Basic Colours in the Bible

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Introduction

The Bible, its meaning, its interpretation and its translation have been studied more than any other book in history. Prior to the introduction of digital technology, it was one of the few books to be subject to the systematic cataloguing of its words, so that we can easily find all instances of a given word, whether in Hebrew, Greek or English, in works such as Strong (1894), for example. In the digital age, its value as a religious text means that hundreds of translations are freely available side by side on websites where these searches can be made almost instantly in any available translation. This can then be cross-referenced to other uses of the same word or the corresponding passages in other languages and translations. This now makes the Bible a unique resource for the study of many branches of linguistics. Furthermore, the substantial period over which the Bible was written down, and the even longer period over which the content was created, make it important for the diachronic study of linguistics. On top of this, the long history of translation, from the Septuagint at the beginning of the Common Era to the present, allows diachronic analysis, even of the translations. In addition, it would have been in many cases the only book that an illiterate person would have heard read regularly, and the language of the Bible would be important linguistically precisely because these people were exposed to it every Sunday.

Colour vocabulary has been extensively studied by linguists, not only because it is inherently important to our culture and language, but because it has proved to be a good test-bed for theories and

methodology that might be more widely applicable. In particular, Basic Colour Theory (BCT – conventionally this stands for both Basic Colour Theory and Basic Colour Term) distinguishes between core vocabulary and the plethora of rare terms, specialized terms, metaphors and so. This is an approach which could be worth applying to almost all other semantic fields.

In this paper I shall first review existing linguistic literature on colours in the Bible and outline BCT. Then I shall consider three specific examples of basic colours – from early, middle and late stages in the BCT model. I shall extend existing work by including examples from the New Testament, which will add text originally written in Greek to that originally written in Hebrew; I shall consider the translations into English, and I shall concentrate on the question of whether and when particular terms, be they Hebrew, Greek or English, are BCTs or non-BCTs, and whether this affects their interpretation. These examples will also show how, in a corpus written and translated over such a long period of time, even a single word can change its meaning from the beginning of the Bible to the end and from an early translation to a modern one. I shall conclude by discussing to what extent the distinction between basic and non-basic terms is important for interpretation and translation.

This paper is intended to consider only the linguistic interpretation of terms in the Bible. Whilst for a theologian this would be the first stage in interpreting the Bible – the subject traditionally known as hermeneutics – I will ignore theological considerations and leave subsequent stages to the theologians.

Technical notes

References to editions of the Bible, dictionaries and corpora are cited using traditional abbreviations or names. These are listed at the beginning of the bibliography.

Transliteration standards for Hebrew are not helpful for those not familiar with them, so I have used a very broad IPA[1] transcription. Those not familiar with IPA should note: /'/ shows stress on the following syllable, /:/ makes a vowel long, /θ/ as in **th**in, /j/ as in **y**et, /x/ as in lo**ch**, /ə/ as in **a**bout.

My principle source for the English Bible has been the King James Version (KJV, 1611), on which Strong's concordance is based. Where there are pertinent differences between versions, these are discussed in detail. For the Hebrew Bible I have used the Westminster Leningrad Codex (WLC, 1008). For the Greek New Testament I have used the Stephanus Textus Receptus (TR, 1550). For all of the above I made use of the online versions available at Bible Hub (2004-2014). For the Greek translation of the Old Testament, I have used the Septuagint (LXX, 2nd-1st century BCE), in the version available with e-Sword (Meyers, 2013), although it can be found online at LXX (2004).

Conventionally, colour terms are italicized, but their meanings are not. However, when considering the correspondence between terms in ancient languages and English the distinction between a term and a meaning becomes unclear and I have italicized all terms that could or might be considered colour terms, even in quotations, where it is particularly useful to be able to pick out such terms.

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[1] International Phonetic Alphabet: the *de facto* modern standard for showing pronunciation.

Existing linguistic work on colours in the Bible

The main work on colours in the Bible is Athalya Brenner's *Colour Terms in the Old Testament* (1982), based on the PhD she submitted in Manchester in 1979. With the obvious exclusion of the New Testament, and without considering how the terms have or should be rendered in the Koine (/ˈkɔɪniː/ 'Biblical Greek' (OED, 1933)) or modern languages, she considers a theoretical framework for analysing the colour terms, including the application of BCT. She considers previous work, which, necessarily, does not consider the subject in the light of BCT. As she notes (p. 14) and I discuss in the next section, the vast majority of work developing and testing the BCT has been done on living languages. This means that little has been done to develop her work on colours in the Bible in the light of understanding and acceptance of BCT since her work.
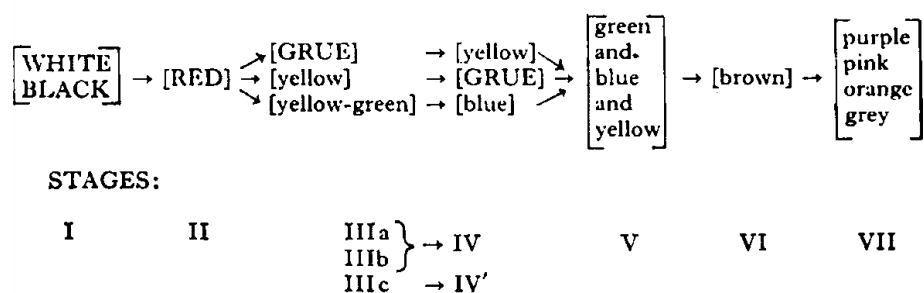
Basic Colour Theory

Many authors, from Aristotle through Newton to the present day, have presented theories of colour that describe the physics, physiology and psychology of colour, but the theory discussed here concerns the linguistics of colour. It is dependent in part on the modern understanding of colour, but it is not a development of any of these other theories.

In their seminal work, *Basic Color Terms: their Universality and Evolution*, Brent Berlin & Paul Kay (1969) sought to argue against the then-popular notion of 'extreme linguistic relativity' as proposed by Gleason (1961) amongst others. In the case of colour, this would imply that different languages would carve up the colour space in arbitrary, and hence completely different, ways. Berlin & Kay suspected that the ease with which colours could be translated from one language to another contradicted this arbitrariness. They realized that there is a

huge array of specialized colour terms (such as *raspberry* and *deep blue-green*) that do not constitute basic colours and so they first set out to establish the notion of a 'Basic Colour Term' – BCT. After investigation and refinement they defined a BCT as a colour term which is, so far as we are concerned,

1. monolexemic, that is not made up of parts that can be understood separately such as *green-ish* or *greeny-blue*;
2. not a subset of another colour, such as *azure*, which most English speakers would define as a type of *blue*;
3. not semantically restricted, so not *bay*, which is generally only used to describe horses.

When we apply these criteria to modern English as an example, the eleven BCTs are *black*, *white*, *red*, *green*, *blue*, *yellow*, *brown*, *pink*, *orange*, *grey* and *purple*. Analysis of a broad range of living languages suggested that all languages in technologically advanced societies had[2] a similar set of eleven colours, with less advanced societies having fewer. However, evidence from these languages with fewer colours, as well as other, language-internal evidence, suggested that these colours were acquired in a constrained order. The model was developed and by 1975 it was as follows:

$$\begin{bmatrix} \text{WHITE} \\ \text{BLACK} \end{bmatrix} \rightarrow [\text{RED}] \begin{matrix} \nearrow [\text{GRUE}] \\ \rightarrow [\text{yellow}] \\ \searrow [\text{yellow-green}] \end{matrix} \begin{matrix} \rightarrow [\text{yellow}] \\ \rightarrow [\text{GRUE}] \\ \rightarrow [\text{blue}] \end{matrix} \begin{matrix} \searrow \\ \rightarrow \\ \nearrow \end{matrix} \begin{bmatrix} \text{green} \\ \text{and} \\ \text{blue} \\ \text{and} \\ \text{yellow} \end{bmatrix} \rightarrow [\text{brown}] \rightarrow \begin{bmatrix} \text{purple} \\ \text{pink} \\ \text{orange} \\ \text{grey} \end{bmatrix}$$

STAGES:

| I | II | IIIa, IIIb → IV, IIIc → IV' | V | VI | VII |

(Kay, 1975, p. 257)

In this chart, the words in CAPITALS represent 'macrocolours', terms with broader meanings than the modern words, which then become

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[2] At the time: Forbes (1979) suggests the situation is still changing.

more specific as terms are added. GRUE is a neologism representing a colour between the modern English *green* and *blue*. Carole Biggam (2012) provides a full analysis of the development of the field, and the model in particular (pp. 70-85). The model is still generally considered valid, although it has continued to be developed, with, for example, *grey* being recognized as more variable than shown here and some languages developing a twelfth colour, but these do not affect the languages we will be considering here, except to note in passing that modern Hebrew has a BCT for *light blue*. Biggam also discusses a methodology for diachronic analysis (pp. 152-168) but this chapter also shows there is much work to be done.

This model suggests that languages will have had fewer BCTs in their early history and will have progressed across this chart over time. It is therefore necessary to consider the state of Hebrew and Greek at the times the different parts of the Bible were written.

The source text

The Bible is, as far as we are concerned, a corpus of text covering a large range of subjects and registers, written by a large number of authors over a substantial period of time in two main languages. The Old Testament was written over perhaps 1000 years. Whilst there are other texts available in similar dialects, the comparatively large amount of work done on the Bible to date makes it particularly suitable as a corpus for study. One day, further analysis with a corpus much larger than the Bible will be as easy.

The earliest parts of the Bible had a long oral history before being written down and can therefore be expected to retain some lexical features from these earlier times. The language will have evolved over this time and we can expect the colour vocabulary to evolve with the rest. The dating of both the events and the writing of Exodus (as a

pertinent example) is still the subject of intense debate and speculation. All that can be said without getting involved in the debate is that the events probably occurred in the second half of the second millennium BCE and were probably written down in the sixth and fifth centuries BCE. The main translation into Koine Greek was supposedly made by about seventy scholars and is thus known as the Septuagint, or LXX. The language is broadly similar to the New Testament which is also written in the Koine, probably in the first two centuries CE. There have been thousands of translations of the Bible into hundreds of languages throughout the subsequent millennia.

Translation theory

This is not a paper on translation theory. In particular, I do not intend to analyse possible translations in terms of merit according to one theory or another. Rather, these examples of various different translations for a given term might inform the debate. Specific translation practices will be noted and it is worth recognizing them for what they are when they occur. Most notably, explicitation involves supplying more detail in the translation than in the original, such as a phrase for a single word, so as to make clear something that the reader in the target language would not understand either because of a lack of familiarity with concepts in the source culture or because the word has no suitable equivalent. Where the intended meaning is not clear it is not possible to ask the users of these dead languages, so there is a particular danger with historic texts that more will be read into the original than can be justified. This must be balanced against the danger that insufficient explicitation will lead to a failure to understand something that was in the source text.

I now examine three examples of colour terms in the Bible, and consider whether and when they are BCTs. We will see that the early

(Stage II) BCT undergoes interesting developments at the beginning of the Bible, but the middle (Stage III) BCT evolves about the time of Jesus and that the late (Stage VII) colour does not exist until relatively recently, thus giving ongoing problems for modern translators.

Stage II – אָדֹם

Many people, if asked to think of something referred to as *red* in the Old Testament will think of the *Red* Sea. The word in Hebrew has nothing to do with *red*. It is *a* word for *red* in the Koine (ἐρυθρός ⟨*erythros*⟩, as in *erythro*[cyte], cognate with *red*), that was once the BCT for *red* (as its cognates in many languages — *rot*, *rouge*, etc. — show), but it had ceased to be a BCT by the time of the Greek translation, replaced by πυρρός ⟨*pyrros*⟩ (see below). So it is, in fact, a non-colour in Hebrew, a non–BCT in the Koine and, by chance, a BCT in English.

Elsewhere in the Old Testament the term translated as *red* is אָדֹם /aːˈdoːm/. Brenner (1982, p. 49) has already established that it is a BCT, as it remains to this day. It describes pottage, the setting sun, a heifer, a person's face, clothing, sorrel and horses. It is translated into Greek as πυρρός ⟨*pyrros*⟩ and into English as *red*. Its use in the New Testament is therefore not problematic in itself but this group of horses will become particularly significant in the next section.

Stage III – Χλωρός

Brenner (1982, pp. 53, 54, 105) considers there to be two terms in the *yellow–green* region contending for the Stage III title during the period the Old Testament was written. But they are both rare. One, צָהֹב /tsaːˈhoːv/ occurs three times in one chapter, referring only to hair, and translated into Greek with the verb from ξανθός ⟨*xanthos*⟩ (cognate

with *xantho*[phyll]) *yellow*. This word is not found in the New Testament.

The other, יֶ֫רֶק /ˈjɛrɛq/ occurs six times in various places, generally translated into English as *green* (but *grass* once) and always referring to living plants but translated into Greek variously as χλωρός ⟨*chlōros*⟩ *green–yellow* (three times), χορτου ⟨*chortou*⟩ (cognate with *garden*) *of a garden* or *of vegetation* (twice), χλόη ⟨*chloē*⟩, *a young shoot* (once). Since it is not clear if the Hebrew word is a BCT at this stage, it cannot be said if a translation with a colour word or a plant word is preferable, but the inconsistency in the Greek may seem odd at first, since all the references are to similar things, namely *green* plants. It is, however, a symptom of the diverse circumstances in which different parts of this translation were made, and scholars have used this sort of discrepancy to analyse the history of the long translation process.

We have seen two *green–yellow* words in Greek (taking the translation of the Old Testament and the original New Testament together), so is either a BCT? Ξανθός ⟨*xanthos*⟩*,* which does not appear in the New Testament, is defined as '*yellow*, of various shades, freq. with a tinge of *red, brown, auburn*' in a 260-word entry (excluding use as a proper noun) in Liddell and Scott (L&S, 1940) but the first and major part of this is taken up with hair, women and horses. What remains is described as 'all kinds of objects' but is in fact entirely restricted to cooked animals and animal derivatives, apart from one reference to wine and one to gold. This highly restricted set of referents means, therefore, that it cannot be said to be a BCT. Χλωρός ⟨*chlōros*⟩ has a longer, 330-word entry in the same dictionary, giving first a long and varied list of referents: petty wares, whey, serum, glen, reed, wheat or barley, plaster, type of stone, sea–water, other water, paint depicting a river, honey, sand, egg-yolk, saliva, sputum. After this there is shorter list of potentially metaphorical and still diverse senses, as would be

normal for any BCT: pale, pallid, bilious-looking, fresh, unripe. On this evidence, this word does meet the criteria for a BCT. John Lyons argues that:

> We have to accept that it may be impossible to establish a definitive list of [Berlin & Kay]-basic color terms for Ancient Greek, Homeric or Classical, in the way that Berlin & Kay and their followers have done for a large number of modern languages.
>
> (Lyons, 1999)

Since Berlin & Kay used field work as evidence it is clearly not possible to use the same methodology, but it does not mean we cannot find other evidence and form an opinion. Lyons accepts that χλωρός ⟨*chlōros*⟩ is a term that can cover both *green* and *yellow* in English and he does not find any other candidate for a fourth or fifth BCT and so I conclude, as far as we can tell from the evidence, that χλωρός ⟨*chlōros*⟩ is the fourth of four BCTs in Classical Greek, in the broad sense that includes the Koine.

This word occurs four times in the New Testament. On three occasions it refers to grass and is *green* in English, as befits a BCT describing grass. The fourth occurrence is a horse, but with one of the strangest ranges of translation into English in the whole of the Bible. It is *green* (Contemporary English Version), *pallid, sickly-looking* (Complete Jewish Bible), *pale-colored* (Easy-to-Read Version), *pale [or pale green]* (Expanded Bible), *pale green [a greenish gray]* (Holman), *sickly green in colour* (J.B. Phillips), *cream-white* (Knox Bible), *colorless, sickly pale* (The Message), *ashen [or sickly pale]* (New American Standard), *light colored* (New Life Version), *greenish pale* (Orthodox Jewish Bible) and *colour of ashes* (Worldwide English), all of these translations being available at http://biblehub.com/revelation/6-8.htm (Bible Hub, 2004-2014). It has already been argued that the Greek word is a BCT so it should be easy to translate. Then why do translators try so many different ways to explicitate it? It is the last of a set of four horses:

> ²And I saw, and behold a *white* horse; […] ⁴And there went
> out another horse that was *red*; […] ⁵And I beheld, and lo a
> *black* horse; […] ⁸And I looked, and behold a *pale* horse.
>   Revelation 6, edited (KJV, 1611)

and is a clear and acknowledged reference to Zechariah, where we met
the *red* horses in Stage II:

> In the first chariot were *red* horses; and in the second
> chariot *black* horses; and in the third chariot *white* horses;
> and in the fourth chariot *grisled and bay* horses.
>   Zechariah 6:2–3 (KJV, 1611)

The first three horses/groups of horses are not problematic. The ones
in Zechariah are the BCTs in Hebrew for *black*, *white* and *red*, and they
are translated into Greek with BCTs as well: λευκός ⟨*leukos*⟩ (from
which *leuko*cyte) *white*; πυρρός ⟨*pyrros*⟩ (cognate with *fire*, but by this
time referring to egg yolk, urine, hair, horses and so on); μέλας ⟨*melas*⟩
(cognate with *mela*[nin]). Crucially, these are the same terms used in
Revelation.

But the fourth colours in Zechariah and Revelation are a
problem. The Hebrew word in Zechariah is a hapax legomenon – a
word that occurs only once – and it has baffled scholars, resulting in
many translations, such as ποικίλος ⟨*poikilos*⟩ *dappled* in Greek and *bay*,
grey or *dappled* in English It is clearly not a BCT, but since the other
three terms are plausible for horses (as *red* would have had a very broad
definition at that time and it is used elsewhere for a horse), it could
well be a plausible horse colour that is not *black*, *white* or *red*. Since
scholars do not know what it means we cannot draw conclusions from
analysis of the translations.

We do not know whether the author of Revelation had a Greek
translation of Zechariah available (and if so if it was a surviving one or a
lost one) or what he might have understood from the Hebrew term. It
is quite possible that he had seen χλωρός ⟨*chlōros*⟩ in a translation of
Zachariah as it is a reasonable equivalent, but, for whatever reason, he

chose to use this word which I have already argued was the fourth of the four BCTs in the Koine. Indeed, since the colour is not a specialized horse term, it only makes sense here as a BCT. Thus he produced a consistent set of four BCTs that everyone would have understood as a set of similar terms, where Zechariah does not appear to be clear or consistent. I would argue, therefore, that only a BCT makes sense as a translation. It is clearly the fact that this broad term does not correspond precisely with any term in English that has led to this attempted explicitation. I say 'attempted' because rather than give the meaning precisely they have not given the meaning at all – none of the 'precise' translations has the sense of 'somewhere in the range from *green* to *yellow*' that the Greek does, and some carry extra imagery such as 'ash' that is difficult to justify. The correct translation is clearly *green* or *yellow*, since these are the English BCTs that approximate most closely with the Greek BCT, but which? Although some, such as Lyons (1999, p. 60), argue that χλωρός ⟨*chlōros*⟩ is more *green* than *yellow*, inseparable from its sense of unripeness, I see no evidence of this in L&S (1940). Since the language covered in this dictionary encompasses the Koine, with the Koine towards the end, chronologically, I consider that this is evidence that this word had become a BCT in the Koine. I interpret the predominance of *green* things in the New Testament as a chance consequence of the small number of coloured items described. Despite some of the varied interpretations of artists, who will generally be interpreting a translation (and the reader is invited to search the internet for images of 'four horsemen'), the four Greek colours are all plausible for a horse – πυρρός ⟨*pyrros*⟩ could cover *roan* and χλωρός ⟨*chlōros*⟩ could cover *bay*. *Yellow* could also cover *bay* but *green* does not describe any plausible horse.

Yellow is the most satisfactory translation for the colour of this last horse.

Stage VII – Purple

To English speakers in the twenty-first century, *purple* is just another colour. Anyone who wants a *purple* shirt or *purple* fingernails or *purple* walls in their bedroom can have one. It is no more expensive than *red* and does not mark one out as regal or rich. Ball (2002) shows how this came about, but it was not always like this.

> And he made the ephod of gold, *blue,* and *purple,* and *scarlet,*
> and fine twined linen.
>
> (KJV: Exodus 39:2)

The word used for *purple* here, אַרְגָּמָן /argaːˈmaːn/ is an expensive and prestigious dye used for cloth. It occurs about 40 times (depending on the interpretation of possible compounds). It always occurs qualifying cloth, almost always with these other words, that are in fact dyes, and frequently with words such as *fine* and *pearl.* It is used to describe a king, a temple and a rich man. The term for *blue* here, תְּכֵלֶת /təˈxeːlɛθ/, is usually translated as *blue,* possibly because it has to be distinguished from *purple,* but Brenner treats it as another shade of *purple.* There would have been a number of suppliers, possibly using combinations of dyes, so we cannot be definite about the colours, although we can be definite that they were both seen as prestigious dyes. I shall examine אַרְגָּמָן /argaːˈmaːn/ in detail. As תְּכֵלֶת /təˈxeːlɛθ/ shares this feature of being a non-BCT translated as a BCT, I shall not consider it further, except to mention that it went on to become the BCT for *light blue* in Modern Hebrew. The third colour term, שָׁנִי /ʃaːˈniː/ is also a dye (Brenner, 1982, p. 143), namely *carmine/crimson/cochineal,* but by contrast with the other colours is translated as *scarlet,* which is not a BCT in English, usually used for

cloth or specifically for this dye. An example of *purple* from the New Testament is

> And a certain woman named Lydia, a seller of *purple*, of the city of Thyatira, which worshipped God, heard us: whose heart the Lord opened, that she attended unto the things which were spoken of Paul.
>
> (KJV, Acts 16:14)

The obvious question here is how can you sell a colour, but the previous discussion suggests the answer. *Purple* is not a colour, but a garment dyed with an expensive dye.[3] Despite this passage being written perhaps 700 years after the previous example, the meaning is similar. Πορφύρα ⟨*porphyra*⟩ (which occurs as a compound meaning *purple*-seller) is clearly not a BCT, but a term applied to cloth or dye implying great wealth and prestige. We can assume, therefore, that Lydia was a wealthy merchant selling to the wealthy, not a street-vendor of cheap clothing, a point not clear from the English translation.

It might seem from the above that I consider the *purple* in the KJV to be a mistranslation, but all is not what it seems. The OED has a 17,000-word entry for *purple* (OED, 2007, 1. adj. and n.), almost all of which is taken up with non-BCT senses. Reading the range of senses and the attestation shows that most senses are almost always associated with cloth and with wealth and prestige. The modern sense, in which it is just a colour that you could paint on your wall, and in which it is used when it is shown as a stage-VII colour in BCT is hidden away in senses A 2.a and B 2. Here, of the eighteen attestations after 1611 (the date of the KJV), and with the notable exception of the three that refer to the ancient world, only one refers to cloth and none imply wealth or prestige. But of the nine attestations prior to 1611, only the last, in

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[3] Alternatively the dye itself – it is not agreed which she was selling but the difference does not concern us so I shall not distinguish the two.

1605, does not refer to cloth, something valuable or someone prestigious. Before 1605, one refers to amethyst (which, as a gemstone, is prestigious) and the rest refer to cloth or dye. The quotation from Sir Philip Sidney, not that long before the KJV was written, is particularly illuminating:

> Sir P. Sidney Arcadia (1593) v. sig. Qq3, Not that *purple*
> which we now haue..but of the right Tyrian *purple*, which
> was neerest to a cullour betwixt our murrey and skarlet.
>   (OED, *purple* (2007): B 2 (a1586))

This shows that he has recognized a change in the usage of the word.

It can never be possible to be entirely sure how common different usages were in the past, as we only have a restricted corpus of what has been written down and preserved. It is, however, worth seeing what trends we can observe in a modern digital historical corpus of English. I have used Early English Books Online (EEBO, 2001–). For present-day English, I have used a random sample from the British National Corpus (BNC, 2007): the reader is invited to enter the search term '*purple*' at <ins>http://www.natcorp.ox.ac.uk/</ins> to see that *purple* is now a BCT.

From this it can be seen that in 1500 *purple* is used almost exclusively for cloth/dye for wealthy or prestigious people/gods. The referents are frequently far off in time (e.g. the Bible, ancient Greece and Rome) or in place (e.g. India).

Target date	1500	1600	1700	2000
Actual dates	1473-1538	1596-1600	1699-1700	1984-1994
Corpus	EEBO	EEBO	EEBO	BNC
Sample size	100	100	100	100
Cloth/clothing/dye	77	53	54	17
Prestige/Expense	61	50	50	10
Either of above	96	68	65	21
Medicine (inc. plants, skin)	4	2	5	11
Plants (not medicinal)	1	10	3	22
Sin, whoredom, inferiority	5	9	5	2
Fresh blood, gore	2	8	7	0
Sky	0	0	2	8
Misc. (none of above)	3	14	19	39

Table 1: Range of meanings of *purple* in English[4]

The result is that the ordinary person would see these things as prestigious and unattainable, and moreover, they would not actually know what colour they were.

By 1600, the range of referents is growing, with fewer having any sense of prestige and the use for blood and gore increasing. Also noticeable is the growth of uses in a technical sense, such as in medicine. This clearly points towards the word becoming a BCT, and indeed it may be the same cultural change that leads to these uses and that leads to the expansion of the set of BCTs. There is little further change by 1700.

By 2000, and with the notable exception of texts that describe how the word used to be used or are quoting from or referring to former times, there are virtually no references that imply prestige; a few refer to cloth, but generally the range of referents is vast. *Purple* is, by now, an unambiguous BCT.

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[4] Each sample contains 100 records, excluding homonyms and unclear records, so these numbers are percentages. The categories overlap so the totals are more than 100. Variants of *purple* were included in the EEBO searches.

The colour of *purple* also seems to have changed. Blood was sometimes *purple* in 1500 but it is not *purple* to us. The OED explains

> Any of various colours ranging in shade between *red* and *violet*. (a) A shade of *crimson*, spec. (also Tyrian *purple*) the colour of a dye obtained from various gastropod molluscs […] and traditionally used for fabric worn by people of imperial or royal rank […] (now hist.). (b) Formerly: †any of various shades of *red* […]. (c) Now: a colour obtained by mixing *red* and *blue* in various proportions, and usually containing also some *black* or *white*, or both; esp. a deep rich shade between *crimson* and *violet*.
>
> (OED, *purple*, 2007, B.2)

This shows the evolution of the colour of the term over the same period that it develops into a BCT. Wherever there is a lexical change linguists will seek a reason, be it an external influence, a new concept developing that requires a term or an existing term ceasing to be available. Since a BCT is not the same concept as a non–BCT, even if the referents are the same in colour range, then the evolution of a new BCT is a good reason for needing a new term. There were several candidates and no over-riding merits of any one, as is shown by the list of English words whose cognates have been adopted in different languages, such as *lilac* (German), *mauve* (Greek) and *violet* (French). Equally, the cognates of *purple* have gone their separate ways, becoming, for example, the word for *cerise* in Modern Greek (Androulaki, et al., 2006). That *purple* was chosen to be mapped onto the new BCT concept may explain its development to the colour range we now associate with it, since the BCT is invariably the colour we now call *purple*.

Thus we can say that, to the translators of the KJV, which was started in 1604 and published in 1611, *purple* was probably still regarded as a term for coloured cloth or dye, almost always associated with wealth and prestige. As such, it would have been the correct translation for אַרְגָּמָן /argaːˈmaːn/ and πορφύρα ⟨*porphyra*⟩. But is it still? The

meaning was changing, and has changed. We can therefore conclude that although *purple* was a correct translation in 1611, it certainly is not now. It is not, however, obvious what the correct translation should be as the same concept no longer exists. The New Jerusalem Bible uses 'who was in the *purple*-dye trade' (NJB, 1985). This is strictly true and not misleading, but it will leave the modern reader ignorant of the prestige of the product and hence of the sort of person she was. The New Living Translation is atypical in attempting to show the prestige when it describes her as 'a merchant of expensive *purple* cloth' (NLT, 1996). This is an example of explicitation. The NLT's self-proclaimed objective is to be a balance between 'thought-for-thought' and 'word-for-word' translation, or, as they rephrase it in more technical terms, between 'formal equivalence' and 'dynamic equivalence' (NLT website, 2005). Which is the best translation is a matter of opinion and translation theory and is beyond the scope of this paper, but I claim that *purple* by itself is inadequate and, as a BCT, inappropriate.

Conclusion

I have shown that colour words in the Bible become problematic just as they start to become BCTs, and thus words at different stages of the model are interesting at different periods. The Stage-II colour is a well established as a BCT by the time the beginning of the Bible was written down. Brenner covers this period and subsequent developments are not problematic. On the other hand, the Stage-III colour becomes established around the beginning of the Common Era and so this is when the linguistic problems arise. The Stage-VII colour is not established during the Biblical period and so is not problematic until it becomes established in modern times.

So far as we can tell from the available evidence, Koine Greek is a Stage–III colour system consisting of

- μέλας ⟨*melas*⟩ black
- λευκός ⟨*leukos*⟩ white
- πυρρός ⟨*pyrros*⟩ red
- χλωρός ⟨*chlōros*⟩ yellow-green

On this basis, the four horses in Revelation (often referred to as the Four Horsemen of the Apocalypse) are systematically represented by the four BCTs and should be translated into English as *white*, *red*, *black* and *yellow*.

On the other hand, the dyes and clothes referred to with terms that imply wealth and prestige are not adequately represented in English by terms such as the modern BCT *purple*. It is difficult to find an appropriate translation. Ultimately, the decision rests on views on what is good translation practice and the intended purpose of the translation.

These examples provide discussion points with which to examine different translation practices. They also show that basic terms are not interchangeable with specific or restricted terms.

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