

Ancient Color Categories

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Synonyms

[Ancient color terminology](#); [Early color lexicons](#); [Early expression of color in language](#)

Definition

Color terms or partitions of color denotata evidenced in ancient language artifacts.

Words and Hues, Languages and Time: An Overview

The sources for understanding the earliest color terms and categories are from the lands to the east and south of the Mediterranean Sea. Evidence of color categories from *proto-cuneiform*, *Sumerian*, *Egyptian*, and *Akkadian* in Mesopotamia and Egypt (from the end of the fourth millennium BC onwards) is followed (during the second millennium) by *Greek* in the West and *Chinese* in the East. Linguistic terms relating to color are present in all these languages.

What is known about the earliest color categories is derived from artifacts and texts. The use of color goes back at least 100,000 years, but the origins of color vocabulary lie in the period since roughly 8000 BC (=10,000 years ago), and the earliest texts (from ca. 3200 BC) appear millennia later. By comparison with the languages discussed here, virtually all other languages are much younger (e.g., *Hebrew*, *Latin*), or contemporary (e.g., *Eblaitic*, *Hittite*, *Ugaritic*), but linguistically related to the languages discussed here.

Vocabularies in the earliest preserved languages offer representative and definitive evidence concerning the origins of color categorization and its linguistic expression, as well as allowing evaluations of different steps in the process of abstraction and the early linguistic partitioning of perceptual color space. (For linguistic and historical details, see Refs. [1–7].)

Color Terminology

Black and White, Bright and Dark

The earliest color lexicons from languages of the Middle East and the eastern Mediterranean (*proto-cuneiform*, *Sumerian*, *Akkadian*, *Egyptian*, and early *Greek*) have words signifying “dark” and “light” as well as terms denoting something closer to “black” and “white.” Yet like most of the more specific terms for “black” in most ancient languages, even classical *Greek melas* had a semantic range including “black” and “dark” [8] that encompassed some regions described in *English* as “brown.” In general, virtually all of the linguistic glosses for “black” and “white” had category

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central exemplars or “foci,” but some also included a broader “light” and “dark.” Despite some overlap, words similar in meaning to *English* “black” and “white” are different from glosses such as “light,” “shining,” “gleaming,” “sparkling,” and “dark” and “gloomy,” respectively, as the latter glosses appear to not have category foci.

Red

In all ancient languages, there is a very clear tendency for a division of the reddish continuum of color experiences into several different hues. While the color typically labeled “red” in modern *English* language usage was among the earliest distinguished in art and written artifacts, the concept of a category of “red” as a distinct linguistic unit was not dominant in the second and third millennia BC. In addition, there is clear evidence, in both earlier *Greek* and earlier *Egyptian*, of a tendency for a “red” and “white” opposition [3, 6, 9]. Moreover, in *Akkadian* and *Greek*, the word for a generic “red” was frequently used as a synonym for “colorful” or “colored” – and there is evidence suggesting this may be the case for *Egyptian* “red” as well.

Green, Green-Blue, and Green-Yellow

The *Egyptian* (*wādj*) and *Akkadian* (*warqu*) color terms that denote what today is referred to as “green” in *English* are derived from the same linguistic root but do not invariably denote the same color, since the Mesopotamian terms *sig* and *warqu* probably included “yellow” as well. The *Akkadian* *warqu* denoted both “green” and “yellow” appearances and was used to describe both vegetation and gold. The *Akkadian* *warqu* definitely did not mean “green-blue” or “green-yellow” [2]. Although the *Egyptian* *wādj* is related to the *Akkadian* *warqu*, the category centroid, or focus, of the Egyptian term was in “green” and neither “green-yellow” nor “green-blue” – and certainly not “yellow” [4]. By comparison, the *Akkadian* color term *ḥašmānum* has been associated with “blue-green” (as well as “light blue”) [10].

There was no generic word for our “green” in *Greek*, although *xlōros* eventually came to mean something like “green,” but the earliest use of color terms in *Greek* was not specific; green was divided and not dominated by a “green-blue.”

Qīng (“dark,” “green,” or “blue”) has not yet been found in the earliest *Chinese* inscriptions. Since the first millennium BC, *qīng* was used for “dark,” “blue,” and “black”; only slightly later, the word *lǜ*, today’s “green,” also appeared, so that to some extent “green” has since been divided into “light” and “dark” (green) [7].

Blue

Some of the color words preserved in the earliest Semitic languages (e.g., *uqnu*, “lapis lazuli” or “dark blue”) are loanwords for materials from other unknown older languages. Other terms – later shared in different languages – were possibly words (but certainly not the corresponding category “abstractions”) corresponding to “red” and “green” which may have existed in the early Neolithic of the Near East, perhaps 10,000–12,000 years ago, prior to the documentation of language [10].

In *Akkadian* (*uqnu*) and *Egyptian* (*xsbdj*), terms for lapis lazuli designated “dark blue.” In *Greek*, a term (*kyaneos*) for blue appearances is derived from the *Akkadian*. In *Egyptian*, turquoise (*mḥkāt*) denoted “light blue.” *Akkadian* used several terms for “light blue” (including *ḥašmanum*, possibly from the *Egyptian* word for amethyst, *ḥsmn*, which was not used as a color word in *Egyptian*). *Chinese* *lán* is a term for “blue” colors but appears quite late (in comparison to, e.g., “red,” “white,” “black,” “yellow”). As a category, the modern *English* term “blue” evolved to ultimately eclipse the distinction (still preserved in *Russian*) between light and dark blue. Through the second millennium BC, color terms are mostly rooted in materials – most of which were later eclipsed with abstract words.

Table 1 Summary of identified color terms from the earliest known languages

Language:	Proto-cuneiform	Sumerian	Egyptian	Akkadian	Chinese	Chinese	Greek	Greek
Time period	4th millennium	3rd millennium	3rd–2nd millennia	3rd–2nd millennia	2nd millennium	1st millennium	2nd millennium	1st millennium
Color terms:								
“White”	BAR, ?U ₄	babbar	ḥdj	pešum	bái	bái	re-u-ko	leukos
“Black”	?GI	mi, gíg, ĝi ₆	km	šallamu	hēi	hēi	ma-ra	melas
“Bright red”	si/u ₄ , NE ₆	si/u ₄	dšr	sāmu	chi	chi	po-ni-ko-ro	erythros
“Green”	sig ₇	sig ₇	wādj	warqu		qing		xlōros
“Yellow”	?GI	sig ₁₇	nb.w		huáng	huáng	ka-sa-to	zanthos
“Dark blue”		su ₆ -za-gin-na	xsbdj	uqniātum			ku-wa-no	kyaneos
“Light green”						lù		prasinos
Other “Blues”			jrtjw, mfkāt	ḥašmānum, pelum, tukiltum		lán		glaukos
Other “Reds”		ša ₄ , su ₉ , sa ₅	rwdj, mss, tjms, mroš	ruššu, ḥuššu		jiàng, hóng	er-ru-to-ro	rhodeis
“White,” “light,” “bright”	(babbar?)	ara, bar, ḥáda, dalla, kára, kug, píriĝrín, še-er, tán, zalag	ḥdj, tḥnt	pešu	míng, qǐ	míng, qǐ		
“Dark”	(gege?)	dara, ge, gíg/gege, kúkku, mi, šúš/šú	kk.w	šallamu, tarku				

Yellow

Early evidence of terms glossing “yellow” is less common but documented. In *Egyptian*, the word for “gold” (*nb.w*) was occasionally used to represent yellow. The linguistic usage of “gold” (*nb.w*) for “yellow” is not common in *Egyptian*; in Egyptian painting, however, the color yellow was frequently used to depict what was intended to represent gold where required and also the sun on occasion [11]. The usage of gold in *Akkadian* texts with the meaning of “yellow” is rarer than in *Egyptian*, and the form was a simile. In contrast to this earliest material, the later *Greek* words based on *xrusos*, “gold,” were frequently used to designate a color which was most probably “yellow”; significantly, *zanthos* “yellow” is also documented.

Table 1 offers an impression of what can be identified in the way of colors in these earliest languages.

Material Color

One of the greatest obstacles to understanding the nature of the earliest origins of ancient color terminology (in the Ancient Near East) and the origins of abstraction (in *Greek* and *Chinese*) is appreciating that in the earliest usage the ancients did not classify the world according to modern

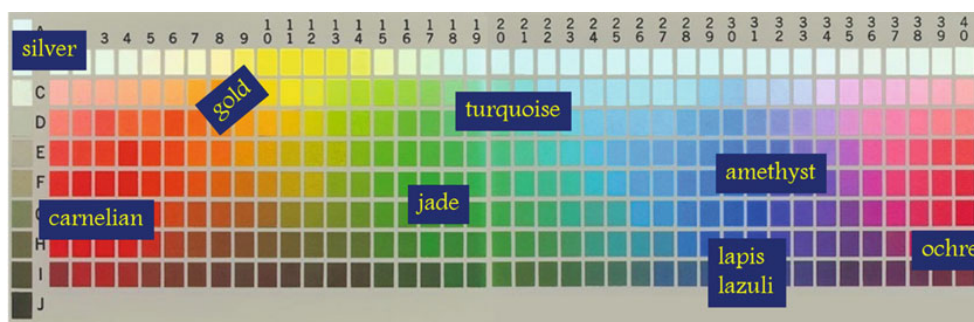


Fig. 1 Examples of physical materials related to ancient color terminology displayed in congruent regions of a Munsell Color Chart

terminological divisions of the diversity of visible light, but rather that they initially used their perceptions of precious materials to express many of the colors they perceived. Thus, their base was the colors of the materials which they then applied to other domains. This eventually created the basis for abstract color terminology. However, the origins render the discussion complicated. (For references for this section, see [10, 11].)

Figure 1 approximates the relationships between color appearances and color terms.

A good example of color abstraction is “gold.” In several languages, the word for “gold” implies color associations mostly from “yellow” portions of color space but can also imply “orange” (and even “red”) areas of color space. In contemporary terms, the color “gold” is generally considered similar to colors in the yellow range. By comparison, ancient users of color lexicons were unlikely to associate “gold” with “yellow” because ancient languages tended to strictly associate the color term “gold” with the physical materials of gold metals. This suggests variation in the underpinnings of modern and ancient concepts associated with terms denoting golden color appearances. Thus, color and material were related – and led to a linguistic partitioning of color in a fashion differing from our own “modern” understanding (as reflected in, e.g., *English*).

The earliest documented use of red (in the form of ochre) dates back 100,000 years – and thus long before the earliest documented written sources. Red and yellow ochre, along with black soot, is easily recognizable in the Paleolithic cave paintings from the Upper Paleolithic, from ca. 35,000 years ago. Green and blue are strikingly absent until tens of thousands of years later.

Stones with material properties producing green hues obtained prominence beginning approximately 10,000 years ago. Blue lapis lazuli appears gradually in South and Western Asia starting in the sixth millennium; red carnelian and blue-green turquoise are seen slightly later, as is jade in Europe and China. Gold and silver appear since the fifth and fourth millennia (respectively) in Europe and the Near East.

Many kinds of precious materials contributed to the concept of “shining” and “gleaming.” Significantly, the word for “white” or “bright” in *Sumerian* (*babbar*) and in earlier *Egyptian* (*hdj*) was the word for silver. In *Greek*, silver played a role in a word for “shining” (*argos*) – with yet another etymology. In his list of Indo-European etymologies, Shields seems to suggest that the abstract terms “bright,” “gleaming,” etc., are the basis for many words that eventually became abstract color words. However, it may be that the evidence suggests the opposite. That is, precious materials (rather than abstract “brightness”) are more likely to be linked to the origins of abstract color words. For example, *Sumerian* *šuba* means “agate” or “precious stone,” but also means “shining.” And *Sumerian* *kug* is the term for the metal silver and “bright” and “white.” Another *Egyptian* word for “gleaming” or “dazzling” can be related to *tjhn.t*, a word later used for faïence, but

probably originally referring to a form of naturally generated glass. In the ancient languages, there are many more words for appearance properties of “gleaming,” “shining,” “brilliant,” “bright,” etc., than can be fully inventoried in the present survey. In general, in ancient languages, ideas of shining and color originated from associations with precious materials although many did not lead to color words.

Yet examples of terms for precious materials that did have color meaning were nevertheless abundant: *Egyptian* *ḥdj* means silver – and has been identified as the basic color term for “white” in early *Egyptian*. The *Akkadian* *sāmu* refers to “carnelian” but is what is interpreted as the basic color term for “red.” *Egyptian/Akkadian* *wādj/warqu* are probably derived (through metathesis) from a widely used (Neolithic?) designation for jade (or a “greenstone”) that later became the basic color term “green” (in *English*; *grün* in *German*, etc.; see below). *Egyptian* *xsbdj* and *Akkadian* *uqnu* meant lapis lazuli but were used for “dark blue” – and the latter is related to the *Greek* *kyaneos* for “blue”; *Egyptian* *mfkāt* was turquoise but used for “light blue.” *Egyptian* *nb.w* was “gold” but used for “yellow.” *Egyptian* *ḥsmn* meant only amethyst in *Egyptian*, but *Akkadian* *ḥašmānum* designated not only a stone but also a “blue-green” or “light blue” and so on.

Of these materials, several eventually led to abstract color words, but usually only in the languages into which they were imported. This process seems to have begun in the second millennium BC, but only began to have systematic effects from the first millennium BC onwards.

Linguistic Issues in Ancient Color Naming

Black and White, Dark and Light

Significantly, a word for “darkness” shared in *Sumerian* (*kuku*) and *Egyptian* (*kk.w*) means that the word must have been of great antiquity, since it fed into two distinct language families. Yet these glosses for “darkness” were not related to the words used for “black” in either language; the origin of “black” in both languages lay elsewhere. The *Chinese* term for black also meant dark but was otherwise used as an adjectival modifier. The *Chinese* term for white *bái* did not signify “bright” or “clear” (which were *míng* and *qī*).

Saliency

It is significant that material, not color, properties of several terms are what was apparently salient throughout the history of the languages. In medieval *Coptic*, the early *Egyptian* for “white,” *ḥdj*, is replaced by *ūbaš* (of which the etymological meaning is to “shine”). The salient meaning of *ḥdj* lasting through *Coptic* is not “white,” but the material “silver.” In *Chinese*, the term for “red” is not salient in the sense described by Berlin and Kay [12], since the common *Chinese* word in the first two millennia of the language is *chì* and not *hóng* (which later replaced *chì*). In Mycenaean *Greek*, the main word for “red” is *po-ni-ko-ro* (later *phonikos*, a loanword referring to the Phoenicians who furnished the red dye) rather than *e-ru-to* (which gave rise to the later basic color term *erythros*).

Etymologies, Materials, and Loanwords

Egyptian and *Akkadian* “green” are most likely the same word and probably at the root of *English* “green” (sharing the radicals *r* and *q/k/g/ġ*). An argument could be made for the diffusion of “red,” where *Akkadian* *ruššu* is probably the same as *Greek* *erythros* and *Italian* *rosso*. Thus, these are ancient concepts that have moved between languages.

As loanwords, precious materials also play an important role. In *English*, lapis lazuli has contributed the words “azure” (derived from *Persian* *lazuward* for lapis lazuli) and “cyan”

(originally a loanword imported into *Akkadian* as *uqnu* for lapis lazuli and subsequently to *Greek* *kyaneos*).

Precious Materials, Loanwords, Abstraction, and Grammar

The classical *Greek* term *kyaneos* is derived from *ko-wa-no*, which was probably the Mycenaean *Greek* word for glass paste. The word *ko-wa-no* itself was derived (via *Ugaritic* or *Hittite*) from *uqnu*, the *Akkadian* for lapis lazuli (itself a loanword in *Akkadian*). In the Aegean *ko-wa-no*, the Asian *uqnu* was used to designate the artificial material glass (as opposed to the semiprecious stone lapis lazuli). Thus, this process of linguistic exchange apparently gave birth to the abstract color term *kyaneos* – but only in *Greek* of the first millennium BC. Earlier, its primary role was that of designating a precious material which gave birth to the color term. In *Akkadian*, the nouns lapis lazuli and cornelian appear regularly together in the same texts, along with *huršāsu* and *hurāšānū*, “gold” and “golden.” In Mycenaean *Greek*, this same word appears as *ku-ru-so* “gold,” and later as *Greek* *xrusos*, where it is used as a color word – even though *Greek* had a word for “yellow” which can be traced back to the second millennium.

In *Egyptian*, the first reference to the “sky” as having a color is in *Coptic*, the latest stage of the language, in the first millennium AD. Prior to this, the sky was described as being turquoise or lapis lazuli (rather than having a color itself). Although vegetation was known to be “green,” the word for green is frequently associated with a classifier signifying a stone. Lapis lazuli was treated as a precious stone in these societies, only gold and lapis lazuli had prices higher than silver (which served as money). The statues of the gods in the temples were not made of granite, but rather of gold, silver, lapis lazuli, turquoise, ivory, etc. These materials were the origins of color words.

Although often considered “abstract,” the adjectives for colors in *Sumerian* were never attached to the *nam* abstract determinative. Given the difficulties of understanding adjectives in *Egyptian*, Schenkel used verbs as his criterion, i.e., *ḥdj* “to be white,” *km* “to be black,” *dšr* “to be red,” and *wādj* “to be green.” It is probably true that these words were verbs, but in some cases, they are also used as adjectives. The noun *xsbj* “lapis lazuli” “dark blue” was a metaphor, a simile, and an adjective, but not a verb. The same is true for *mškāt* “turquoise” used for “light blue.”

In *Akkadian*, color words are all adjectives. However, in the case of *uqnu*, the principal meaning is the noun “lapis lazuli”; an identical adjective means “lapis lazuli color(ed)”; *uqnātu* is an adjectival form with the same meaning. The same is true of *sāmtu* “cornelian” and *sāmtu* “redness” and *sāmu* “red.”

In *Chinese* and *Greek*, color words are largely adjectives. Some of the *Greek* terms can be traced back to Near Eastern materials. Of the languages discussed here, *Chinese* is the only language with a completely abstract color vocabulary, where hues and terms match, more or less. Although silk appears as a component in the writing of some color words in *Chinese*, even as a component, jade played an even more marginal role. Thus *Chinese* color terms never bore primary relations to precious, natural object categories; the evolution of *Chinese* color vocabulary differed fundamentally from that of the West – but the results are similar to those in *Greek*, implying diffusion.

The Mediterranean languages usually had a word for “color” as a phenomenal experience; however, the words were not restricted to a single meaning in terms of hue. In *Egyptian*, the word *jwn* is probably derived from the designation for a “vein” of ore (meaning the material color which was visible), but it also meant “character” of a person in the figurative sense (what was hidden under the surface). By contrast, although later *Chinese* has such a word, in the earliest *Chinese*, no term for color as such has been discovered; in later *Chinese*, the suffix *-si* is frequently attached to color words.

Theory of Ancient Color Term Emergence

Debate regarding the sequence of emergence in early color terminology is constrained by limited artifact sources and historical evidence of ancient color term sequences. Moreover, color term emergence theories (see also Encyclopedia of Color Science and Technology entry on “► [Berlin and Kay Theory](#)”) that describe color language hierarchies found in contemporary and very recent language data cannot easily be applied to ancient color term emergence as they are based primarily on modern observations of modern phenomena and therefore do not take account of the relevant ancient data discussed here. This makes emergence theories of modern color lexicons problematic as models of both ancient partitions of gradient color continua and ancient color category acquisition sequences.

Warburton [10] argues that the earliest acquisition sequence was not an issue related to individual specific languages, but rather a shared phenomenon based on shared terminology, concepts, and materials. In this scheme, “ochre” (as dark red) will have been the earliest color used (in the Paleolithic, 100,000 years ago), followed by “greenstones” (in the earliest Neolithic, from 10,000 years ago), and “gold,” “silver,” lapis lazuli,” “carnelian,” and “black” (in the following late Neolithic and earliest Bronze Age) and then by turquoise (before 4,500 years ago).

Of extreme importance is that in ancient Egypt, the sun is occasionally called “red” and painted as such. This does not imply a “red-yellow,” but rather the use of a single term to designate different colors, as with the Mesopotamia “green” used for yellow and green. The reasons behind this do not lie in perception so much as expression (based on gold, bronze, sun, vegetation, etc.).

Loanwords and common etymologies play important roles in emergence of ancient color terms in that, as detailed above, many of the earliest words are related to designations of materials. Terms for “white” and “black” do not stand at the origins, and the red, blue, and green ranges were partitioned before being lumped together. Only later did the further color words begin to crystallize (in the last two millennia). The concept of “blue-green” is not documented in the earliest languages; it appears only recently in *Chinese* and does not universally evoke color significance among informants [7].

Color in Art and Language

Of particular interest for the understanding of the evolution of color terminology is the fact that for *Egyptian*, *Akkadian*, and *Sumerian* (which all date to before the middle of the second millennium BC), it is agreed that the color terminology did not match the colors that were used in the contemporary art. In contrast to this, already for Mycenaean *Greek* and classical *Greek* (thus, from the second half of the second millennium BC onwards), Blakolmer is persuaded that “it is hardly surprising that in the use of color, language and representative art are two sides of the same coin” [6]. Thus, in comparing Bronze Age paintings with Roman-era painting, for Blakolmer, the use of color in painting reflects the development of a vocabulary in the Greek language. By comparison, in *Egyptian* art, there are many colors used in painting that are not accounted for by any kind of vocabulary [11].

Summary

Precious materials played an important role in the development of abstract color terminology, usually in the form of loanwords during the period well after the earliest recorded languages.

Warburton suggests that the materials dominated and that the concept of abstract color terminology never developed in the ancient Near East; yet the flow of loanwords meant that abstract terminology may have already been embryonic in the Aegean by ca. 1400 BC [11].

There is a clear difference between the descriptive uses of color in literature and economic texts. Although the sources for various languages are not equally balanced in terms of genre, it is significant that there is little evidence of color from the earliest administrative texts in proto-cuneiform whereas color terminology appears in the administrative texts written later in all other languages (where it also appears in other genres of text).

The gradual emergence of color as a means of categorization was thus a historical development that contributed to the emergence of abstraction in relatively recent historical times. In the art of the Paleolithic and Neolithic societies, few colors appear, whereas there is an abundance of color in the Near Eastern Bronze Age – well beyond what appears in evidence from language artifacts. By comparison, in the Greek world, the use of color in art and language marched hand in hand. It is clear that the Greeks acquired color concepts and terminology from the Near East through the diffusion of materials, ideas, and terminology. These in turn influenced the color lexicons of more recent languages.

Cross-References

- ▶ [Berlin and Kay Theory](#)
- ▶ [World Color Survey](#)

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