, sorrel and white horses.

Eighth vision:

Zech 6:3:

וּבַמֶּרְכַּבָה הַשָּׁלְשִׁית סוּסִים לָבַנִים וּבַמֵּרְכַּבָה הַרְבַעִית סוּסִים בְּרָדִּים אֵמְצִים:

And in the third chariot, white horses; and in the fourth, horses of mixed color.

Zech 6:6:

אָלְאַחֲרֵיהֶם נְצְאוּ אֶלֹאֶרֶץ הַפּּוּסְים הַשְּׁחֹרִים יֹצְאִים אֶלֹאֶרֶץ צָפּוֹן וְהַלְּבָנִים יָצְאוּ אֶלֹאֵרֶץ הַתִּימָן: וְהַבְּּרֵדִּים יָצְאוּ אֶלֹאֶרֶץ הַתִּימָן:

The carriage in which are the black horses goes in the direction of the north country; the white go to the west; and those of mixed color go in the direction of the south country.

As in Gn 30:35, the סרסים from Zech 1:8; 6:3, 6 are translated as "white horses" (NRVS, NET Bible, Cantera-Iglesias, Reina-Valera, Louis Segond). Since the verses do not mention anything that allows us to concrete the white nuance of the horses, we are forced to look into extra-textual references. White horses are rare, so that is why they are valued. They usually have dark eyes and their hair is described as "dominant white." Dominant white is a genetic mutation for horses which causes near-white or completely white coats. It can happen spontaneously and it can be found in any breed, even in those that rarely display white markings. It is widely known the fact that white horses are animals which represent military victory. The celebration of victories with white horses and chariots was employed by Xerxes and his general Mardonius and Julius Caesar as well, 32 and this idea is

VETERINARY GENETICS LABORATORY, "Introduction to Coat Color Genetics," in School of Veterinary Medicine, University of California, Davis (2008 [https://www.vgl.ucdavis.edu/services/coatcolor.php] accessed January 16, 2016), and W. L. Pulos and F. B. Hutt, "Lethal Dominant White in Horses," in *The Journal of Heredity* 60:2, ed. J. Hered (Oxford 1969) pp. 59-63: 59.

³² R. H. Charles, (ed.), *A Critical and Exegetical Commentary on the Revelation of St. John*, 2 (Edinburgh: ICC, 1920) pp. 162-163.

present in Zechariah. Hence we tend to think that is the tonality referred to by the narrator: לָבֶּוֹ in Zech 1:8, 6:3, 6 corresponds to what we call "dominant white" nowadays.

The color of the horses has been understood symbolically. There are extra-biblical traditions in which the white color is responsible for representing the dominant element, red alludes to violence and bloodshed, while black symbolizes nutrition.³³

In light of these facts, we can conclude that לָבֶּן in animal context denotes different types of white: white-gray and "dominant white." The first hue is the color of Jacob's goats (Gn 30:35). We have actual referents (capra hircus) which lead us to affirm such statement. On the other hand, "dominant white" is the color owned by Zechariah's horses. This color has a symbolic nature because it connotes military victory.

3.2. לָבֵן in botanic context

The presence of the root לבן in botanic context is well reflected in the MT: The referents here are poplar, almond, and plane rods (Gn 30:37), followed by the vineyard and the fig tree (Jl 1:7). We will also include in this section the color of manna (Ex 16:31). Although it is obvious that manna is not a plant, the narrator describes and compares it with the seed of coriander.

– *Poplar, almond and plane*: This verse belongs to the chapter we have already presented, regarding the covenant made between Jacob and Laban: Here Jacob placed stripped branches of white poplar, almond, and plane in the drinking troughs of Laban's goats to obtain the desired offspring.³⁴

³³ F. Cantera Burgos and M. Iglesias González, (eds.), *Sagrada Biblia* (Madrid: Biblioteca de Autores Cristianos, 2009) p. 592.

The use of the rods by Jacob has often been described as the use of a certain kind of magic related to conception. The white bark contains salicin, which reduces fevers or inflammation of the joints. However, the use of poplar rods has also been understood as a type of *phallus fallax*, an artificial male organ used to deceive the ewes and she-goats; Freedman, *Eerdmans Dictionary of the Bible*, and S. B. Noegel, "Sex, Sticks and the Trickster in Gen. 30:31-43: A New Look at an Old Crux," in *Journal of Ancient Near Eastern Society* 25 (1997) pp. 7-17: 10.

Gn 30:37

וַיִּקַּח-לוֹ יַצְקֹב מַקַּל לִבְנֶה לַח-וְלוּז וְצַרְמוֹן וַיְפַצֵּל בָּחֵן פְּצָלוֹת לְבָנוֹת-מַחְשׂף הַלֶּבֶן אֵשִׁר עַל-הַמַּקלוֹת

Jacob took to himself rods of fresh poplar, almond, plane tree, peeled white streaks in them, and made the white appear which was in the rods.

Modern translations of the Bible focus on the white color (לְבָּנֵּתֹּת) of the debarked rods, but some of them differ on the first plant used by Jacob: has been translated both as styrax (Cantera-Iglesias in Spanish) and poplar (NRSV, NET Bible, Reina-Valera, Louis Segond), although being two different trees. לְבְנֶּתֹּ has been identified with Styrax officinalis due to the fact its flowers and the back of its leaves are white. However, the tree mentioned in Gn 30:37 is identified as Populus alba nowadays (white poplar). Populus alba grows in humid places of Syria, Lebanon and Israel, as the Styrax officinalis does not grow where Gn 30 is situated. Regarding Zohary 'poplar' is a much more plausible translation than 'styrax' because the presence of poplar is well attested in the region for centuries until today, while styrax is not a proper tree zone. Furthermore, Sima suggests that לִבְּנֶת would refer to white poplar because of its whitish foliage. The other two plants described in the verse (almond and plane) have a color which lies between white and pink. Almond

³⁵ F. Brown, S. R. Driver and C. A. Briggs, *A Hebrew and English Lexicon of the Old Testament with an appendix containing the Biblical Aramaic* (BDB) (Cambridge: Riverside Press, 1906) s.v. לבנה.

³⁶ S. Segura Munguía and J. Torres Ripa, *Las plantas en la Biblia* (Bilbao: Universidad de Deusto – Madrid: Consejo Superior de Investigaciones Científicas, 2011) p. 55, and J. A. Duke, P.-A. Duke and J. L. du Cellier, *Duke's Handbook of Medicinal Plants of the Bible* (Boca Raton, FL: CRC Press, 2008) pp. 348-349.

³⁷ M. Zohary, *Plants of the Bible* (Cambridge: Cambridge University Press, 1982) p. 132.

³⁸ A. Sima, Tiere, Pflanzen, Steine und Metalle in den altsüdarabischen Inschriften (Wiesbaden 2000) p. 271.

³⁹ A. J. Felipe, R. Socias i Company and J. Gómez Aparisi. "The Almond Rootstock Ideotype," in *Acta Horticulturae* 470, ed. A. J. Felipe (1988) pp. 181-187, and M. W. Chase, "An Update of the Angiosperm Phylogeny Group Classification for the Orders and Families of Flowering Plants: APG III," in *Botanical Journal of Linnean Society* 161:2, ed. M. F. Fay (London: Biological Journal of the Linnean Society, 2009) pp. 105-121.

(למו) has petals whose color is pink at the bottom, becoming white at the top, producing the effect of a perfectly white tree. It is identified with Amygdalus communis L, also called Prunus dulcis Miller.⁴⁰

On the other hand, the plane tree (עַרְמוֹן), identified with Platanus orientalis, usually sheds its outer bark, and hence its Hebrew name means 'naked.'⁴¹ It grows in northern Israel, near rivers, reaching 20 meters high and 3 meters in diameter. Its flowers are greenish and small, while its wood is white streaked with yellowish or reddish tones.⁴²

In light of the above, it can be concluded that לבן refers to the whitish color of the branches of these trees.

- Vineyard and fig tree: J1 1:7 is the final verse of the MT where the root τρ appears in a botanic context. J1 1 is a large sequence where the Kingdom of Judah mourns the judgment decreed by God. There is a great destruction caused by a plague of locust, followed by drought, famine and fire. locust is the first sign used to discipline the nation. Here, the prophet Joel speaks and calls the people of Judah to return to God before the coming of a bigger trial. Throughout Israelite history the vineyard played an important role in agricultural and literary aspects of religious development. A fruitful vineyard was a symbol of God's faithful beneficence. But it could also be a symbol of judgment upon the nation. The devastation of the vineyard is caused by Israel's injustice and unrighteousness, ⁴³ as we can see in Is 5:1-7, Ps 80:8-16, Hos 10:1-2, Jer 8:13, along with J1 1:6-12. The image of the vineyard is also used by Luke 13:6-9 in the parable of the barren fig tree, with a message of repentance.

Jl 1:7

שָׁם גַּפָנִי לִשַּׁמָּה וּתָאֵנָתִי לִקְצָפָה חָשֹׁף חֲשֶׂפָהּ וְהִשִּׁלִיךְ הִלְבִּינוּ שַׂרִיגֵיהַ:

By him my vine is made waste and my fig-tree broken: he has taken all its fruit and sent it down to the earth; its branches are made white.

⁴⁰ ZOHARY, *Plants of the Bible*, pp. 66-67.

⁴¹ Freedman, Eerdmans Dictionary of the Bible.

⁴² ZOHARY, *Plants of the Bible*, pp. 74-76, and DUKE, DUKE and DU CELLIER, *Duke's Handbook of Medicinal Plants of the Bible*, pp. 346-348.

FREEDMAN, Eerdmans Dictionary of the Bible.

Here הַלְבִּיט is used as verb: הַלְבִּיט, Hif'il Perfect, 3rd person plural. It has been translated as "have turned white" (NRSV), "stripped off the bark" NET Bible, "tornándose blandos" (Cantera-Iglesias), "quedaron blancas" (Reina-Valera), and "ont blanchi" (Louis Segond).

The detailed description given by the prophet shows the destruction and devastation. First he mentions that the fig tree has become chipped and then he insists that both the vineyard and the fig tree have been peeled and scattered. This means both the fig tree and the vineyard are completely desiccated. They have lost their springineess and color due to the fact they cannot photosynthesize. The nuance of לָבֶּל here, when the vineyard and fig tree are completely dried, would be grayish-white, whitish yellow or completely white, the right hues for dried plants.

- Manna:

Ex 16:31

וַיִּקַרָאוּ בֵית ֹיִשְׂרָאֵל אֱת שָׁמוֹ מָן וְהוּא כָּזֵרַע גַּד לָבָן וְטַעְמוֹ כְּצַפִּיחִת בִּדְבָשׁ:

And the house of Israel called the name thereof Manna: and it was like coriander seed, white; and the taste of it was like wafers made with honey.

Modern translations of the Bible seem to concur on the fact that the color of manna is white (NRSV, NET Bible, Cantera-Iglesias, Reina-Valera, Louis Segond), such as the coriander seed. Coriander (Coriandrum sativum) is an herb widely used in the ancient Mediterranean world, from the Umbelliferae/Apiaceae family. Its aromatic flowers are red and ellipsoidal, and they are used in the makeup of several medicines. Its green leaves and seeds have a beige or whitish yellow nuance, not too far from a cream hue. Besides, the Arabic /gidda/, cognate with the Hebrew א יש א white Artemisia, plant with implications of bitterness.

⁴⁴ Ancient extra-biblical sources also expressed their interest both in the color of manna and coriander: Rashi claimed there is no doubt the color of coriander is white, and relies on the Babylonian Talmud in his statement (Yoma 75a). Ibn Ezra did not know how to identify the plant, but he believe it does not refer to coriander, and Josephus said the Israelites mistook the manna with snow (Ant III, 1: 6); Brenner, *Colour Terms in the Old Testament*, p. 88.

⁴⁵ Duke, Duke and du Cellier, *Duke's Handbook of Medicinal Plants of the Bible*, p. 139.

The whiteness of manna is reinforced by Num 11:7, verse which explains the color of the seed of coriander: וְהַמֶּן כִּזְרֵע-נֵּד הוּא וְעִינוֹ כְּעֵין הַבְּדֹלֵח (Now the manna was like coriander seed, and its appearance like that of bdellium). Bdellium is a gum resin whose tonalities vary from yellow, gray or brown. It is famous for its soft odor and bitter taste, whose origin are the trees of the bursera family growing in Persia, India, Arabia and northeastern Africa. 46

According to Duke⁴⁷ "when the bark was incised, gum would ooze out the bigness of a white olive. Gum removed from the bark of the tree hardens, becomes transparent and waxlike, resembling a pearl."

Once we have finished analyzing the uses of לבן in a botanic context, we can conclude stating that לבן denotes different types of white. Gn 30:37 is openly denoting white color through לְבֶנֶה (poplar), almond and palm tree, while the color of manna in Ex 16:31 is not actually white but probably grayish or pale yellow. The same nuances are found in Jl 1:7, although לבן here is used to denote the dried leaves of the vineyard and the fig tree, presenting a grayish-white or yellowish white.

3.3. לָבֵן in the illness context

Lev 13 is the Biblical chapter where לָבָן is repeated the most times: it appears twenty times, male and female, singular and plural. The chapter focuses on the rules that the priest must follow to determine the purity or impurity ritual in various cases of skin diseases. This chapter may be seen as providing guidelines of hygienic nature whose purpose is to avoid infectious diseases. However, there are religious connotations behind this: sick people cannot perform religious services, because in order to do them, corporal integrity is required. Its lack gave rise to religious and social ostracism. ⁴⁸ Therefore, it can be determined that sicknesses present

⁴⁶ D. Brothwell and P. Brothwell, *Food in Antiquity: A Survey of the Diet of Early Peoples* (Baltimore – London: The John Hopkins University Press, 1969) p. 123.

 $^{^{47}}$ Duke, Duke and du Cellier, *Duke's Handbook of Medicinal Plants of the Bible*, p. 126.

⁴⁸ R. E. Brown, J. A. Fitzmeyer and R. E. Murphy, *Comentario Bíblico "San Jerónimo." Tomo I. Antiguo Testamento I* (Madrid: Ediciones Cristiandad, 1971) p. 228.

in this chapter are not examined from a medical point of view, but a religious one.

In fact, all these uses of לָבֶן are specifically inserted to reflect the ailments caused by the illness known in Hebrew as אָרַעַת. This term is usually translated as 'leprosy.' However, it is necessary to distinguish the biblical leprosy to the modern concept of it.

In biblical leprosy (צָרְעָת) there is no allusion to facial deformity or the loss of feeling and the rotting of the limbs, features of modern leprosy. Such manifestations could not have escaped observation if they existed. Moreover, according to Lev 13, אַרַעָּת was a curable disease. Once the leper was healed, the priest made an atonement before the Lord, and expiatory sacrifices in the form of a sin-offering and a trespass-offering were also made. On the other hand, modern leprosy was considered incurable for centuries. There are two forms of "modern leprosy": the tubercular, or nodular, and the anesthetic. Both forms are usually present at the same time. Nowadays treatments are long and expensive, taking months to cure the patient, and the vaccines are 26% to 60% effective.

Reading Lev 13 the reader can perceive צֶרְעַת includes a number of skin diseases, which, according to the undeveloped state of medical science at that period, were not differentiated. Then, צָרַעַת can be understood as a generic term for various skin ailments. Or as Preuss affirms, אַרַעַת is nothing but a "collective name" with an obscure etymology: "it is totally purposeless to enumerate here all the innumerable derivations of the word w."52

⁴⁹ C. Adler and I. Singer, *Jewish Encyclopedia* (New York – London: Funk & Wagnalls Company, 1901-1906 [http://www.jewishencyclopedia.com/] accessed January 14, 2016).

⁵⁰ M. S. Setia, C. Steinmaus, C. S. Ho and G. W. Rutherford, "The Role of BCG in Prevention of Leprosy: A Meta-analysis," in *Lancet Infect Dis.* 6:3, ed. S. Pablo Lucia (2006) pp. 162-170: 162.

The problem of distinguishing between "ancient and modern leprosy" is not exclusive of Hebrew, it can be found in Greek as well. The Greek "lepra", derived from "lepros" ("rough" or "scaly"), was regarded as a circular, superficial and scaly eruption of the skin: psoriasis. On the other hand, "modern leprosy" was not called "lepra" in Greek, but "elephantiasis." The case of "leprosy" shows the darkness present in the names of diseases in ancient times. As we can see, the application of the word "lepra" has changed its meaning and application through time; ADLER and SINGER, *Jewish Encyclopedia*.

⁵² J. Preuss and F. Rosner, *Biblical and Talmudic Medicine* (New York: Hebrew Publishing Company, 1978) p. 326.

Several scholars agree on the fact that some of those skin diseases, spots, tumors, hairs, upon which so much stress is laid in the text may be caused by vitiligo. Vitiligo is a variety of leukoderma, a disease in which patches of the skin and hair lose their pigmentation, becoming white. It begins as small patches, slowly spreading and involving large areas of the body, and it is associated with unclean conditions.

Since it is not possible to know for sure the disease or diseases referred by the the different pericopes of Lev 13, it is difficult to specify the different tones of לבן in these verses. At least we know that three different attribution subjects appear through Lev 13: hair (עַנֶּע, Lev 13:3-4, 10, 20-21, 25-26), skin (ענֹר, Lev 13:4, 19, 24-25, 38-39), and sore (ענֹר, Lev 13:42-43).

- -Hair לבן frequently describes the color of hair in Lev 13 and becomes a אֶרְעַת symptom (Lev 13:3, 20, 25) or at least אָרָעָת impurity (Lev 13:4, 10, 21, 26). Sick people are required to be analyzed by the priest, and although it is not possible to identify the disease, it is clear that לבן is a disease indicator through the loss of hair pigmentation. Such lack of pigmentation causes the hair to acquire a white or gritty tone. Today is known that this phenomena is caused by aging or different ailments. The tones that לבן is used as symptom of the disease in Lev 13, it seems better to keep the translation of as 'white', as it is the color that clearly shows the difference between healthy and sick hair, on the contrary of gray.
- Skin: The presence of לבן regarding skin is found in Lev 13:4, 19, 24-25, 38-39. But unlike the case of hair, לבן in the verses regarding skin indicates both a clear indication of illness, and therefore impurity (Lev 13:4, 19, 24); and at the same time it appears as sign of health and consequence of purity (Lev 13:13, 16-17, 38-39).
 - a) Impurity: Again, we do not have enough elements to identify the sicknesses described. The symptoms is flakiness of skin, indicated by white or reddish-white spots, which fit many types of skin conditions: psoriasis, seborrhoeic dermatitis, certain mycotic infections, patchy eczema and pityriasis rosea. 53 Of all these diseases,

⁵³ E. V. Hulse, "The Nature of Biblical 'Leprosy' and the Use of Alternative Medical Terms in Modern Translations of the Bible," in *Palestine Exploration Quarterly* 107:2, ed. Taylor & Francis Group (1975) pp. 87-105: 96.

psoriasis exhibits silvery scales, while vitiligo is characterized by the presence of white patches on the skin,⁵⁴ and Preuss⁵⁵ suggests that the advanced stage of the disease and discoloration of skin is expressed through white or reddish-white hues. Considering that the skin disease described in these verses is one of such ailments, then as לבן would denote both white, gray or even grayish white.

b) Cleanness: Lev 13:13, 16-17 express what could be understood as a paradoxical idea: if the entire body is covered by the disease, then the person is clean (טָחוֹר). While the disease is covering the whole flesh, then no ulcerated skin appears, ensuring purity at the same time. However, Lev 13:14-15 express just the opposite: if ulcerated skin reappears, it is יַצְרַעַת

Despite these verses can confuse the reader, it can be seen that לבן is linked with purity in these verses. And in the contexts where לבן is directly related with purity (as described in the next section), it clearly denotes white color. Therefore, לבן in Lev 13:13, 16-17 would mark this white tone, expression of purity.

– Sore: Lev 13:40-44 focus on balding of the head, לָבֶּן appearing in Lev 13:42-43.

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וְכִי יִהְיֶה בַקֶּרַחַת אוֹ בַגַּבַּחַת נֶגַע לָבָן אֲדַמְדָּם צָרַעַת פֹּרַחַת הָוּא בְּקֵרַחְתּוֹ אוֹ
בְגַבַּחָתוֹ
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But if, on his head or on his brow, where he has no hair, there is a red and white place, it is the disease of the leper coming out on his head or on his brow.

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וְרָאָה אֹתוֹ הַכּּהֵן וְהִנֵּה שְׂאֵת הַנֶּגַע לְבָנָה אֲדַמְדֶּמֶת בְּקַרַחְתּוֹ אוֹ בְגַבַּחְתּוֹ כְּמַרְאֵה
צַרַעַת עוֹר בַּשִּׂר
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Then if the priest sees that the growth of the disease has become red and white on his head or on his brow where there is no hair, like the mark in the skin of a leper.

NIAMS (National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2014) "¿Qué es el vitiligo?" [https://www.niams.nih.gov/Portal_en_espanol/Informacion_de_salud/Vitiligo/default.asp] accessed January 16, 2017.

⁵⁵ Preuss and Rosner, Biblical and Talmudic Medicine, p. 328.

According to Freedman,⁵⁶ this balding is alopecia, caused by vitiligo, reflecting white patches once again. Therefore, לֶבֶּן denotes 'white color' once more.

As we can see, Lev 13 does not clarify the possible hues of לֶבֶּן. Gradwohl⁵⁷ states that it is a grayish white or low intensity color, used to describe the texture of wounds and its location in the skin, and the tonality of sick hairs. Gradwohl's hypothesis would seem plausible if we compared the description of these verses with photographs of skin diseases described nowadays.⁵⁸ However, such statements could not be other thing than a mere hypothesis, because we would end up getting to this point: it is nearly impossible to know for sure the white nuance לָבֶּן expresses in this chapter.⁵⁹ However, since לָבֶּן appears as a determining symptom to diagnose health or illness, it can be concluded that from the literary point of view "white" would be an adequate translation.

3.4. לָבָן in purification context

Confronting the use of לָבֶן as an adjective linked to skin diseases in Lev 13, the root לבן is widely used in the MT to denote purity and repentance. This purity addresses four different elements: sins (an intangible and

Freedman, Eerdmans Dictionary of the Bible.

⁵⁷ Gradwohl, Die Farben in Alten Testament: Eine Terminologische Studie, p. 35.

⁵⁸ M. COLOMINA, F. E. MOLTÓ, S. CORTÉS and V. GINER, "Marjolin's Ulcer in a Patient with Residual Hansen's Disease," in *Enfermedades Infecciosas y Microbiología Clínica* 29, ed. B. Almirante Gracera (2011).

[&]quot;in Lev 13 is not white color itself but discoloration of some parts of the body (hair, skin). According to Rosner "the skin of Jews and other Semitic is intermediate in color between that of Germanic people and Ethiopians." And such emphasis on the term לֶבֶן in Lev 13 also emphasizes the lighter color of hair, skin and sore "when compared to the darker coloration of the skin of Semitic People." We cannot forget that Ancient Hebrews, the original readers of Lev 13, were interested in the religious content of these medical prescriptions, so for them it was not so important to distinguish between different nuances of white. On the other hand, the fact that their hair or skin had lost its usual color due to religious impurity was a much more delicate and important matter; F. Rosner, Encyclopedia of Medicine in the Bible and the Talmud (Nothvale – New Jersey – Jerusalem: Jason Aronson, 2000) p. 279, and Preuss and Rosner, Biblical and Talmudic Medicine, p. 327.

abstract element, Is 1:18), David himself (Ps 51:9), garments (a tangible and real element, Ecle 9:8) and the People of God (Dan 11:35, 12:10).

- Sins: As we know, Is 1 is a chapter that includes the main themes of prophetic literature: sin and punishment, repentance, forgiveness, purification, conversion and restoration of Jerusalem. Is 1:18 presents a subtle image based on the use of colors to explain the magnitude of God's forgiveness:

Is 1:18

לְכוּ נָא וְנִנְכְחָה יֹאמֵר יְהוָה אִם ֹיִהְיוּ חֲטָאֵיכֶם כַּשָּׁנִים כַּשָּׁלֶג יַלְבִּינוּ אִם ֹיַאְדִּימוּ כַתּ וֹלע כּצמר יהיוּ:

Come now, and let us have an argument together, says the Lord: how may your sins which are red like blood be white as snow? How may their dark purple seem like wool?

Here בֹלבן appears again as a verb: יַלְבִּינוּ. And it is also compared with snow: יַלְבָּינוּ. "They shall be like snow" (NRSV), "become white like snow" (NET Bible), "quedarán blancos como la nieve" (Cantera-Iglesias), "como la nieve serán emblanquecidos" (Reina-Valera), and "deviendront blancs comme la neige" (Louis Segond).

⁶⁰ L. Ryken, J. C. Willhoit and T. Longman III, (eds.), *Dictionary of Biblical Imaginery* (Downers Grove, IL: InterVarsity Press, 1998) p. 157.

⁶¹ D. R. W. Wood, A. R. MILLARD, J. I. PACKER, D. J. WISEMAN and I. HOWARD MARSHALL, (eds.), *New Bible Dictionary* (Downers Grove, IL: InterVarsity Press, 1996 [accordance electronic edition, version 3.6]).

The color of wool is the white per excellence in Israel. As explained in 3.1, the predominant color of sheeps and goats was white.

a verb which means "to bring out or produce a light color", and in Is 1:18 that light color would be no other than "brilliant white."

Therefore, the presence of snow clearly defines the white nuance behind of לבן in Is 1:18. here has the same tonality as snow. It is thus simple to understand why Lyons⁶⁴ considers "snowy white" as a "prototype color", a primal model where the other nuances of white could emerge. It is simultaneously white and bright, because snow by its own nature shines in contact with the sun. לבן is shining white in Is 1:18.

We find the same image in Psalms 51:9, where the subject is King David instead of sins:

תַּחַטְאֵנִי בָאֵזוֹב וָאֵטָהָר תִּכַבְּסֵנִי וּמִשְּׁלֵג אַלְבִּין

Make me free from sin with hyssop: let me be washed whiter than snow.

– *Garments*: The links between white and purity continue if we consider garments and priestly vestments. ⁶⁵ This verse is part a larger text describing the pursue of daily happiness, parallel to the Epic of Gilgamesh. ⁶⁶ Mankind must rejoice life through satiated stomachs, dancing, cleaning garments and the body with oil, and taking care of young children.

Ecle 9:8

בַּכַל-עַת יָהֵיוּ בָגָדֵידְ לָבַנִים וְשָׁמֵן עַל-רֹאשׁדְּ אַל-יַחְסֵר

Let your clothing be white at all times, and let not your head be without oil.

⁶³ Hartley, The Semantics of Ancient Hebrew Colour Lexemes, p. 95.

⁶⁴ J. Lyons, "The Vocabulary of Color with Particular Reference to Ancient Greek and Classical Latin," in *The Language of Color in the Mediterranean: an Anthology on Linguistic and Ethnographic Aspects of Color Terms*, ed. A. Borg (Stockholm: Almqvist & Wiksell International, 1999) pp. 38-75: 43.

White or gray tones were the dominant tones in the cultic area and even in burials, with examples found in the MT in Hebrew and Aramaic and also other biblical texts outside the Hebrew canon: 1Enoch and the New Testament. Dan 7:9 and 1Enoch 14:20 contain the expression "white as snow" (פְּתְּלֵגֹּ תְּנָּר), in Aramaic) when describing the garments of the Ancient of Days, but there is no mention to snow in Ecle 9:8; L. García Ureña, "Colour Adjectives in the New Testament," in *New Testament Studies* 61, ed. F. Watson (Durham: Abbey House, 2015) pp. 219-238: 220.

⁶⁶ CANTERA BURGOS and IGLESIAS GONZÁLEZ, Sagrada Biblia, p.769.

At first it seems that the text does not reveal the nuance of the white garments (בְּנֶדֶיךְּ לְבָנִים). Certainly the expression "white as snow" from Is 1:18 and Ps 51:9 is not used here, but Ecle 9:8 emphasizes the color of clothes through the root לבן. These clothes must be white in every moment (בְּכֶל-עֵת), in all/each time). Linking this idea with the use of oil when cleaning the head (a symbol of prosperity, hospitality and joy and purity) and the fact that Ps 51:9 identifies cleanliness with the whiteness of snow, we might suggest that the use of לָבֶן in Ecle 9:8 (garments) also expresses the idea of a prototypical white color.

- People of God: Dan 11:35 and 12:10 are part of a panoramic view of the past from the Persian period until a certain time in the last period of government of Antiochus IV Epiphanes, time when the author of the book of Daniel writes. The end of God's anger against his people is approaching, as well as the end of his patience towards his enemies. In both verses one group of the People of God will be purified and bleached, preparing them for the promised time. Daniel himself speaks in 11:35, while Michael does it in 12:10, explaining that in times of persecution and oppression, God must do justice with the martyrs on one hand, and punish deserters on the other hand.

Dan 11:35

וּמְן-הַמַּשׁכִּילִים יָבַּשׁלוּ לַצְרוֹף בַּהָם וּלְבַרֵר וַלַלְבֵּן-עַד-עַת קַץ כִּי-עוֹד לַמּוֹעַד

And some of those who are wise will have wisdom in testing themselves and making themselves clean, till the time of the end: for it is still for the fixed time.

Dan 12:10

יִתְבָּרְרוּ וְיִתְלַבְּנוּ וְיִצֶּרְפוּ רַבִּים וְהִרְשִׁיעוּ רְשָׁעִים וְלֹא יָבִינוּ כָּל-רְשָׁעִים וְהַמֵּשְׂבִּלִים יבינוּ

Many shall be purified, cleansed, and refined, but the wicked shall continue to act wickedly. None of the wicked shall understand, but those who are wise shall understand.

Dan 11:35 and 12:10 show the root לבן is preceded by another root, ילְבָרֵר וְלַלְבֵּן (purifying, cleaning, delousing) in the same binyanim: וּלְבָרֵר וְלַלְבֵּן (Pi'el, Dan 11:35) and יִתְבַּרֵרוּ וִיִתְבַּרוּ (Hitpa'el, Dan 12:10), respectively.

Both binyanim are usually considered "intensive", and while Pi'el is the active intensive form, Hitpa'el is the reflexive/reciprocal form. The root does not reveal its white nuance in these verses, but if we consider the preceding root ברר, we might suggest that the type of white ברך expresses in these verses is an unblemished white, immaculate.

At this point we could conclude this section by saying that here the root לבץ appears in a context of purify and conversion, and is mainly defined as a prototypical white or snowy white, bright and intense. Different elements are used to stress such tonality: the comparison with snow (Is 1:18, Ps 51:9), the presence of oil and daily repetition of cleaning garments (Ecle 9:8), and the use of intensive verbal forms along with the root ברר (Dan 11:35 and 12:10).

3.5. לֶבֶן in the corporal context

The attribution subject of לבן here is a part of the body: The pericope is Jacob's blessings. These are a collection of oracles, aphorisms, allusions to the past and descriptions of the situations in the beginning of the Kings. The dominance of the tribe of Judah, described with great praise in Gn 49:8-12 will actually take place in the time of David. Gn 49:12 presents Jacob's words to Judah. He symbolically speaks about fertility and extraordinary abundance of this tribe, and their generosity. Here, the root לבן

Gn 49:12

חַכְלִילִי עֵינַיִם מְיַיִן וּלְבֶן-שְׁנַיִם מֶחַלֵב

His eyes will be dark with wine, and his teeth white with milk.

NRSV translates this verse as comparative elements: "darker than whine... whiter than milk." However, חַּכְלִילִי, does not imply darkness as opposed to light, but a dark flashing (only of the eyes) in a good sense: brilliant as stimulated by wine. "That's why some translations understand חַבְּלִילִי as dull or red (Cantera-Iglesias, Reina-Valera).

⁶⁷ CANTERA BURGOS and IGLESIAS GONZÁLEZ, Sagrada Biblia, p. 55.

⁶⁸ J. Strong, *The Exhaustive Concordance of the Bible* (Cincinnati: Jennings & Graham, 1890 [accordance electronic edition, version 3.6]).

Here, both לֶבֶּל and לֶבֶּל are symbols of abundance. The dark/dull eyes would be a result of drinking wine, and the white teeth from drinking milk. expresses its nuance by the Hebrew simile "as milk." Biblical dictionaries stresses on the whiteness of milk. Even current dictionaries include white color as part of its denotation: milk is a whitish liquid.

But milk can also have a bluish or yellowish nuance. Whiteness is due to the scattering of light by the colloidal particles of the milk emulsion. Both the fat globules and the smaller casein micelles deflect light, hence contributing to the opaque nuance of milk. But fat globules contain a yellow-orange carotene, enough in some breeds to impart a golden or "creamy" hue to milk. At the same time, the riboflavin can give skimmed milk a greenish color. Even fat-free skimmed milk, owning only case in micelles to scatter light, hands milk a bluish nuance.⁷¹

We thus need to talk, what color of milk is referred to Gn 49:12? Is it white? Bluish? Yellowish? Apparently the verse does not inform us about it. But considering milk symbolizes fertility and prosperity, we may conclude that לבן here appears in contrast of the dark/dull eyes (מַכְּלִילִי). We think that in this verse לבן expresses a clear whitish nuance.

3.6. לְבַנָה as the name of the Moon

We would not like to finish our study of לָבֶּן in the Hebrew Bible without presenting an interesting use of this root. Is 24:23, 30:26 and Songs 6:10 do not include יַבְּחָ as the term used to call the moon. Instead, they use לָבֶנֶת word that is nothing but the adjective לָבֶנֶת in its singular

⁶⁹ Freedman, Eerdmans Dictionary of the Bible.

⁷⁰ CAMBRIDGE DICTIONARY, Cambridge Free English Dictionary and Thesaurus [http://dictionary.cambridge.org/ s.v. *milk*] accessed January 16, 2016, and Real Academia Española, *Diccionario de la lengua española* (23.ª ed.). [http://www.rae.es/ s.v. *leche*] accessed January 16, 2017.

UCSB ScienceLine. 2015. "Why is milk white?," University of California [http://scienceline.ucsb.edu/getkey.php?key=3227] accessed October 24, 2016.

Ugaritic texts have shown that there was a moon deity worshipped under the name yrh; Wood, Millard, Packer, Wiseman and Howard Marshall, *New Bible Dictionary*.

feminine form, conducting a substantive use of the adjective. These verses are calling the Moon "white", like a proper name (White / The White One).

Is 24:23

וְחָפְּרָה הַלְּבָנָה וּבוֹשָׁה הַחַמָּה כִּי-מָלַדְּ יְהנָה צְבָאוֹת בְּהַר צִיּוֹן וּבִירוּשָׁלַם וְנֶגֶד זְקַנִיו בּוֹד

Then the moon will be veiled, and the sun put to shame; for the Lord of armies will be ruling in Mount Zion and in Jerusalem, and before his judges he will let his glory be seen.

Is 30:26

ּוְהָיָה אוֹר-הַלְּבָנָה כְּאוֹר הַחַפֶּה וְאוֹר הַחַפָּה יִהְיָה שִׁבְעָתַיִם כְּאוֹר שִׁבְעַת הַיָּמִים-בְּיוֹם חֲבשׁ יְהוָה אֶת-שָׁבֶר עַמּוֹ וּמַחַץ מֵכָּתוֹ יִרְפָּא

And the light of the moon will be as the light of the sun, and the light of the sun will be seven times greater, as the light of seven days, in the day when the Lord puts oil on the wounds of his people, and makes them well from the blows they have undergone.

Songs 6:10

מִי-זֹאת הַנִּשְׁקַפָּה כְּמוֹ-שָׁחֵר יָפָה כַלְּבָנָה בָּרָה כַּחַמֶּה-אֲיֻמֶּה כַּנִּדְגָּלוֹת

Who is she, looking down as the morning light, fair as the moon, clear as the sun, who is to be feared like an army with flags?

Perhaps the purpose of these verses is no other than evoking poetically the light and clarity of this celestial body, as well as the beauty of the beloved woman. The point of comparison might stress the splendor of the woman with the bright light of a full moon. Taking this into consideration, the term לְבָנָה could be alluding to one of the various nuances the Moon displays while orbiting the Earth: snowy white, grayish white or yellowish/brownish white. And from all of those we have considered that לְבָנָה is probably snowy white in these verses. The primeval nuance expressed earlier clearly evokes the clarity of the full moon.

⁷³ Brown, Driver and Briggs, A Hebrew and English Lexicon, s.v. לְבָנֵה.

4. Conclusions

Through the significant presence of לבן in the MT (29x as an adjective, 5x as a verb and 4x as a substantive), we can certainly see that in all the analyzed verses לבן evokes different hues of white color, depending on the context where this root appears.

This research, focused on different contexts (animal, botanic, illness, purity and even a special form to denote the name of the Moon), shows that the whitish hue may vary depending on the attribution subject and the referents present in each verse:

For animals, לבן denotes different types of white: white-gray for goats (Gn 30:35) and "dominant white" for horses (Zech 1:8, and 6:3, 6). In a botanic context לבן denotes different tonalities, from white (poplar, almond and plane in Gn 30:37) to grayish-white or yellowish white (vineyard, fig tree in Jl 1:7, and even manna in Ex 16:31). The case of illnesses and skin diseases in Lev 13 shows us that לבן denotes here a grayish white or low intensity color, used to describe wounds, skin, and sick hairs. Through the purity context where לבן appears (Is 1:18, Ps 51:9, Ecle 9:8, and Dan 11:35 and 12:10), we have concluded that a "primordial white color" exists in the MT. It is an ideal, prototypical nuance of white, a "snowy-white." A kind of white that is used to denote the sins that have been washed away and there is no sign of impurity on them. In a corporal context לבן expresses a clear whitish nuance (teeth, Gn 49:12). And finally, when denoting the name of the Moon, לבן may be evoking both the clarity and light of this satellite and the beauty of the beloved woman at the same time (Is 24:23, Is 30:26, Songs 6:10). Extratextual sources have proved to be a key element to these tonalities.

This is not the final point of לבן in our study of color in the Hebrew Bible. Advancing in the study of other colors will allow us to rethink certain aspects associated to לבן, like expressions found in the illness context, such as לְבָנֶה אֲדַמְדֶּמֶת (reddish-white). One thing is clear: thanks to all its complexity, לבנה able to evoke a world full of light.

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⁷⁴ Lev 13:19.