Centro de Estudios de Postgrado
Online Master in English Studies

UNIVERSIDAD DE JAÉN
Centro de Estudios de Postgrado

Master's Dissertation/
Trabajo Fin de Máster

COLOR SCIENCE, THE COLOR NAMING DEBATE, AND CORPUS LINGUISTICS IN F.SCOTT FITZGERALD´S *THE GREAT GATSBY*

Student: Blackmore Dawn

Tutor: Dr. María Pilar Sánchez Calle
Dpt.: English Philology

November, 2016

A**bstract**

This Master Dissertation, has utilized pure basic research to address the knowledge gap of previous color studies where the "psychology of color" has been the main focus in *The Great Gatsby*. In relation to Fitzgerald´s color lexicon and symbolism, a color science perspective has replaced the illocution of color as a simple irreducible property. Furthermore, this dissertation incorporates a seminal piece of linguistics work from Berlin and Kay (1969), to structure the theoretical framework. Past scholarly cross-cultural investigations that addressed their eleven "universal" basic color terms and "evolutionary" hierarchy were evaluated. For the methodology, corpus linguistics and "Antconc" a concordancer software tool were employed, to combine qualitative and quantitative evaluation. The research was foundational and exploratory and a substantial amount of "color" was discovered. The American *Time Magazine* Corpus has been used as a reference source only for the frequency of "basic color terms" during the 1920s. This research focuses on color key words in context (KWIC), "N-Grams" (an *n* string of letters/words), and collocates of color terms. Colors in the novel for this foundational work were measured, and recorded using screen-shots, tables, and pie chart graphics. In conclusion, *The Great Gatsby* through an initiation of color science and the framework of the Berlin and Kay "basic color terms" concept has been analyzed to offer a fresh perspective in comparison to the former psychological associations of color in the novella. Future scholarly research, and pedagogical resource materials, now have new inspiration to work with corpus linguistics software and to explore certain aspects of literature.

Key Words

Color Science, Belin and Kay "basic color terms", *The Great Gatsby*, Corpus Linguistics, American *Time Magazine* Corpus.

Acknowledgements

This Master´s Thesis is for every OMIES Professor for their tireless dedication.

A hug for Diego at the library, and thanks to his superb staff for their help.

With gratitude to my Spanish friends, especially Lucia & Antonio, Lidia & Gines, Dan, and Bea, for your ongoing support, I cherish your friendship.

A Blessing for Simi and her incredible family for guiding my artistic soul into Academia.

A Special Dedication to my beloved parents Cyril and Josie “Just for everything”.

Finally for my supervisor Pilar , whose constructive comments about my initial idea resulted in a change of direction for my research. Thank you for your Professionalism and guidance.

Gracias a Dios.

CONTENTS

TABLE LIST OF FIGURES

TABLE LIST OF TABLES

TABLE LIST OF APPENDICES

1. INTRODUCTION

The current research paper has utilized pure methodology in order to address the knowledge gap surrounding the intellection of "color" in F.Scott Fitzgerald´s *The Great Gatsby* that has for a long time been associated with the “psychololgy of color”. This exploration of the novella has considered a fresh approach by not repeating the color and symbolism aspect of previous scholarly research, and thus has initiated the process through color science to raise awareness of such doctrines. Exploratory research has attempted in part, to provide answers to previously overlooked key questions. The **First question** stated:There is much talk about color and mood association in *The Great Gatsby*, but what exactly is color? A theory of color from a folk perspective and the pervading green light have been replaced by trichromacy, how we as humans have the ability to see colors, experience color sensations, and spectral rays of light. The consideration that color does or does not exist is part of this dissertation.

The theoretical framework of this research has focused on the color naming debate of the so-called "*Universal Basic Color Terms*". This landmark model and seminal work was a collaboration between Brent Berlin, and Paul Kay in 1969. This model, helped to formulate the **Second question:** Although the novella was written in the 1920s, does a Berlin and Kay set of eleven English basic color terms exist in Fitzgerald´s Color Lexicon? By the same token, we have avoided a repetition of the "static" psychology of color symbolism diversion (i.e. green for organic, red for danger, white for purity, and so forth).

Following the qualitative part of this dissertation, we incorporated Cognitive Linguistics and the software tool "Antconc"(Laurence Anthony, 2010). This methodology was deemed compatible with pure research and was employed to measure quantitative color distribution. A small corpus generated from an e-media version of *The Great Gatsby* from Planet e-books was explored for “color” Key words in context (KWIC), *n*-grams, and collocates of color terms, both “basic” and “elaborate”, were analyzed.

Selected *n*-grams (short strings of letters or words), were evaluated to answer the **Third question:** For what purposes did Fitzgerald designate color terms in his lexicon?

The American *Time Magazine* Corpus has been used as a reference source for the frequency of “basic color terms” during the 1920s.

2. JUSTIFICATION OF COLOUR STUDIES

Through history the visual perception of color has helped us to identify between friend or foe. Color permeates every aspect of our lives. Just as the clock regulates routine in industrialized nations, colour orders our spatial awareness, memory, and recollection. Moreover, our status, personal relationships, surroundings, choice of branding, commonplace objects, affiliations, sense of aesthetics, well-being and motivation have a colour focus. From our concrete surroundings, Nature acts as a colour link with indigenous cultures.

However, a folk theory of "color" is in conflict with the discipline of Science and in particular with Physics. Physicists talk in terms of "bodies" and the qualities they possess, thus our surroundings and physical objects are not believed to have any colours, not in the sense that ordinary folk equate to them such as skies of clear blue, crunchy red apples, and so forth. In his essay "Human Understanding" (1689) the seventeenth-century philosopher John Locke, divided our sensory perceptions of the world into two orders: Primary and secondary qualities. The former included aspects of solidity, motion, and number, and the latter aspects of colour, taste, smell and sound. Scholars who did not believe in a nativist theory of color include: the “luminaries” (eminent scientific thinkers from the past) Galileo, Descartes, and Newton. This scientific viewpoint is known as eliminativism and will be discussed in the first chapter, along with other prominent color theories as outlined in the Stanford Encyclopedia (2012).

However, there are various reasons why the illocution of color is sufficiently interesting to philosophers. A major point is one surrounding metaphysical concerns with regards to the “nature of color” through its physical reality and what is held as the “mind-perception” of color. Scholarly work relatedly questions whether certain theories can justify color as part of a mind-independent state of reality on planet earth. Ever-evolving refinements of philosophical work on "color" have latched onto issues of epistemology, ontology, and phenomenology.

3. MAIN OBJECTIVES

3.1. General Objectives:

In defense of Pure Methodology and its significance:

"All progress is born of inquiry. Doubt is often better than overconfidence, for it leads to inquiry, and inquiry leads to invention" (Hudson:1853-1927), as cited by C.R Kothari ´s Research Methodology (2009:5).

The aim of this research was to utilize pure methodology in order to address the knowledge gap within the existing body of work on color term theories. Previously, the potential of color as a solo project in *The Great Gatsby* has largely been compromised with collaborative themes including a focus on characterization and the "American Dream" signifying achievement through an honest work ethic (Truslow Adams, 1931:214-215) religion, and icons of the Jazz Age. This famous work although written during the 1920s by Francis Scott Fitzgerald, beckoned for a new color direction. The aim of this dissertation, is to deter a repetition of the previous longstanding interpretations with regards to the psychology of color vocabulary in *The Great Gatsby*. The work by R.W Stallman 1955, J.S Westbrook 1960, M Millgate 1962, R.E Long 1966, B.M Barbour 1973, J S Korenman 1975, L.H Peter and P Demory 1988, E R Canterbery 1999, J Lance 2000, R Berman 2002, M Samkanashvili 2013, and H Zhang 2015, although highly commendable did not fully address the variable of color in *The Great Gatsby*. For this reason, we wanted the current dissertation to be oriented towards color science. A folk theory, sees color more or less as a simple quality of objects, thus versus an interpretation of color through Physics in this work, we have a deeper explanation of "color" and a more robust debate. Within this new realm of what color is not "metaphysically" speaking a "sui generis" quality, an explanation of color vision, and how we as "trichromats" have the ability to see colors of the spectrum is explained. In this dissertation, we have integrated an overview of prominent color theories and these have added an outlook onto the scientific color theme conundrum, i.e. the debate over the existance or non existance of colors in our world.

A color naming debate structured the theoretical framework via the impetus of a seminal piece of work written by two American scholars in 1969. Brent Berlin an anthropologist, and Paul Kay a linguist collaborated on *Basic Color Terms: Their Universality and Evolution*. This theme of basic color terms activated our exploration of

the colour domain in Fitzgerald´s lexicon. A Corpus linguistics software tool and an e-media generated corpus of *The Great Gatsby* were employed to search the distribution and collocation of colour terms. The *Time Magazine* Corpus from the USA was used as a reference for color frequencies during the 1920s.

It appears the domain of colour is attracting increasing numbers of Science-led papers. Huxtable (2001:141) speaks of "The mutability of blue" and how "a chemical structure projects an air of "certainty". For scientists a clear understanding of our world is paramount.

3.2. Specific objectives:

- To introduce **color science** in order to initiate a new color direction moving away from "psychology of color and emotion" that has been a long tradition in *The Great Gatsby*.

- To incorporate the **original** Berlin and Kay 1969 "**basic color terms**" hierarchy as the foundation for the linguistic theoretical framework to investigate "bct" salience.

- To conduct a literature review of scholarly work that predominantly references Berlin and Kay´s **basic color terms** in support of this dissertation to build color knowledge.

- To utilize **Corpus Linguistics** as a **Methodology**, to explore and analyse an e-media corpus of *The Great Gatsby* for color terms using the Antonc software tool.

- To clarify if the **eleven** Berlin and Kay Basic so-called "**basic color terms**" are present in *The Great Gatsby*.

- To investigate **non-basic** color terms in *The Great Gatsby*.

- To widen **the knowledge** on Color studies in *The Great Gatsby* for future scholars, and Pedagogical studies, incorporating new materials and Corpus Linguistics.

4. THEORETICAL FRAMEWORK

4.1. What Exactly Is Color?

4.1.2. Color Vision

In their e-media textbook on Graphic Design, in the Color Science section, Martin et al (2015:79) refer to color vision as an "event". This event requires a P-value and three main factors as expressed in the acronym "POLO" helping us to recall it: physics, physiology, and psychology, + "an object+a light source+an observer".

In the preface to the third edition of *Neuroscience*, Purves et al (2004) describe the physiology of the human body as "a piece of biological machinery". Chapter ten has the title "Anatomy of the Eye"(2004:229): with a section devoted to "Cones and Color Vision" (2004:245). An alternative label for cones is "receptors" (Roorda and Williams, 1999:520-522) as described in "Letters to Nature".

The scientific term of Color Vision refers to the aforementioned cones and our ability as human beings to be able to identify lights, and forms through their "spectral properties" (Boynton 1996:2256). A value system incorporating "three dimensions" referred to as *h* hue, *s* as saturation, and *b* as brightness, helps us to quantify the perception of color. Red or blue would characteristically represent *hues*. *Saturation* is the degree to which "the stimulus" is visually different compared to stimulus of "achromatic" purity, of which black and white are examples. *Brightness* is associated with its "lightness" value. As human beings, our perceptual skill has evolved over time and is now three-dimensional. Although many animals are dichromats, in contrast, we are trichromats. A person with "normal color vision" has the natural ability to perceive and discuss "the hue of any light" by using between one to four of the "unique hues": red, yellow, green and blue. For example: blue-yellow, or red-green, (Hering´s 19 th century opponency theory, as cited in Boynton). The wavelengths that are visible to the human eye are measured in nanometers on a scale from ultraviolet at 400 to infrared at 800, clearly illustrated in the figure below.

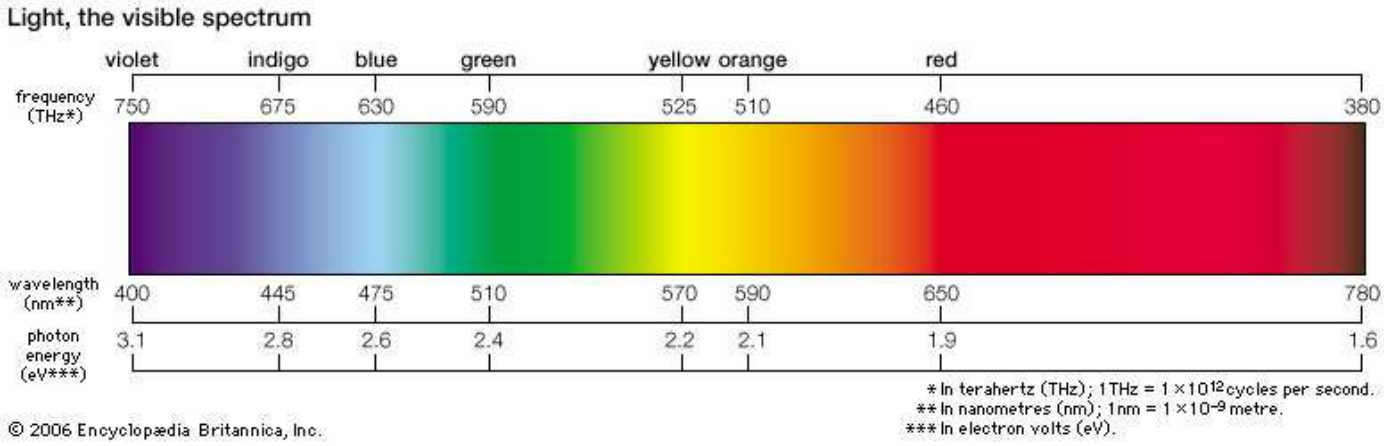


Figure 1. The visible spectrum

4.2. A Colour Folk Theory Versus Science

Thompson et al (1992) introduce the scientific perspective of this paper and argue that colour vision can be explained through its compatibility with certain "philosophical positions". The theory of objectivism that believes color is a quality of the object, is compatible with "computational vision" whereas the theory of subjectivism (colour is processed in our minds), goes well with "psychophysics and neurophysiology".

Thus within Colour Science and Colour Vision, there are some prominent theories held regarding the existence of colour including, primitivism, eliminativism, dispositionalism, and relationalism. We will look at some examples of these theories one by one.

4.2.1. A Primitist View

"Color Objectivism" has arguments including primitivism, the belief that colors are just simple "sui generis" qualities of objects, and physicalist color realism, a belief that "colors are the hidden properties of material bodies and light sources" (Stanford Encyclopedia 2012).

In his paper "What Colors Could Not Be", Gert (2008:128) correlates the foundation of his evaluation with "What Numbers Could Not Be" (Benacerraf 1983, *Ibid*:128) To this scholar colors are "irreducible properties of objects". Furthermore, these color "properties" that are revealed to us through visual experience, are the very things that result in how

objects "seem" to us in a certain way. On this basis, he argues there is no call to identify colors with theories of having "physical" or "dispositional" properties, this will only result in "endowing colors" with dispositions they do not possess. This suggests to us that Gert holds the view that hybrid theories of "reductive color realism" are mistaken on the part of primitivism.

4.2.2. A Physicalist Response

Smart (1995:545) reports his contempt in reaction to certain philosophical theorists who "elucidate " something "is red" in terms of it "looks red" i.e.Armstrong 1968, as referenced in the "realism about color" literature of Campbell (1993:251) that features in his article (*Ibid*:545). What might be a harmless "behavioral" reference, is to Smart "dangerous talk". Our interpretation is a theoretical obstacle for those who "wish to argue for a broad physicalist account of the mind" . We value this revelation as part of color philosophy with the aim to include different doctrines that present arguments for and against color as more than a perceptual skill or a simple irreducible quality.

We note there are three theories that hold the belief "colors **do not exist** in the external world", these are eliminativism, irrealism, and fictionalism (Stanford Encyclopedia 2012).

4.2.3. Color Ontology

In his literature *The Red and the Real:An Essay on Color Ontology*, Cohen (2009) evaluates the main viewpoints of philosophers and theorists. Irrealism a concept not dissimilar to eliminativism, is in equal denial of "the quotidian belief" that things, in general, have "color properties". In Cohen´s estimation, this calls for a revision from the nativist color perspective. In fact, the irrealist stance we note is not a view of modern society but dates back to Hellenistic scholars for instance Democritus (c 460-370 BC) as cited in Cohen, argued: "by convention color exists, by convention bitter, by convention sweet but in reality atoms and void"(2009:2). This is where color phenomenology is challenged, what then is a rational argument?

4.2.4. Natural Daylight

Allen (2010) examines how objects or forms appear differently to us depending on the source of “illumination” below which we perceive them. If this is so, under which light source does the colour of the object appear as its true self? Although this point is problematic for “the view that colors are mind-independent properties”, this scholar argues that if we accept “plausible” attitudes about colour, it is under “natural daylight” that we “perceive the real colors of objects”.Firstly, we could argue that “natural daylight” is subject to variance in weather conditions around the world that would impact on color vision, and secondly, certain “illuminations”, imply Gert´s theory of color irreducibility of an object is transformable.

4.2.5. An Eliminativist Perspective

In Hardin´s introduction to *Color for Philosophers*, (1988:xx) he proposes that a clearer perspective on the “nature” of color and the “interrelation” between colors would be feasible, if “color”, like heat, could be subsumed under some wider set of phenomena”. We could contribute to this argument, unlike objects that can be subjected to mathematical analysis, (our example: what do rectangles have in common?) in the same way “colors” are evasive (our example: what do red objects have in common?). Maund, in his e-media article for the Stanford Encyclopedia (2012) includes Hardin among a list of prominent contemporary defenders of eliminativism. Hardin argues that a denial of color would remove the subject of enquiry, but he adds “to deny that colors are properties of either material objects or sense data” in his opinion is just confirming that “ the locus of color is not what we took it to be” (1988:xxiv).

So far, our interpretation is that some papers on color arguments are open to misinterpretation, and/or an air of inventive persuasion suited to *sales talk*. Rational logic thus makes us question if color is not what it appears to be and is only an activation of the human brain, why did we develop trichromatic colour vision?

4.2.6. The Momentum of Colour Research

Brogaard (2012), argues in defense of Hardin´s *Color for Philosopher´s* that acted as a catalyst towards the interest in, and “approach to”, colour studies. Previous studies did so

according to Brogaard, without taking into consideration “Colour Science”. The connection between “the neural” and “the experiential realization of colour”, associated with the nature of what colour is all about has been discarded. In Brogaard´s opinion, while colour research has gathered “momentum” a main stream attitude of the philosophy of colour has grown, independent of colour perception.We could argue that technology has played a role in the commercialisation of color with a bias towards psychology.

4.2.7. Dispositionalism

X is red = *X* has the disposition to look red_to normal perceivers, in standard conditions (Stanford Encyclopedia 2012). But we must challenge this theory, who is a “normal perceiver” and how do we decipher what are “standard conditions”?

Mark Johnston´s 1992 paper of the so-called paradigm of “Canary Yellow” aroused interest and some furore among scholars. … “We take to be paradigms of canary yellow, for example “some canaries” are of a canary yellow colour. They possess a visual aspect or “disposition” in order to have the appearance of canary yellow. Johnston expanded his argument with the theory of a property of a “higher-order” as having “intrinsic properties”, resulting in the causation for the appearance of said “canary yellow thing”. This to us is intriguing to think of colour as having a disposition so as to manipulate human perception.

4.3. THEORETICAL FRAMEWORK (Part two)

4.3.1. An Overview of the Basic Color Terms

Within the domain of Color and linguistics there are what Kay and McDaniel (1978) refer to as “Semantic Universals” and this selection places a direct constraint on World colour lexicons with a bias towards the best examples of “colour foci” and their “salience”.

4.3.2. A Universalist Point of View

“The sea-change in anthropological linguistics came in 1969 with the publication of Brent Berlin and Paul Kay´s Basic Color Terms”: as cited in Hardin and Maffi (1997:3). Two American scholars Overton Brent Berlin an anthropologist, and Paul Kay, a linguist,

(hereafter B&K), collaborated on ”*Basic Color Terms:Their Universality and Evolution*”. This seminal work proposed eleven “focal” colors. This concept correlates with Chomsky´s universal grammar, in the sense that they are “hard-wired” between the neural networks in our brains and the human visual system, how we order things in the world about us into “proper” categories. The following figure illustrates the “hierarchy” and emergence of the seven “key” B&K *colour stages* (see Figure 2.). If a language/culture is at **stage one**, it will possess white and black, if it has three colors it will include red, and be at Evolutionary **stage two**. If a language is at **stage three,** it will possess either green or yellow and if **stage four** exists then both green and yellow will be present. At **stage five,** blue is incorporated. Then at **stage six** brown, and finally at **stage seven:** purple, pink, orange and/or grey. We can observe then that Berlin and Kay constructed their “Color Model” in relation to the advancement of humanity from indigenous culture and survival, to one of modern industrialized societies who have reached stage seven of the B&K hierarchy, with specific, ordered, and materialistic dependencies. It is a kind of color taxonomy and neatly corresponds with Maslow´s paper (1943) and his pyramid of human survival from the physiological aspects to a state of self-realization.

In Saunders (2000), and Schrillo´s (2001) tutorial on how color is important to “language and culture”, it is revealed to us that the B& K (1969:4) hierarchical set of eleven universal colors incorporated the six “Hering” primaries from his research in 1920, and an additional five “derived” color terms in Schrillo´s estimation that require “special attention” i.e.brown, purple, pink, orange and grey.

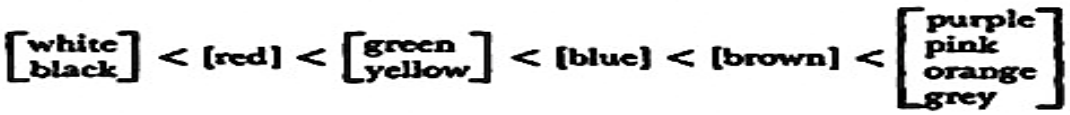


Figure 2. Berlin and Kay (1969) Hierarchy of Universal Evolutionary Color Terms

4.3.3. Berlin and Kay Color Term Criteria

According to B&K, each language has an infinite array of expressions regarding the notion of color terms (more applicable if we are talking about industrialized nations). In

their book (1969:5 and 6), they ask that we note the following ways to express colors in English:

a) crimson, b) scarlet, c) blond, d) blue-green, e) bluish, f) lemon-colored, g) salmon-colored, and h) the color of the rust on my aunt´s old Chevrolet. Belin and Kay go on to state that in the fields of anthropology, psychology, and linguistics the concept of basic color words is operational. However, B&K have outlined certain characteristics for their own "basic color terms" as follows:

I. It is monolexemic, that is its meaning is not predictable from the meaning of its parts" (cf Conklin 1962, as referenced in B&K 1969:6) on this basis we must note that the previous examples in letters a-h, if following the complete B&K criteria (that continues on below), they would be wiped out completely.

II. "Its signification is not included in that of any other color term", from the above B& K list, that would exclude a) and b) as they are both types of "Red".

III. "Its application must not be restricted to a narrow class of objects" B&K provide the example blond:hair, complexion, and furniture (in British English we use "fair" for complexion). There is also blond beer, and this term reinforces its restrictiveness.

IV. "It must be psychologically salient for informants".

1. According to B&K (1969:6) this means "having a tendency to appear at the beginning of elicited lists of color terms". We could put forward the argument that bright colors are probably recalled first, due to educational methodologies in Western society. Achromatic color terms (black, white, and grey), equally meet the requirement for English language salience.

2. "Stability of reference across informants".

3. "Occurrence in the idiolect of all informants".

V. "the doubtful form should have the same distributional potential" B&K´s example includes Reddish in English but not Chartreus(e)ish.

VI. “Color terms that are also the name of an object characteristically having that color are suspect”. B&K´s example includes: Gold and silver. B&K note that this criterion would exclude the color term orange in English. The author would also add pink, (the former named after a type of fruit, and the latter a flower).

VII. “Recent foreign loan words may be suspect”.

VIII. “Morphological complexity” if the lexemic status is difficult to assess as in the term “blue-green”.

4.3.4. Crawford´s Critique

In his article Crawford (1982:338-342), scrutinizes Berlin and Kay and their “notion” of basic colour terms. Essentially the previously noted points, are considered bothersome to apply in scholarly field work, with an economy of facts to support the Theory. In relation to point i. monolexemic requirement and why a words meaning should be transparent to a native tongue, Crawford (338) provides the example of Handbook, and Manual from Latin, these would be parted in semantic terms. Additionally, Crawford raises the issue of fixed collocations in reference to point ii. the signification of a “bct” not to be included in any other color term, Crawford´s utility of “white coffee” in English, indicates another category altogether, as the “white” in this structure is actually “brown”. The author adds a further example of “white wine” far from being equal in appearance to lactic products it is yellow-goldenish. Point iii. its application must not be restricted to a narrow class of objects is rational, but we must take into consideration how other languages designate general colour terms. Snow (1971:387), as referenced in Crawford (1982:339) discusses the unsuitable use of “inanimate” objects, we can provide B&K´s association with the Munsell color chips as an example used to describe “animate” objects. Crawford makes reference to Snow´s Samoan field study. The impossibility of an inanimate object used to “elicit” a color term for that which is animate. Crawford proposes the deletion of B&K´s basic color term requirement of psychological salience in point iv), as it would deter investigations of a historical nature. He adds that “colour” to some people would not include the terms “Black” and “White” as they are seen as non-colors. Regarding suffixes -”ish” as in yellowish, in British English, orange-y exists (Crawford, 1982:341). We agree it is crucial not to create a bias around the prohibition of color terms named after objects. Crawford highlights the successive stages and historical factors of colour words as highly relevant. The colour orange is on B&K´s dubious cancellation list, and it would include the

author´s example of "(a) pink" derived from horticulture.The issue of "recent foreign loan words" calls for a rejection. Finally, viii) what B&K refer to as lexemic status, as "questionable" if having a complex "morphological structure" as in blue-green. We can consider this in terms of a "Western ideology" and a certain way to divide the color spectrum, and it is not applicable to field work with indigenous peoples. What it really boils down to in Crawford´s paper is: *"a basic color term occurs in the idiolects of all informants"*.

Lindsey and Brown´s article (2009:19787) discusses how up-to-date color naming reveals "universal motifs" and a degree of "within language color diversity". Their paper includes the term **"**grue**"** (Berlin and Kay et al,: 2009:23) that consumes two plus focal colors.

4.3.5. THE MUNSELL COLOR SYSTEM

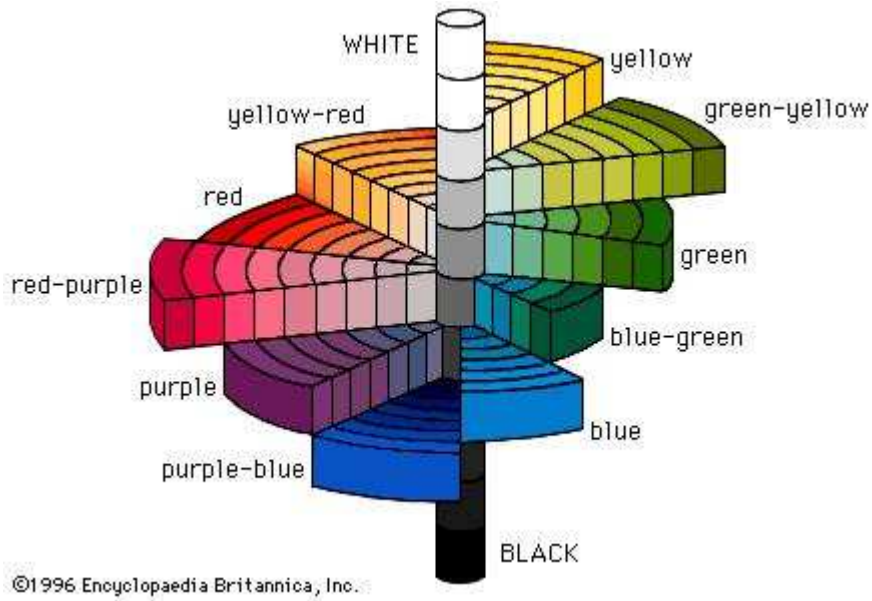


Figure 3. The Munsell color system

Berlin and Kay (1969:7) "*Color Terms:Their Universality and Evolution*, for their study, they used the Munsell Color system of 329 "color chips" that included:320 chips of

color hues with equal space between them, and eight degrees of brightness, all saturated to capacity level. Berlin and Kay also included nine chips of neutral hues of black, white, and gray. With the exclusion of the neutral hues, B&K´s color stimuli were the same as that used in the Lenneberg and Roberts (1959) Zuni color terminology research (as cited in B&K,1969:5). Their objective was to "map" the "total area" and "typical member" of a color category. In this way, B&K arrived at a consensus that "a set of eleven universal perceptual categories become encoded in the history of a given language" (Berlin and Kay, 1969:5).

4.3.6. The B&K Participants

All of the participants for the 1969 study, were "native speakers" and were living in the San Francisco Bay area of the USA, except for the speakers of "Tzeltal". From the location described, we can argue that some of the participants were most certainly bilingual, and not monolingual, determining a different outcome for focal areas of the "color spectrum". The following is a list of the actual participants (also featured on the Munsell Color system webpage as a landmark study):Arabic (Lebanon), Hungarian (Hungary), Swahili (East Africa), Bulgarian (Bulgaria), Ibibo (Nigeria), Tagalog (Philippines), Catalan (Spain), Indonesian (Indonesia), Thai (Thailand), Cantonese (China), Japanese (Japan); Tzeltal (Southern Mexico), Mandarin (China), Korean (Korea), Urdu (India), English (USA), Pomo (California), Vietnamese (Vietnam), Hebrew (Israel) and Spanish (Mexico).

4.3.7. Indigenous Culture and Color Field Work

Maclaury´s (1987) field study of speakers of Mshuswap in the Pacific Northwest region has revealed a "Yellow-with-Green" color category that is salient. We can note this is not in keeping with Berlin and Kay´s Evolutionary sequence in their hierarchy of basic color terms. Maclaury cannot understand the rationality for this proposed evolutionary "bct"lineage, nor any neurological rational. Indeed the "y-with-g" with its Pacific strategy of cognition is rather strange to us occupying one unit, and rare in comparison to other world languages who designate two units: One for yellow, and One for green. We could consider the impact of industrialization in modern society, and the use of pigment dyes for the shift from basis color naming to "exceptional" colour terms like mauve (Perkin,1856) on the peripheral of the colour domain even in "The West".

If we evaluate Snow´s inanimate objects used to name animate objects; Turton´s field work (1980) with the Mursi people provides an apt example of the aforementioned focal divisions. According to this scholar, these people only use colour terms that are applicable to their cattle. Therefore their colour lexicon corresponds to cattle-type focal colours. This development would not give support to the Relativist opposition who included Lenneberg and Roberts from the 1950s. Relativists insist that world languages portion up the colour spectrum arbitrarily and uniquely. The Mursi tendency of cattle and colours for a "Framework" to represent different colour categories strengthens the universalist argument. In Turton´s words on one side of the debate "this adds further empirical support to Berlin and Kay´s demonstration (1969) of semantic universals in colour naming". On the other side, there is a hint in his research that certain natural environments could be used as the basis for "encoding" basic colour terms, and the accountability of cross-cultural differences would not be pertinent to B&K´s evolutionary and universal doctrine.

4.3.8. A Sapir- Whorf Hypothesis

There are two sides to every argument, and in opposition to the universalist theory is the US Whorfian Hypothesis, whose supporters include Lenneberg, Saunders, and Wierzbicka. This view suggests that it is the differences between languages that cause further differences in cognitive processes, bringing into question how "culture and language" produce their own sub-divisions of the "Color Spectrum". The Whorfian supporters accept that colours are perceived in a categorical way, only because that is how they are named "arbitrarily". There is uncertainty about the existence of a "Model" for the Whorfian set. We can observe that due to the tightness and constraint of the Universalist´s original model construed by B&K in the 1960s, a refinement since its early conception has taken place. "Berlin and Kay subsequently abandoned their encoding of "foci system" (Hardin and Maffi, 1997:4). The so-called color space is now divided into three main categories:composite, fundamental and derived.

Lenneberg and Roberts seminal work in 1953 "The Denotation of Language Terms", reported research with speakers of Zumi, who have two color terms: for yellow and orange. For us, this is inconsistent with the evolutionary aspect of the B&K hierarchy. These "warm" hues follow on after black and white. The paper concluded the Zumi people, had

difficulty in recalling color terms, with the emphasis of blame on “codability”. In 1954, Lenneberg and Brown, conducted further research to test the “availability” of “bcts” linked to the previous study and recollection. The Munsell Color System and Chips of 320 in total, with 40 hues were administered, (referenced in Kay et al , World Color Survey 2009:225).

In his article on the Yélnî Dnye language, Levinson (2000:3) takes issue with B&K´s notion of “color and basicness” (Davies et al, 1991:311). Their theory of universality that prompted the demise of “linguistic relativity”, is now under the color microscope again. This case study suggests a number of world languages have a color vocabulary that is emergent and thus raises doubts for us regarding the “classic”evoluntionary sequence of B&K´s universality.

Wiezbicka (2005:217) argues that there are no “Color Universals” however, there are Universals of Visual Semantics. Her argument is that B&K´s book with its reputation as a landmark study with its impact on ongoing research is founded on a concept of “Color” that was taken for granted. New data is proposed from Polish, Russian, and most importantly from Australian languages. The emphasis is on how “visual descriptors” can be analysed without referring to the lexeme “color”. In a later paper (2008), Wierzbicka explains why there are no “Color Universals in language and thought”. Wierzbicka´s yes to perceptual acceptance of colors, (we can add a “No” from an eliminativist perspective) and a no vote to the conceptualness of color. Wierzbicka´s revelations have developed from research in Australia among the Walipiri. The consensus is that no “color talk” and no “color practices” exist, just a tapestry of discourse of “other kinds”, facts we cannot correlate with the B&K ideology.

> *All, at first, was vague in color, but gradually a difference was perceived, and men were compelled to find some term to express this newly observed appearance... green was for a long time regarded as yellow ... Not only was the sky not called blue, but nothing was called blue, and it was impossible to call anything blue .. the men of that time did not and could not call anything blue (Geiger, quoted by Hopkins 1883:184-5)* as cited by Saunders (2000), in “*Revisiting Basic Color terms*”.

4.3.9 Polysemy

We can consider it appropriate for this paper, although not strictly a color study Witkowski et al (1981), who have investigated biological categories including “tree” ”grass” and “vine”. Along with Wierzbicka´s support for no “color concept” in indigenous culture, they examine how these terms have become “recent” language appendages. They suggest the terms have developed with the sophistication and ordering of modern society. Just as “tree” was absent or not salient in the past, “many of the world´s languages acquired wood/tree polysemy” and went onto create separate categories, this argument supports etymology of color terms and a colour naming debate.

4.4. Child Development Colour Studies

4.4.1. Johnson

Johnson (1977:308-311) tested color knowledge among preschool children aged from 30 months to 3 years old. A sample study, using ten squares made from stiff card, was pretested with children under 7 years of age. It was a “colour naming” task. The selection of colours included 4 primary hues, 4 secondary hues, and 2 achromatic squares. Almost 670 children were tested, with a balanced representation between boys and girls. Johnson reveals that the boy´s performance was inferior on the color test to that of the girls. This study supports the B&K “proposed” order of evolution and its “adaptive value” across World cultures. A discussion was led about negative language indoctrination that leads to salience of particular colour hues. Focal points are a restricted concept and are “better remembered” and “named more quickly” (Heider, 1972:10), as referenced in Johnson thus influencing the order of acquisition.

4.4.2. Goldstein

We note that all of the following articles appeared in the same publication, *The Journal of Experimental Child* Psychology. Two tests conducted by Goldstein in 2008, tried to reformulate experiments performed by Franklin et al (2005:114-141) as referenced in Goldstein´s article (2009:219). As with the previous scholar Johnson´s test of color naming, this time the blue-green and blue-purple colors were tested and additionally a category task was added. Findings for between color categorization gave interpretative

support to the Universalist ideology of focal colors and recall. In contrast to the Whorfian theory of Roberson et al (2004:554-571) also featured in the *Journal of Experimental Child Psychology*. The knowledge of color terminology revealed different results for Goldstein. Memory recall linked to categorical perception (CP) was found only to be present among children with a developed knowledge of the relevant terminology. Goldstein concludes that color naming knowledge performance for "toddlers" is inclined to imply both greater, and lesser estimations. Test 2 reveals to us that the indigenous Himba children who have no separate blue and green divisions showed superiority on the in-between color category test.

4.5. Support Studies for Basic Color Terms

Davies et al (2007) carried out a field study of the Universal Berlin and Kay basic color terms with Ndebele, the Bantu language. The objective was to describe the Ndebele colour lexicon. From this lexicon the salience of "bcts" were determined. Subjects included school children, and adults. A "list task" required the subjects to write down their knowledge of colour vocabulary. The results demonstrate to us that four defined "bcts" white, black, red and "grue" are operational in Ndebele. The school children had also been taught a bct for yellow. The conclusion from this study is that both samples are applicable to the Berlin and Kay color universals. If we consider "grue" is green with blue, it is not conventional in Western society, but an in-between category appears to exist on the African continent (Himba and Ndebele). Furthermore, the "formal teaching" of a western "bct" for yellow to these school children is evidence for thought and language processing, placing a possible inhibition on their own colour terms.

4.5.1. English Colour Loan Words

As English is the "official language" in Nigeria, Ibrahim´s article (2014) digresses over the expansion and influence of English. In 1991 Schmied´s study as cited in Ibrahim, explored the impact of the English language on African languages, but did not analyze the domain of colour terms. Ibrahim´s paper reveals the "loan" of some basic and non basic English colour terms including gold and silver, into African languages. Some examples of "phoneme adaptations" of English "bcts"recorded include blue: ehbulu in Esan, bulu in Igala, and bulu in Hausa. Yellow is apparently yalo in Hausa. Their incorporation provide support for B&K. To a "lesser extent" the paper reveals to us the mineral colour terms gold, and silver are in use. These however, do not match the criteria for the original evolutionary model of "bcts".

4.6. ELEVEN BASIC COLOUR TERMS REVIEWED

4.6.1. A Russian Study

Davies and Corbett (1994) have examined the Russian language and its basic color terms in relation to Berlin and Kay´s 1969 evolutionary color model of eleven "Universals". Seventy-seven native speakers of Russian had a list-task test, while a further fifty-four subjects did a "color-naming" task. The study reveals that Russian is an "exception" to the rule with the clarification of twelve "bcts". The division of color space in Russian includes two terms for blue:sinii (dark) and goluboi (light). We note this is a move towards cross-cultural "accuracy".

4.6.2. A Greek Study

Androulaki et al´s article from 2006, is a representation of Greek Colours, devised to study the B&K set of "bcts". Moreover, it gives support to the evaluation of Russian colour terms . Using Munsell chips and (NCS) the Natural Color System "stimuli", participants (bilingual Greek/English and monolingual Greek) had four "naming" tasks. Colour vocabulary retrieved was measured for four main criteria:frequency, consistency, consensus of use, and naming time. Salience was also measured in terms of "necessity". The conclusion of the Greek analysis of colour terms also reveals twelve "bcts" with a category for light blue "yalázjo. In conclusion, the result reveals to us a similarity to the division of colors for the Russian and Turkish colour terms.

4.6.3. A French and Russian Comparative Study

Morgan (1993) evaluated the 1969 Berlin and Kay Framework of eleven basic colours in terms of a "development" study. Seventy-four French participants had a colour task and listed "terms" during a limited amount of time. Morgan´s work was compared with that of a Russian study for "blue". The most salient of the colours through recollection, established their "colour basicness" (Davies et al, 1991:311). French appears to have two terms for brown:marron and brun.This would then tell us that French has twelve basic colour terms. A further development in the French language, is the emergence of "beige" as a basic colour term. The colour term beige, is potentially an addition to the British English set of colours.

4.6.4. Modern Irish

Inge Swinkel´s thesis paper (2015), reveals that the colour classification system of the Modern Irish language, has two terms for “red”, dearg and rua. The colour term “rua” is restricted to hair colour and the coat/fur of animals and the term “dearg” has a colour-emotion association. Through this evaluation we realise there is a discrepency with Berlin and Kay´s universal theory of eleven color foci.

4.6.5. Spanish

Delgado et al (2004) present a “robust” argument against Whorfian linguistic relativity. Their study is of current and contemporary Spanish. The sequence of Spanish colour terms is an assurance of the Berlin and Kay (1969) colour word order for white, black, red, green, blue, yellow, grey and brown, that is “highly consistent diachronically” and “synchronically through various countries”. A total of 131,028 colour terms, clarified the findings, utilizing a corpus where N=188,975,000. In summary, “an exercise of methodological consilience”.

4.7. Non-Basic Color Terms

Mylonas et al (2015), have demonstrated to us the results of a colour naming “experiment” revealing an “augmentation” to the 11 B&K basic color terms. Their unrestricted experiment included about 330 subjects that it appears were crowd sourced, as the test was conducted using the internet. In total 600 colour samples were part of the naming task. The colour terms that were “monolexemic” and the 30 most prevalent, were then explored for their frequency, and consensus in relation to gender, time of response, “consistency”and “denotative volume within the Munsell and OSA colour spaces. An index of colour term salience was achieved through this in-depth analysis. The proposal is to include two non basic colour terms lilac and turquoise in English to create a set of 13. The author considers the influence of interior design and marketing to account for this shift from “n-b to b-ct”.

4.7.1. Secondary Colour Terms

Lin et at (2001) tested a colour naming task to determine “categorization” among 50 speakers of English, and 40 speakers of Mandarin Chinese. The colour samples used in the test were 200 ISCC-NBS. Data analysis and criterion to establish “codability”was not dissimilar to the Mylonas et al study. Results support the salience of the B&K(1969:5-6) basic colour terms in English and Mandarin Chinese. Lin et al argue that while there is a linkage between language and cross-cultural colour concepts, “a large discrepancy” was found with secondary colour terms (our example of secondary terms: pink and orange).

4.7.2. Colour System Comparison Munsell Versus Osa

Sturges and Whitfield (1995) aimed through their “monolexemic” colour naming study to determine the “location of the eleven basic surface colours” with the Munsell system. An additional objective was an improvement of the colour space through localization of the red and neutral areas. Whilst the Munsell and the OSA systems correlated quite well for the “centroids”, the study demonstrates how the Munsell color system has a “much higher level of saturation”. This raises a question about the restrictiveness of the OSA range and the “status” of the foci as identified in Boynton and Olson (1987), as cited in Sturges. The B&K set of eleven basic colour terms and their locality using Munsell has been acknowledged.

4.7.3. Metallic Studies

In their article on the categorical properties of the color “GOLD”, Okazawa et al (2011) revealed the results from tests with small groups of young male and female participants for “categorical color-naming tasks”. Their study to establish if the color terms GOLD and SILVER could be localized within color space stimuli featured 15 color terms including the B&K basic terms. A majority of previous studies for “psychophysical color-naming”, we note have used “flat matt colors” for example: Boynton & Olson (1987:94), as referenced in Okazawa et al (2011:1). The Japanese color stimuli was a

combination of “CIE *xy* chromaticity coordinates and surface reflectance” furthermore, to clarify if the metallic colors had “categorical properties like ordinary basic color terms”. The study has revealed that GOLD and SILVER are utilized specifically for ranges of “chromaticities with stimuli having large specular reflectance”. In Japanese, “hada” is the term for beige and its use is widespread. This study argues that beige could “become a benchmark basic” in order to evaluate the potential of “GOLD”. Measures of consistency, consensus, and reaction time of the Metallics used for the Okazawa et al study, were found to be comparable to those to those of the B&K (1969:5-6) basic color terms.

4.8 HISTORICAL STUDIES

4.8.1. Old English

Wyler (2006), argues from a historical position. In relation to the evolutionary aspect of the Berlin and Kay (1969:4) Universal Hierarchy of Basic Color Terms, Wyler´s literature evaluates colour terms in Old English. He reduces a surplus of colour names to 25: huit, blanc, seolfran, sweart, blat, blæc, har, græg, hasu, salu, wann, dun, read, rosen, grène, geolu, gylden, fealu, dox, brun earp, hawen, basu, wæden, purpuren, and an additional 3 terms for “colourful” (bleo, fah, hiw). As the B&K stipulation for “bct´s” has specific criterion”, some of the Old English terms do not qualify as they refer to “restricted” terms, for example har-hair, huit-silver, and dun-horses. If we concentrate on a restricted set of “monolexemic” Old English terms as a “candidate” to contrast with the B&K evolutionary set for:white, black, red, green, yellow, blue, brown, and grey, we discover the following: huit, blæc, græg, read, grène, geolu and brùn.It is revealed to us that an equivalent colour term exists for the B&K set with the “exception” of blue. This is “astounding” considering the evolutionary model from the B&K study is from the English language, and from an indusrialized nation the USA. Wyler concludes the results of philology from a historical study stand against the technique, methodology, and findings of the Berlin and Kay Hierarchy, where “blue” appears before brown.

4.8.2. Scandinavian Travelogues

According to Steinvall´s article on the power of colur term precision (2011:220), the category of "basic color terms" as defined in B&K´s classic literature (1969:5-6) has made up the majority of colour studies. In his paper, he reveals to us the use of "non basic" colour terms derived from an analysis of five 19th century travelogues. This qualitative study, evaluates the number of colour terms, their frequency, and what they refer to, artefacts, human and nature. "Specific colour vocabulary" is highly evident when describing "nature" and the northern territory of Scandinavia. "Exoticness" of term with an aim towards descriptive "colour precision", demonstrates the writers´ connectedness with their surroundings (mostly during the summer). Casson (1994), and Kerttula (2002) were included in Steinvall´s section of references (2011:230). Casson (1994:5) in particular has acknowledged that the vast majority of English elaborate colour terms (Steinvall 2011:222) or "ECTS"are derived from objects, while Kerttula´s work, has included the etymology of colors. Short extracts from the aforementioned travelogues include:dazzling imagery of orange cloud and pearly, opaline flushes of pink and unusual golden grey. Kent, one of the travellers uses terms including:apple-green, buff-colour, lavender-coloured, cerulean blue and coral red. Taylor´s travelogue, has a lexicon that includes spices, and precious stones:pearl, saffron, and sapphire. We note the subjectivity of creative expression.

4.8.3. Entity Stands for Entity´s Color

Casson (1994:5), has examined secondary English color terms. Between the 14th and the 15th century, "simplex" terms for colors arrived including "rose (plant) and russet (textile)". These innovations of "ontological metonymy" as in rose stands for rose´s color, and raspberry for the color of raspberries also denotes industrialization, and how our cognitive processes correlate with our experiences of "physical entities". This selection of historical colour derivations aptly leads us onto an introduction to the novella *The Great Gatsby*.

4.9. THREE WORKS OF LITERATURE

4.9.1. The Satyricon

During the First century AD, under the reign of emperor Nero, Gaius Petronius Arbiter, a courtier, is "reputed" to have written The Satyricon (Encyclopedia Britannica). The book is known for its "Menippean drollness, described in the Online Oxford Dictionary as satirical whit incorporating different styles/genres chiefly associated with Menippus (Greek philosopher 3rd century B.C) In the chapter "Cena Trimalchionis", we are introduced to the character Trimalchio an ex-slave. Trimalchio (from Greek "thrice King") who is now affluent, has a reputation for inviting guests to dinner party extravaganzas. Petronius´s work inspired Balme (1974) to produce "The Millionaires Dinner Party:An Adaptation of the Cena Trimalchionis of Petronius". Trimalchio is rich but he has ostentatious taste:et pro calculis albis et nigris aureos argenteosque habebat denarios which means "and instead of white and black pebbles he has gold and silver coins" (Balme, 1974:17) this was for a game. Abbott (1907:43) who digresses on the characterization and language portrayed in Petronius argues that "the character and culture of a man are revealed by his dress, his conduct, his attitude toward the world, by the subjects in which he shows interest, and by his manner of speech". At Trimalchio´s dinner party Abbott reveals, the first group are "men of some education" such as Eumolpus a poet, still they are "unscrupulous". The "other group" are comprised of Trimalchio and his "freedman friends" whose literacy level, and conversational skills stem from "the junk shop". Trimalchio´s dinner in Petronius is associated with its use of colours. Grant (2004) describes the apparel of the host, he is the centre of attention and is wearing "a red tunic" (tunica russea 27.1) and is playing a game with a green ball (pila prasina 27.2). A certain lack of protocol is revealed as his colours "clash" with the interior of his home and the costume of his "doorkeeper". In Chapter seven of *The Great Gatsby*, we observe the lines "It was when curiosity about Gatsby was at its highest that the lights in his house failed to go on one Saturday night - and as obscurely as it began, his career as Trimalchio was over"(Fitzgerald, 1925:120).

4.9.2. Trimalchio

In correspondence between Fitzgerald and his editor, Perkins responded "Its magnificent", words used to describe a proof of *Trimalchio*, and not *The Great Gatsby*. West (2000) in an e-media article "Almost a Masterpiece", discusses how he edited the novel *Trimalchio*. He reveals to us how Fitzgerald rewrote chapters VI and VII, changed Nick Carraway´s persona and gave Jay Gatsby a more rounded character and a memorable smile. *The Great Gastsby*, is a better book than *Trimalchio*, but *Trimalchio* is itself a remarkable achievement...and different enough to deserve publication on its own" (West, 2002). This achievement was over 75 years after the publication of *The Great Gatsby*. Both novels contain 9 chapters, we could propose "*Trimalchio*" for scholarly research and cross-reference, and *The Great Gatsby* for cultural studies and canonical status. We have made a discovery, *The Great Gatsby* was not the original novel, but was formed from a previous work called *Trimalchio* that then became *The GreatGatsby.* In the introduction to the novel *Trimalchio*, West (2002:xiii) adds "*The Great Gastsby* is like listening to a well known musical composition buy played in a different key ..."

4.9.3. The Great Gatsby

It was during 1924, while F.Scott Fitzgerald and his wife Zelda were staying in Saint-Raphael on the French Riviera, that Fitzgerald undertook the revision of Trimalchio, that was transformed into his "Magnum Opus", this was after being restructured and then receiving the new title *The Great Gatsby*. Alternative titles proposed were "*Gold-hatted Gatsby*" and "*Trimalchio in West Egg*". The writer Fitzgerald´s own life was not dissimilar to his novel. For F.Scott and Zelda, we could consider the following phrase useful: *they spent money like it was going out of fashion*. In "The American Scholar" an e-media publication, Quirk (2009) recounted how tax returns given to a family friend by Scottie Fitzgerald´s daughter, revealed his income and outgoing expenditure. His earnings averaged $24,000 per annum, equal to $500,000 today. He rented a house in *Great Neck* for $300 a month and spent a further $300 on servants:a butler, chauffer, yard man, cook, parlor maid, chamber maid, laundress, and a nurse for his daughter. The cover design for the *Novella* was created by Francisco Coradal-Cougat, a Spanish artist, who was born in

Barcelona but was living in Paris. His design was ready ahead of time, it has been noted that “Celestial Eyes”inspired Fitzgerald. *The Great Gatsby* was published in April 1925, it received mixed reviews, and moderate sales. It tells the story of three main districts “Old Money” Daisy and Tom Buchanan in East Egg, the “Nouveau Riche” in West Egg where Gatsby has a mansion, and the down-trodden Wilson´s who reside in the Valley of Ashes. It is a narrative of doomed love, and extra-marital affairs and a fatal car accident. It is distinctive for its eloquent text, and themes of color, symbolism, and the corruption of the “American Dream” (Truslow Adams, 1931:214-215). So what makes Gatsby so great ? One theory is he took the blame for a crime he did not commit for “the gal” he was in love with (Daisy). Fitzgerald battled alcohol addiction and died prematurely in 1940. During Fitzgerald´s short lifetime less than 25,000 copies of the novella had sold. Today “The Great Gatsby” is the publishing house Scribner´s most popular novel. Each year 500,000 copies are sold annually, and 25 million copies have sold worldwide. The Great Gatsby has been translated into 42 different foreign languages. Cultural studies have amplified its attraction through film and theater adaptations, it truely is gold-hatted.

Many previous scholars, have approached the theme of color in the novella through an association with color and symbolism. For the current dissertation, will be taking a new direction to explore the color lexicon of *The Great Gatsby* using the Berlin and Kay 1969 hierarchy of eleven basic color terms. A corpus linguistics approach not dissimilar to Ishikawa´s D.H.Lawrence study of collocational patterns (2004:189 and 194) using the B&K formulation, has added inspiration. An e-media version of The Great Gatsby from Planet e-book/s has generated a small corpus to explore color in this essay with Antconc a concordancer software tool.

5. METHODOLOGY

5.1. Introduction

Pure research, and a traceable (deductive) strategy have been followed in this dissertation. The Berlin and Kay (1969) basic color terms formed the main hypothesis, the color terms were observed using a corpus linguistics approach, and a concordancer tool

confirmed the basic color term frequencies. This academic essay was concluded during a segment of time between summer/autumn 2016, therefore the research had no longitudinal study requirements with regards to returning to observe the same subjects at set times in the future.

5.2. Corpus Linguistics An Overview

A corpus, or corpora (plural), is an academic description of a text that has been created from natural written, or spoken language. Corpus linguistics is the discipline of analyzing corpora for various “patterns”using a computer. There are corpora for different purposes, for instance, The American Time Magazine Corpus, and much larger corpora including COCA and the BNC, more resources are available on the internet, that has helped centralize this practice.A corpus is either raw, or tagged/annotated. If it is the latter, each word has been coded for its “grammatical category”(Biber et al,1998:3). Types of software tools to assist corpus linguistics analysis include Antconc (free), and Wordsmith. In their literature, Biber et al (1998), argue that “lexicographic” corpus-based research covers six main categories:1) to find out what are the “meanings”related to a specific word, 2) what is the “frequency”of a single word relatively speaking in relation to other words, 3) what “non-linguistic” meanings does a word have for example “register”, 4) what words commonly co-occur with a “particular word”(collocates), 5) in relation to the “senses and uses of a word” how are these distributed? (example:noun v verb), 6) words that appear to be “synonymous”, how are these used in different ways?

In their literature *Corpus Linguistsics:Method, Theory and Practice*, McEnery and Hardie (2012) emphasize that corpus linguistics is not “monolithic”, thus within the practice of this discipline we realise that different approaches exist. Two main schools of thought are:Corpus-based, versus Corpus-driven (Tognini-Bonelli 2001) as referenced in McEnery and Hardie (2012:5). Corpus-driven supporters do not believe “CL” is a methodology (2011:6) In this dissertation we will classify corpus linguistics as a methodological approach.

As “the corpus data we select to explore a research question must be well matched to that research question” (McEnery and Hardie, 2012:2) the author chose an e-media version of *The Great Gatsby* to create a corpus, motivated by the election of Pure research to address the knowledge gap surrounding “color terms” in *The Great Gatsby*. A corpus linguistics approach, and a “concordancer”, the software tool Antconc, were deemed suitable for a deeper exploration of Fitzgerald´s color lexicon in relation to the Berlin and Kay (1969) hierarchy of universal basic color terms and “elaborate” color terms (Steinvall, 2011).

Indiana University´s (2013) webpage on corpus linguistics, describe an *n*-Gram as a “stretch of text *n* words long, and through analysis it “tells us something about language”. However, an *n*-gram “does not capture structure”. For the purpose of this dissertation, clusters*/n*-grams were used for us to discover how Fitzgerald designated the colors as a sort of map for his “colourful” lexicon. The main thrust of the dissertation has been to explore all color terms for their saliency in an idiolect in relation to the theoretical framework and Berlin and Kay´s classic book (1969) following a hierarchy of universal evolutionary basic color terms.

5.3. Corpus Linguistics and Accuracy

A manual count to identify patterns in a novel could result in human error, in contrast a corpus analysis using “*Antconc*” a free software tool is an efficient method compatible with pure research methodology. This is how we will explore **color key words in context**, clusters/n-grams and collocates of “basic colour terms” (Berlin and Kay, 1969), and note the usage of “elaborate colour terms” (Steinvall, 2011). Although the novella *The Great Gatsby* was written in the 1920s, the **second question** “does a B&K set of basic color terms exist in the novella?”, is the impetus for our search following the B&K Evolutionary outline and hierarchy of the **eleven** “Universal bcts”.

The tool and corpus details are included here: Antconc the free software tool is available to download at http://www.laurenceanthony.net/software.html

An e-media version of "*The Great Gatsby*" is accessible from Planet e-books at http://www.planetebook.com/about.php, with 193 pages, it generated an apt corpus to be analysed in this dissertation. The file was converted to a**.txt file** a requirement of Antconc.

5.4. Antconc Preparation

1. We have downloaded our free antconc tool from the official webpage.
2. We have converted "*The Great Gatsby*" from planet e-books to a **txt file.**
3. We have opened our converted *"GG"* file and we are ready to search.
4. We observe the menu bar **"options"** with concordance/collocates/n-grams.
5. In the lower left box we enter a color word example "white" and **start.**
6. Concordances (lines of text) with our key word in a central line **appear.**
7. This is how we will continue to search for words (tokens).
8. The **min** and **max** boxes, minimise or extend the length of word strings.
9. To select another search option for example *n*-grams we must check this.
10 We generate a **general** word list (not to be confused with **key word list**)

See Appendices for general word list and all KWIC colors as screen-shots.

5.5. An E-Media Corpus Analysis Frequencies

There are a total of **50649** word tokens ordered by rank, frequency, and range in our "*Great Gastsby*"corpus. On the **main** word list generated with the concordancer tool Antconc, "white" was ranked at 151, with a frequency of 49, "black" was ranked at 530, with a frequency of 11, "red" was ranked at 659, with a frequency of 9, "yellow" was ranked at 296, with a frequency of 22, "green" was ranked at 368, with a frequency of 17, "blue" was ranked at 299, with a frequency of 21, "brown" was ranked at 772, with a frequency of 7, **Note** purple did not exist in Fitzgerald´s "*The Great Gatsby*" therefore the author included **lavender,** it was ranked at 900, with a frequency of 7 equivalent to the B&K "bct" brown. Pink was ranked at 924, with a frequency of 6, orange was ranked at 4609, with a frequency of 1 and "grey" was ranked at 369, with a frequency of 17.

5.6. In-Text Data Analysis and Results

5.6.1. The Basic Color Term White

For the viewer, a screen-shot of each **KWIC basic color term** was included in the Appendices including the key word in context screen-shot “white”.

Our first “monolexemic” color term “white” generated 49 “concordance lines”.

49 for the **KWIC** as represented in **color figure 4** below. **Categories** of the basic color term white, are shown in **figure 5**.

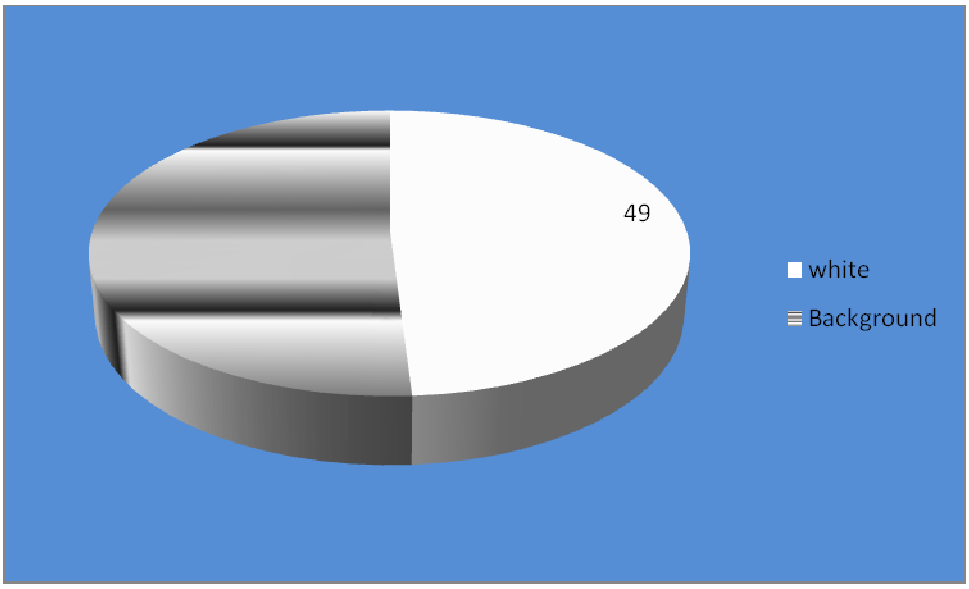


Figure 4. KWIC White 49.

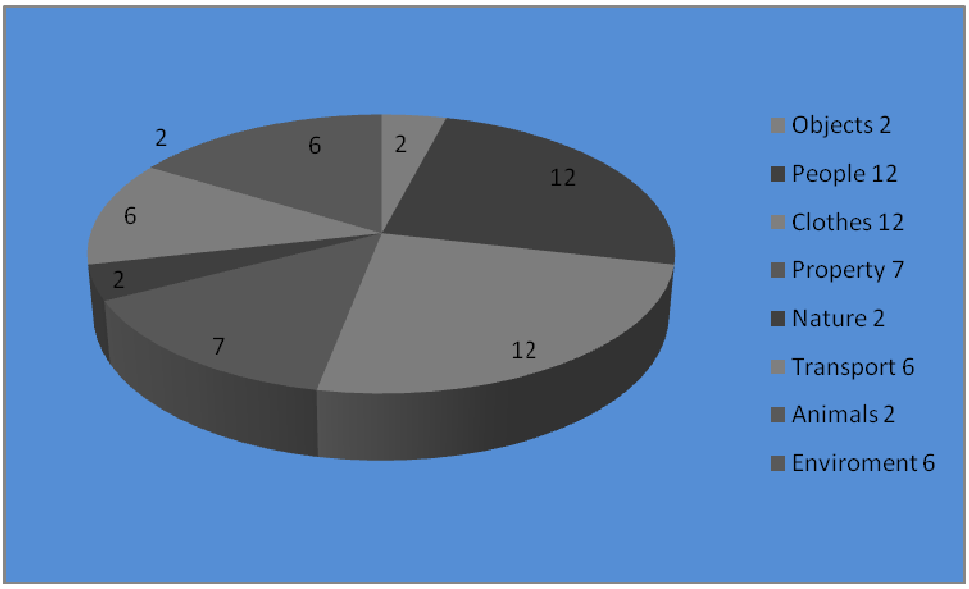


Figure 5. KWIC White Categories (manual Count) .

The author selected collocates as ten **Cluster/N-Grams** "2" minimum to "2"maximum tokens, search term position (on the left) checked. transport, clothes, people, and property were included. Frequently, *n*-grams are used in probability studies to predict language sequences for example, White/white palaces/white palaces of/white palaces of east/White palaces of East Egg. This however would be not be an easy task for us compared to everyday language, as the novella is a work of fiction and so the pattern would not be predictable or probable, more an exercise in creativity. In the present dissertation clusters and *n*-grams were utilised to tell us how Fitzgerald used his color lexicon, what colors signified to him in *The Great Gatsby* and how his colors were designated.

5.6.2. How Fitzgerald Designated White in his Color Lexicon

Rank	**Frequency**	**Range**	**Cluster**
2	2	1	White car
3	2	1	White dresses
4	2	1	White plum

7	2	1	White washed
11	1	1	White card
17	1	1	White face
21	1	1	White girlhood
29	1	1	White palaces
30	1	1	White race
31	1	1	White sheep

Table 1: White Clusters/N-Grams

The basic color term “White” had the highest frequency of all the basic color terms (49 KWIC) in Fitzgerald´s color lexicon. Transport as in “white car” was salient with a rank of 2, in comparison to “white sheep”, ranked at position 31. The cluster tokens for “white have shown to us Fitzgerald´s subjectivity, how white constructed characterization, objects, and spatial awareness. The ideology and aspirations of white in the novella have revealed to us a ”**white elite**”group. The high frequency of white in the novella initiated more research in comparison to the other B&K basic color terms.

The token for “white” encompassed all the main characters in the novella, and furthermore, “male” **status** was much higher in the ranks than female status as with *King* ranked at 21, and *Daughter* at 59. The female group had a higher **presence** in the category of the basic color term white. *The Great Gatsby* was told through a first person narrator Nick Carraway, the pronoun “me”.

The author selected the main nouns and pronouns that collocated with “white”, see **the table** below.

King	noun	Rank 21	Frequency 1	F/left 0	F/right 1	Stat10.02211
Daughter	noun	Rank 59	Frequency 1	F/left 0	F/right 1	Stat 9.02211
Jordan	noun	Rank 154	Frequency 4	F/left 2	F/right 2	Stat 5.83229
Woman	noun	Rank 160	Frequency 1	F/left 1	F/right 0	Stat 5.62980
Nick	noun	Rank 167	Frequency 1	F/left 0	F/right 1	Stat 5.43715

Daisy	noun	Rank 211	Frequency 3	F/left 1	F/right 2	Stat 4.07569
Tom	noun	Rank 258	Frequency 1	F/left 0	F/right 1	Stat 2.44468
His	pronoun	Rank 228	Frequency 6	F/left 1	F/right 5	Stat 3.65871
Her	pronoun	Rank 198	Frequency 9	F/left 6	F/right 3	Stat 4.55179
He	pronoun	Rank 263	Frequency 3	F/left 1	F/right 2	Stat 1.86898
She	pronoun	Rank 266	Frequency 1	F/left 1	F/right 0	Stat 1.32515
Me	pronoun	Rank 264	Frequency 1	F/left 1	F/right 0	Stat 1.67338

Table 2: White nouns/pronouns

5.6.3. The Basic Color Term Black

Note:A screen-shot of the basic color term black was included in the Appendices.

Our second "monolexemic" color term black generated **11 KWIC** concordance lines in the Novella as represented in **color Figure 6** below. **Categories** of the "bct" black are shown in **Figure 7**. Berlin and Kay´s (1969) hierarchical model stated that if a language had only two "Universal" color terms they would be black and white, or warm/cool, as day/night (our input).

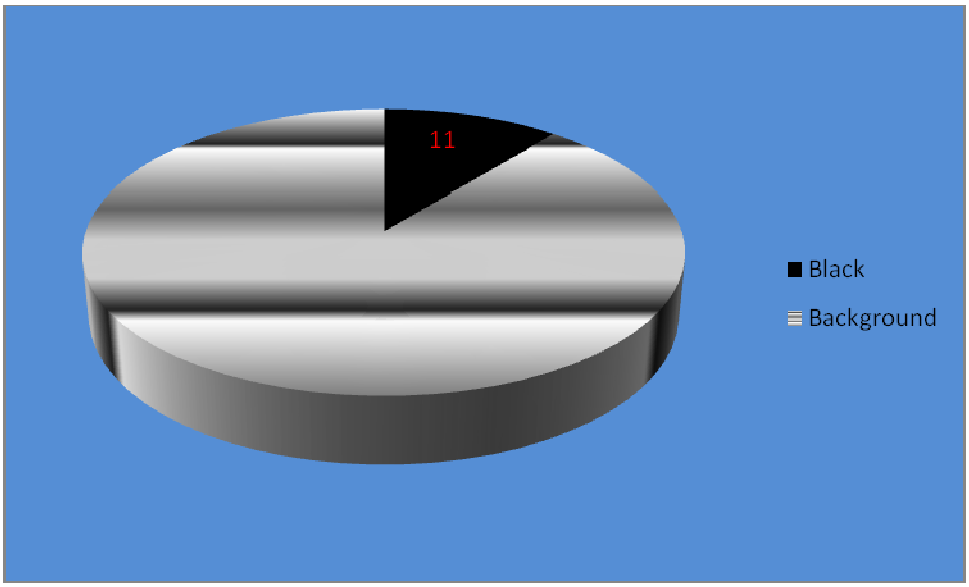


Figure 6 KWIC Black 11.

The author selected collocates as nine black **Cluster/N-grams** “2” minimum to “2” maximum tokens, search term position (on the left) checked, see the **table** below.

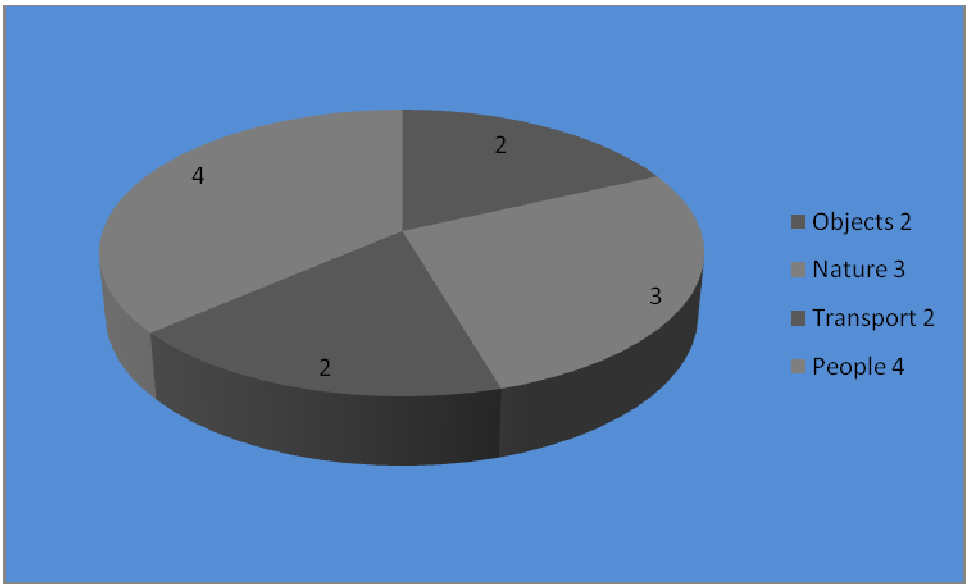


Figure 7. KWIC Black Categories (manual count)

5.6.4. How Fitzgerald Designated Black in his Color Lexicon

Rank	Frequency	Range	Cluster
1	3	1	Black and
1	3	1	Black as
3	1	1	Black beach
4	1	1	Black hostile
5	1	1	Black knotted
6	1	1	Black morning
7	1	1	Black rivulets
8	1	1	Black silk
9	1	1	Black wreath

Table 3: Black Clusters/N-Grams

The concordance lines with **11 KWIC** for black, are less than one fifth of the size of the basic color term white. The subjective use of the cluster tokens for "black" in Fitzgerald´s *The Great Gatsby* demonstrated to us the Western "indoctrination" of a color term, as black was/is associated with sadness, hostility, death, and uncertain climatic conditions as in "black morning" and "black beach". The color terms black and white, form part of the "achromatic set", and for this reason are not always considered to be colors. According to Berlin and Kay (1969), if a language possesses two color terms they are **black and white**.

Mother	noun	Rank 34	Frequency 1	F/left 0	F/right 1	Stat 8.85546
Gatz	noun	Rank 37	Frequency 1	F/left 0	F/right 1	Stat 8.71796
Mr	noun	Rank 53	Frequency 1	F/left 0	F/right 1	Stat 5.78507
Me	pronoun	Rank 72	Frequency 1	F/left 1	F/right 0	Stat 3.82866
His	pronoun	Rank 77	Frequency 1	F/left 1	F/right 0	Stat 3.22902
You	pronoun	Rank 78	Frequency 1	F/left 0	F/right 1	Stat 3.14949

Table 4: Black nouns/pronouns

As above, nouns and pronouns collocated with the B&K (1969) basic color term **black** in *The Great Gatsby*, as selected for this dissertation. The name Gatz revealed some past history related to "Gatsby" himself, and a change of identity. The collocates selected here had mostly male associations, with the exception of mother, "me" (Nick the narrator) and "you" (Tom Buchanan). Overall, the color term black had an **even distribution** between male and female.

Intermarriage (noun)	Rank 9	F 1, -F/left 1, F/right 0	Stat 12.17739
Sold (verb)	Rank 20	F 1, -F/left 1, F/right 0	Stat 10.177.39
Soft (adjective)	Rank 26	F 1, -F/left 1, F/right 0	Stat 9.17739
Shadow (noun)	Rank 30	F 1, F/left 0, F/right 1	Stat 9.00747

Table 5: Collocates of Black continued

The above chart demonstrated to us further collocates of the “bct” black. Intermarriage between black and white ethnic groups was an issue in the novella. Soft was used as a modifier on page 115 in natures “soft black morning”, in contrast “you” is how Daisy refers to her husband in ...”you did it, Tom” when she reveals her black and blue knuckle, a harsher use of basic color terms (page 15).

5.6.5. The Basic Color Term Red

Note:A screen-shot of the basic color term red was included in the Appendices.

Our third “monolexemic” color term “red” generated concordance lines with **9 KWIC**, as represented in **color Figure 8** below. **Categories** of the “bct” red in Fitzgerald´s *The Great Gatsby* are shown in **Figure 9**.

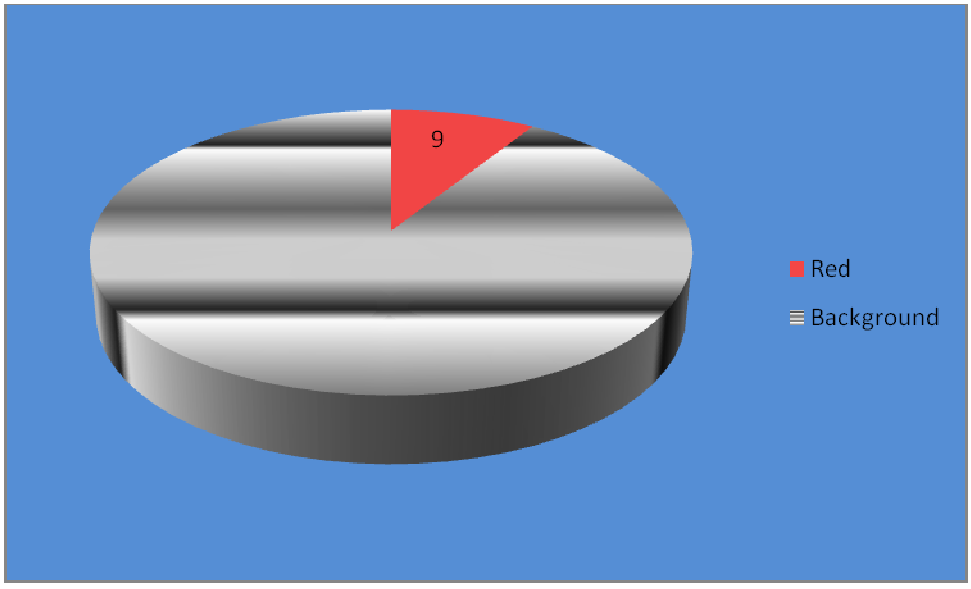


Figure 8. KWIC RED 9

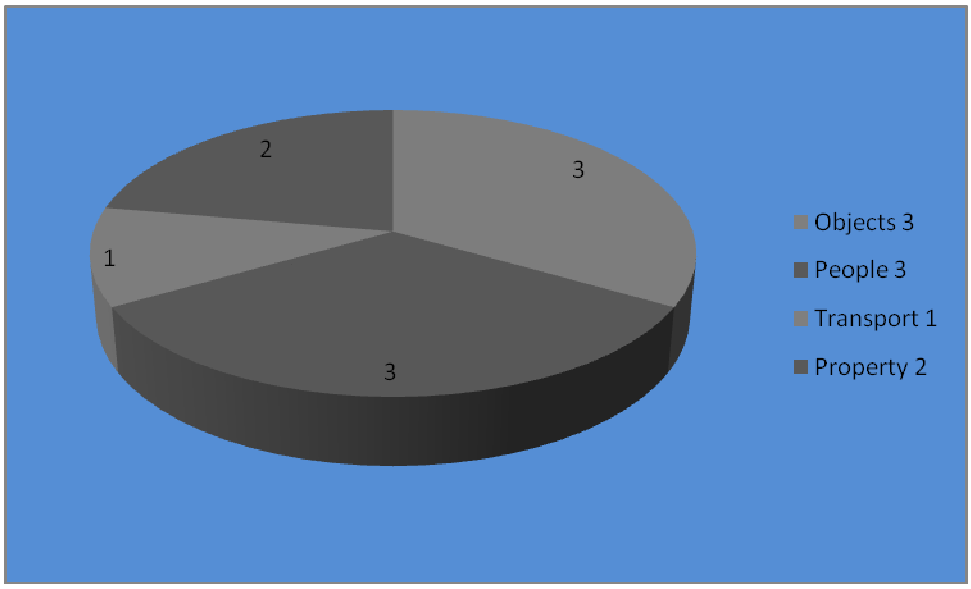


Figure 9. KWIC Red Categories (manual count)

5.6.6. How Fitzgerald Designated Red in his Color Lexicon

The author selected collocates as 8 **Cluster/N-grams** "2" minimum to "2" maximum tokens,search term position (on the left) checked, see the **table** below.

Rank	Frequency	Range	Cluster
1	2	1	Red and
2	1	1	Red circle
3	1	1	Red cross
4	1	1	Red gas
5	1	1	Red hair
6	1	1	Red haired
7	1	1	Red, white
8	1	1	red-belted

Table 6: Red Clusters/N-Grams

The basic color term red clusters, revealed to us how Fitzgerald´s color lexicon used "red" to portray movement as in red-belted (ships), humility (red cross), necessity red gas

(pumps), high spiritedness (red hair), and destruction red circle (of blood). The “bct” red was used mostly for objects and femaleness. In contrast to Modern Irish (Swinkel, 2015), with “rua” for hair and animal fur, and “dearg” for emotions, **red** in Fitzgerald´s lexicon has only one basic for a broad application. If a language has three color terms, the third one will be red in accordance with the B&K “Evolutionary” model. Further collocates of the basic color term red were included in the table below.

Lady	Rank 31	F 1, F/left 0, F/right 1	Stat 9.46690
Her	Rank 59	F 1, F/left 1, F/right 0	Stat 3.82665
Gold	Rank 32	F 1, F/left 0, F/right 1	Stat 9.14497
Money	Rank 38	F 1, F/left 0, F/right 1	Stat 7.94334

Table 7: Red Collocates

5.6.7. The Basic Color Term Yellow

Note: A screen-shot of the basic color term “yellow” was included in the Appendices. Our fourth “monolexemic” color term “yellow” generated **22 KWIC** concordance lines as represented in **color Figure 10** below. **Categories** of the “bct” yellow, are shown in **Figure 11**.

The author selected collocates as nine yellow **Clusters/N-grams** “2” minimum to “2” maximum tokens, search term position (on the left) checked, see **the table** below.

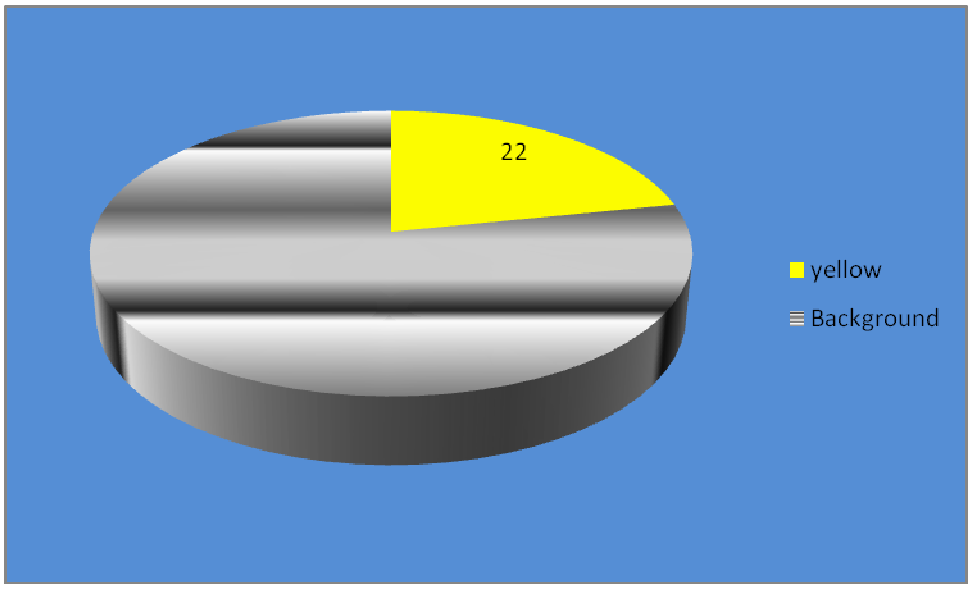


Figure 10. KWIC Yellow 22

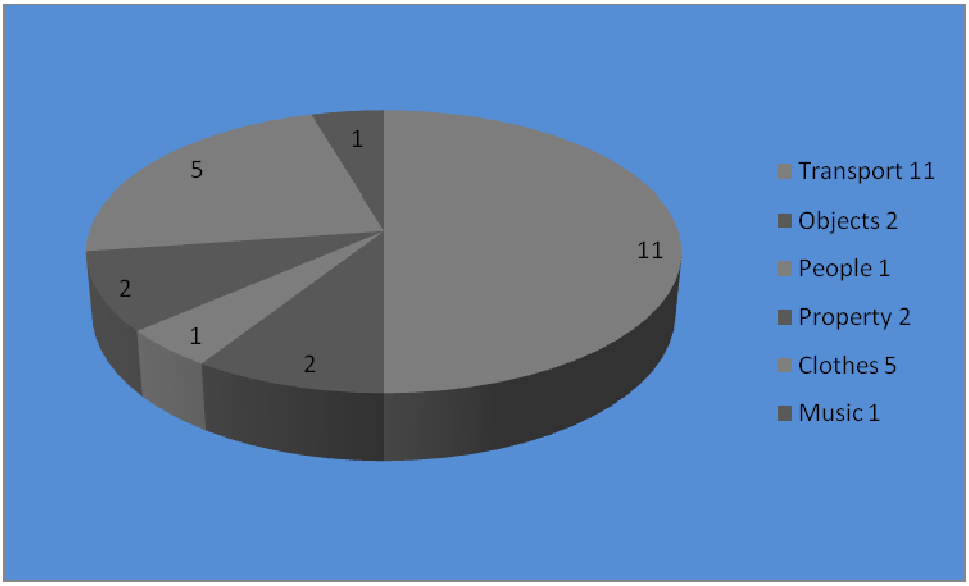


Figure 11. KWIC Yellow Categories (manual count as above)

5.6.8. How Fitzgerald designated Yellow in his color lexicon

Rank	Frequency	Range	Cluster
1	7	1	Yellow car
3	1	1	Yellow brick
4	1	1	Yellow bug

6	1	1	Yellow cocktail
7	1	1	Yellow dresses
8	1	1	Yellow light
11	1	1	Yellow spectacles
12	1	1	Yellow trolley
14	1	1	Yellow windows

Table 8: Yellow Clusters/N-Grams

In the Berlin and Kay (1969) hierarchy of basic color terms, yellow or green can be exchanged regarding their "evolutionary" order . In Fitzgerald´s subjective color lexicon, yellow has a high value, and is the second most salient of the basic color terms after the "bct white. Fitzgerald´s selection of yellow was elected to denote fun, speed, and quirkiness, as in yellow bug (vehicle) "theatrical" with yellow dresses, and yellow cocktail (music). In contrast to the white category and palaces (page 10), a certain solidity with yellow brick (building) is to be found on page 27, and in yellow windows, and "spectacles" for reading. Yellow for characterization, was even between male and female.

5.6.9. The Basic Color Term Green

Note: A screen-shot of the basic color term green was included in the Appendices. Our fifth Berlin and Kay (1969) basic color term has generated 17 KWIC concordance lines as represented in **color Figure 12** below. **Categories** of the "bct" green are shown in **Figure 13**.

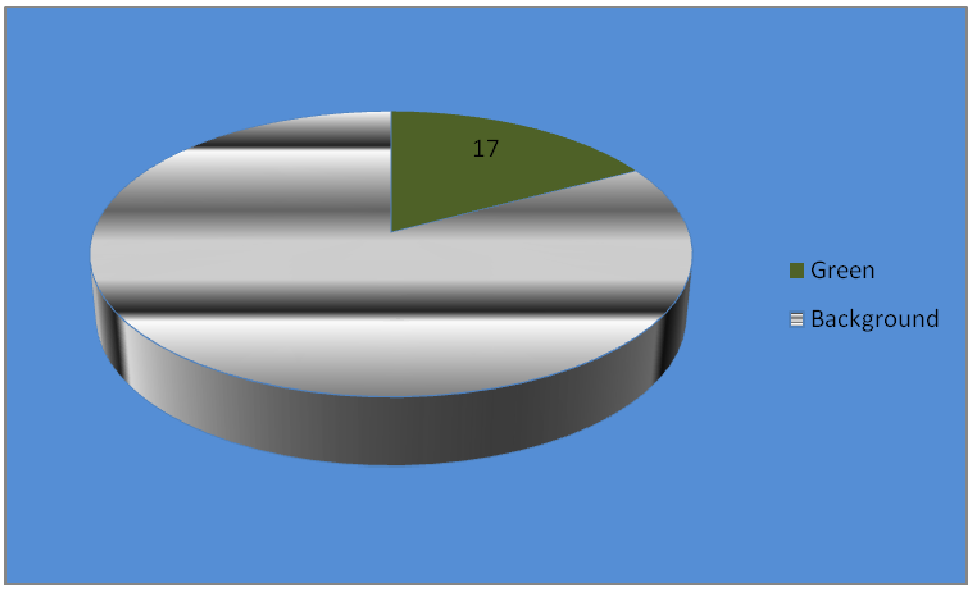


Figure 12. KWIC Green 17.

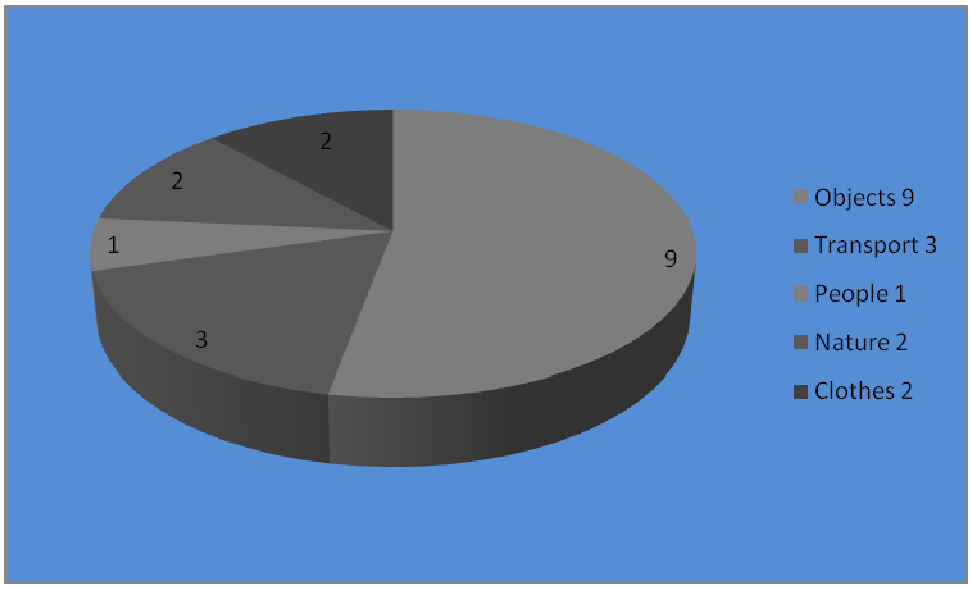


Figure 13. KWIC Green Categories (manual count)

The author selected 8 green collocates as **Clusters/N-grams** "2" minimum to "2" maximum tokens search term position (on the left) checked, see the table below. The basic color term green achieved the fourth highest position regarding salience of the Berlin and Kay (1969) "bcts". Fitzgerald´s subjective color lexicon allocated green for nature with "green sound"(river), to define distance and "green breast"(land) for something stark. In contrast "green leather" has revealed to us a deviance from the norm, "green tickets" exclusivity, and green golf expanses of land and the upper middle classes. The color term green had a predominantly male hierarchical association:Gatsby, the surnames Hesseys and Schultzes, policeman, and Dutch sailors.

5.6.10. How Fitzgerald Designated Green in his Color Lexicon

Rank	Frequency	Range	Cluster
1	5	1	Green light
2	2	1	Green leather
4	1	1	Green breast
6	1	1	Green golf

7	1	1	Green jersey
8	1	1	Green sound
9	1	1	Green tickets
11	1	1	Green

Table 9: Green Clusters/N-Grams

5.6.11. The Basic Color Term Blue

Note:A screen-shot of the basic color term blue was included in the Appendices. Our sixth Berlin and Kay (1969) basic color term blue has generated 21 KWIC concordance lines as represented in **color Figure 14** below. **Categories** of the "bct" blue are shown in **Figure 15**.

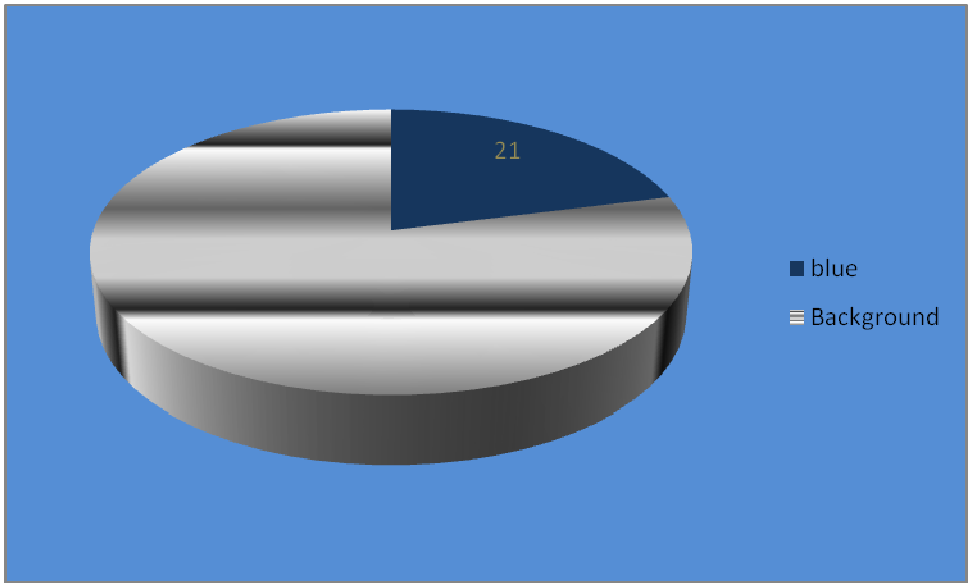


Figure 14. KWIC Blue 21.

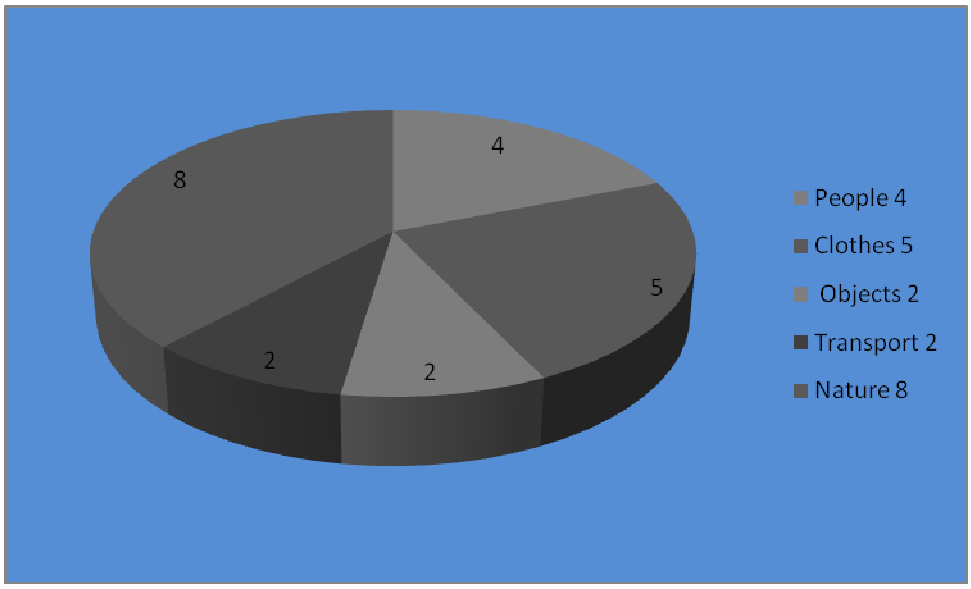


Figure 15. KWIC Blue Categories (manual count).

The author has selected 8 blue collocates as **Clusters/N-grams** "2" minimum to "2" maximum tokens, search term position (on the left) checked. See **the table** below.

5.6.12. How Fitzgerald designated blue in his color lexicon

Rank	Frequency	Range	Cluster
2	1	1	Blue banners
6	1	1	Blue coupé
7	1	1	Blue crepe
10	1	1	Blue eyes
11	1	1	Blue gardens
12	1	1	Blue honey
16	1	1	Blue paint
17	1	1	Blue quickening

Table 10: Blue Clusters/N-Grams

Blue was the third most salient "bct" in Fitzgerald´s color lexicon, blue revealed to us that the color term was designated for themes of patriotism (banners), class status

(coupé), sensuality (crepe), race (eyes), surrealism (gardens), and nature (honey, and quickening). The color term blue was also predominantly associated with maleness:Dr TJ Eckleburg, Wilson, and Tom. It was also interesting for us to note how Fitzgerald referred to women in a diminuitive way ...”in his blue gardens men and girls came and went”(page 43).

5.6.13. The Basic Color Term Brown

Note: A screen-shot of the basic color term brown was included in the Appendices. Our seventh Berlin and Kay (1969) “basic color term” has generated 7 KWIC concorance lines as represented in **color Figure 16** below. **Categories** of the “bct” brown, are shown in **Figure 17**.

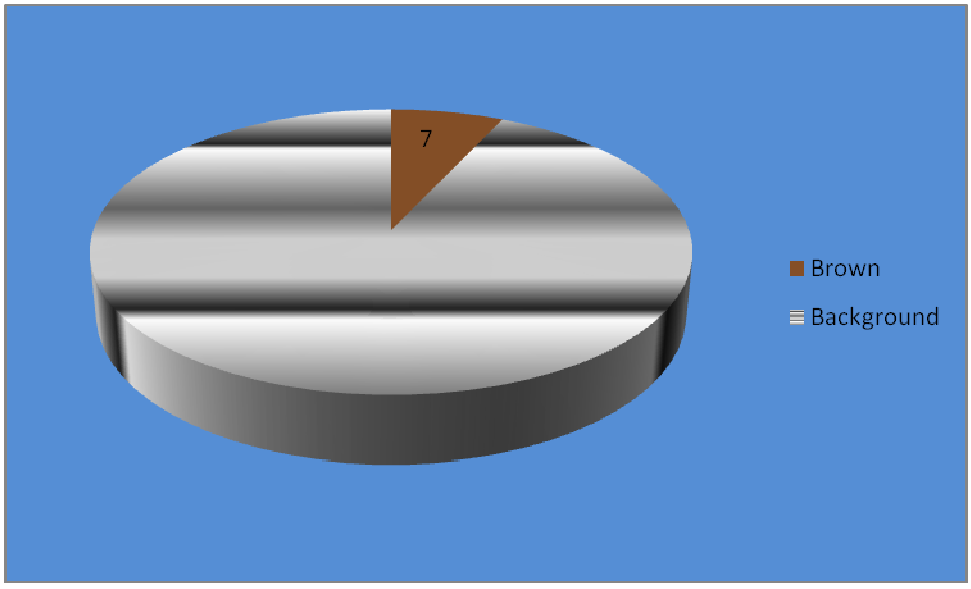


Figure 16. KWIC Brown 7

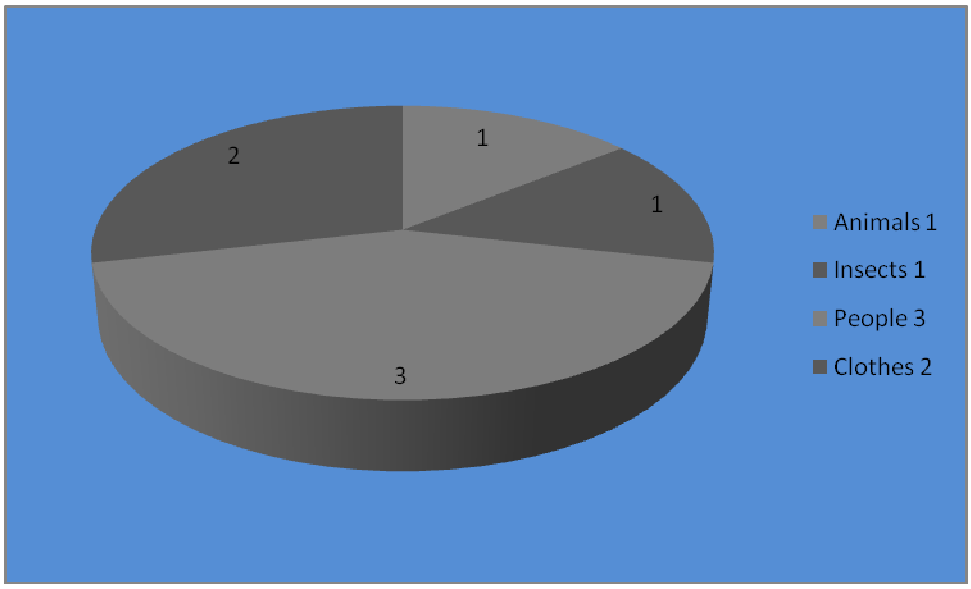


Figure 17. KWIC Brown Categories (manual count).

The author has selected 6 brown collocates, as **Clusters/N-grams** "2" minimum to "2" maximum tokens, search term position (on the left) checked. See **the table** below.

5.6.14. How Fitzgerald Designated Brown in his Color Lexicon

Rank	Frequency	Range	Cluster
1	1	1	Brown beetles
2	1	1	Brown figured
3	1	1	Brown hand
4	1	1	Brown riding
5	1	1	Brown tint
6	1	1	Brown wash

Table 11: Brown Clusters/N-Grams

The designation of the color term brown in Fitzgerald´s subjective lexicon, was applied to nature (beetles), solidity (figured), not normative (hand), class (riding), healthy (tint), commonality (wash).

Brown was designated mostly for femaleness and solidity, in contrast to the preciousness of white.

5.6.15. The Basic Color Term Purple

It is the eighth basic color term, but it **did not exist** in Fitzgerald´s lexicon for *The Great Gatsby*.

5.6.16. Lavender (*Substitution)

Lavender is a lighter shade of purple and was present in Fitzgerald´s color lexicon, therefore for the purpose of this study and exploration, it has been included with the **eleven** basic color terms.

Note: A screen-shot of the color term lavender was included in the Appendices. Our eighth Berlin and Kay (1969) basic color term did not exist, however lavender has generated 6 KWIC concordances, see **color Figure 18** below, and **Figure 19** for the **Categories** of the "ct" lavender.

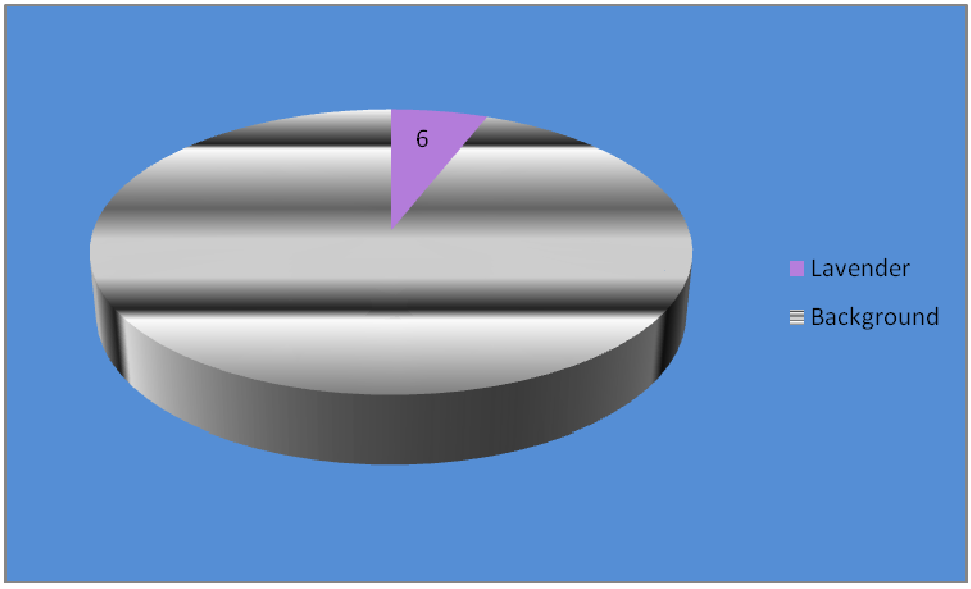


Figure 18. KWIC Lavender 6.

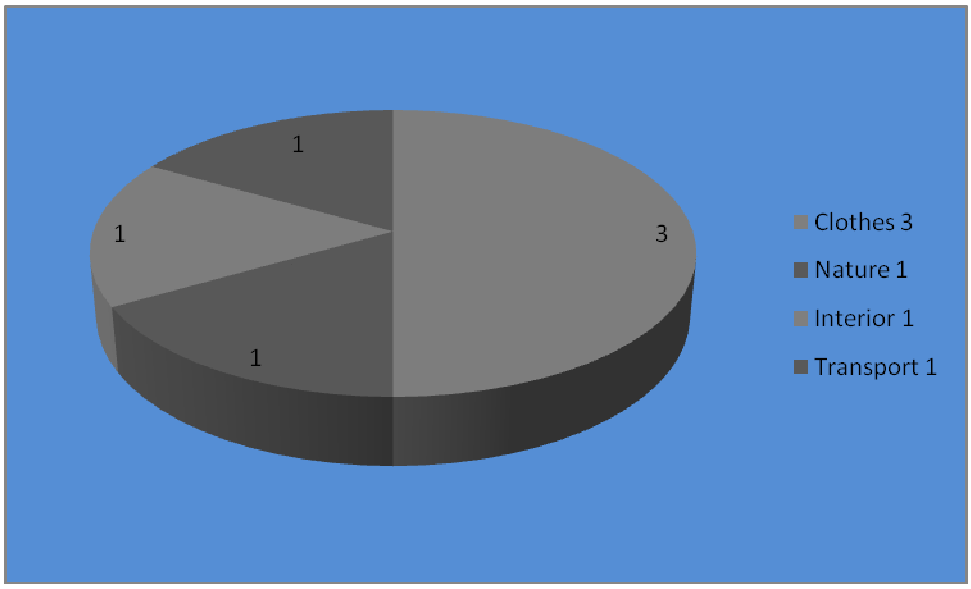


Figure 19. KWIC Lavender Categories (manual count).

The author selected 4 lavender collocates, as **Clusters/N-grams** "2" minimum to "2" maximum tokens, search term position (on the left) checked. See **the table** below.

5.6.17. How Fitzgerald designated Lavender in his color lexicon

Rank	Frequency	Range	Cluster
2	1	1	Lavender beads
4	1	1	Lavender hat
5	1	1	Lavender silk
tbc			Lavender-colored

Table 12: Lavender Clusters/N-Grams

The election of the color term lavender in preference to purple, reveals to us that Fitzgerald had a specific artistic, and elaborate intention for its designation for interiors, trimmings, and accessories.

In separate scenes, Lavender featured the narrator Nick, Daisy, and with an example on page 30 Myrtle (Tom´s mistress). .."She let four taxi cabs drive away before she selected a new one, lavender colored...

5.6.18. The Basic Color Term Pink

Note: A screen-shot of pink is included in the Appendices.

The basic color term “pink” is the ninth of eleven Berlin and Kay (1969), basic color terms in the writer F.Scott Fitzgerald´s *The Great Gatsby*. Pink has generated 6 KWIC concordance lines equal to the non basic color term “lavender”. See **color Figure 20** below, and **Figure 21** for the **Categories** of the “bct” pink.

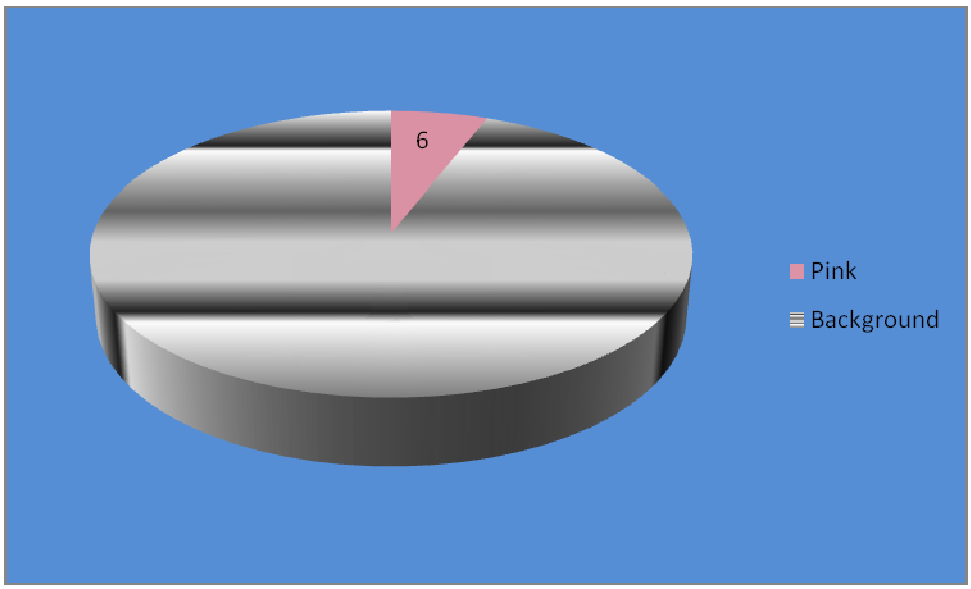


Figure 20. KWIC Pink 6.

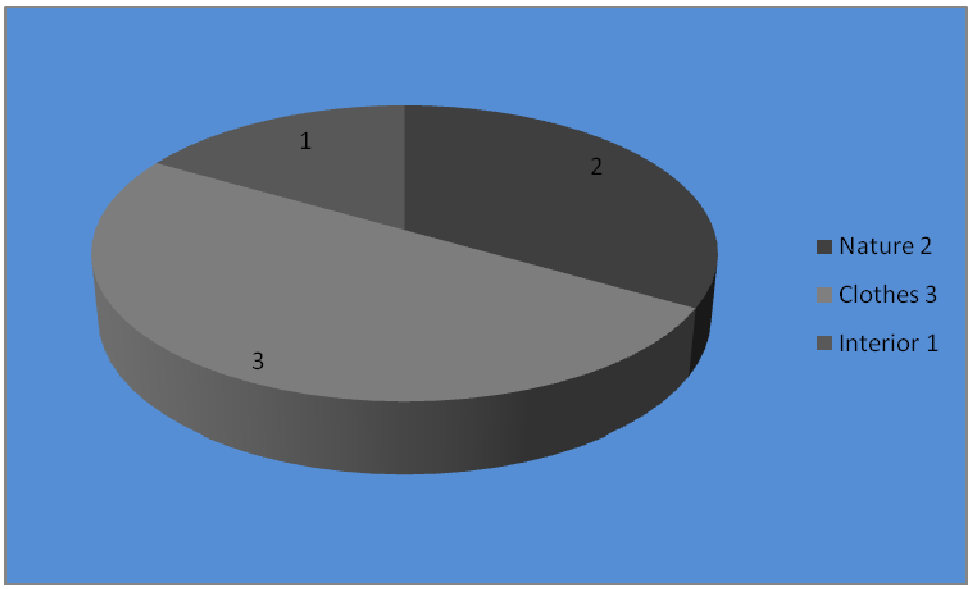


Figure 21. KWIC Pink Categories (manual count).

The author selected 5 pink collocates as **Clusters/N-grams** “2” minimum to “2” maximum tokens, search term position (on the left) checked, see **the table** below.

5.6.19. How Fitzgerald Designated Pink in his Color Lexicon

Rank	Frequency	Range	Cluster
1	2	1	Pink suit
2	1	1	Pink and ...
3	1	1	Pink clouds
4	1	1	Pink glow
5	1	1	Pink rag

Table 13: Pink Clusters/N-Grams

Fitzgerald´s lexicon revealed to us, how he designated the B&K basic color term pink for illusion as in (clouds), romance (glow), ostentaciousness (suit), and new money (rag). The Berlin and Kay basic color term pink was teamed mostly with maleness (Gatsby), and romance Gatsby with Daisy.

5.6.20. The Basic Color Term Orange

Note: A screen-shot of orange was included in the Appendices. We were reminded that orange, and pink as color terms, are on the dubious list regarding the Berlin and Kay (1969:5-6) criteria as they were both named after objects, a type of fruit (*an* orange) and “*a* pink” from horticulture. orange is the tenth basic color term and it generated only 1 KWIC concordance line, this revealed to us that Orange had the lowest value and was the least salient of all the basic color terms in Fitzgerald´s *The Great Gatsby*. See **color Figure 22** below KWIC and for **Categories** of the “bct” Orange see **Figure 23**. ADD pie chart, ADD pie chart

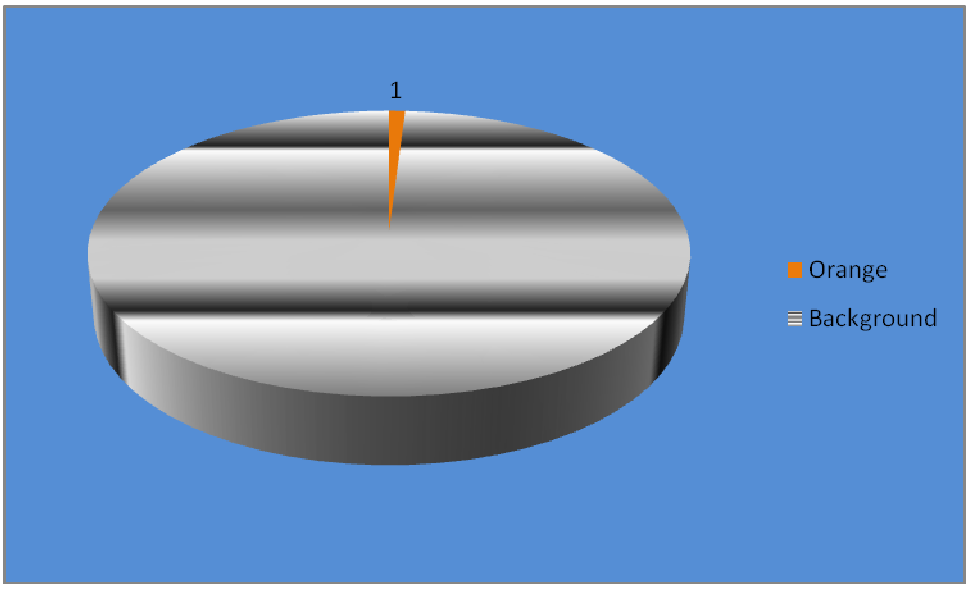


Figure 22. KWIC Orange 1.

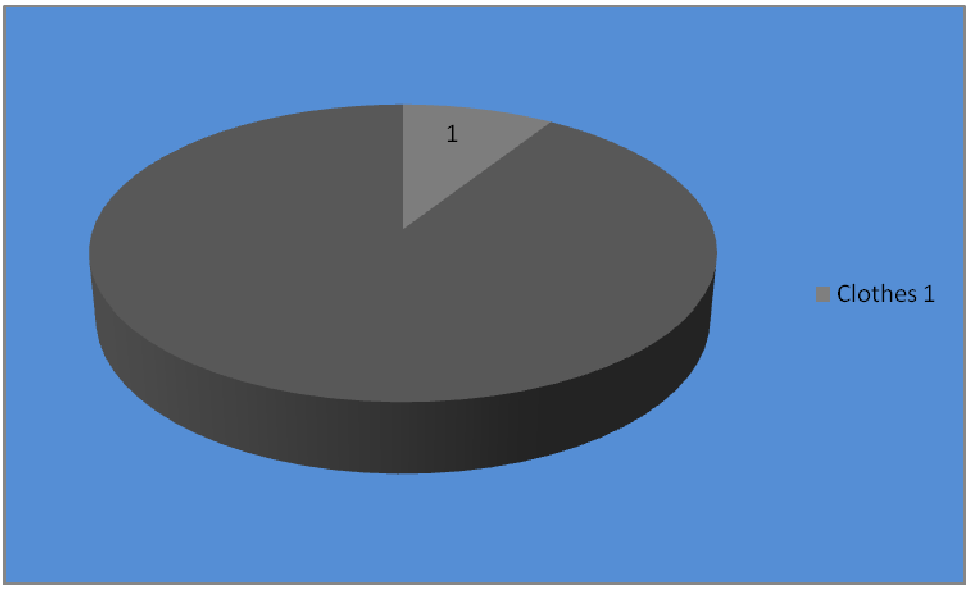


Figure 23. KWIC Categories (manual count).

5.5.21. How Fitzgerald Designated Orange in his Color Lexicon

Rank	Frequency	Range	Cluster
Not applicable	for	this	"bct" Orange

Table 14: Orange (Not applicable)

The author did not select any collocates as **Cluster/N-grams** as Antconc had none available for this category. Fitzgerald designated the basic color term orange for Gatsby´s

wardrobe, it was the color of a shirt among a stack of bespoke shirts, with monograms of "Indian blue". This added an aspect of exoticism to the protagonist Jay Gatsby and also gave him the air of a playboy. The "bct" orange was associated with maleness.

5.6.22. The Basic Color Term Grey

Note: A screen-shot of grey was included in the Appendices. With the exception of lavender, **we have achieved the full set** of the eleven Berlin and Kay (1969) basic color terms as part of their Evolutionary hierarchy. This demonstrated to us, that Fitzgerald´s lexicon of color terms was derived from a fully industrialised nation. Grey was the eleventh of the "bcts", and grey as a basic color term was highly salient in *The Great Gatsby*, it generated 17 KWIC concordance lines.

See "bct"**color Figure 24** below, and **Figure 25** for **Categories** of the color term grey.

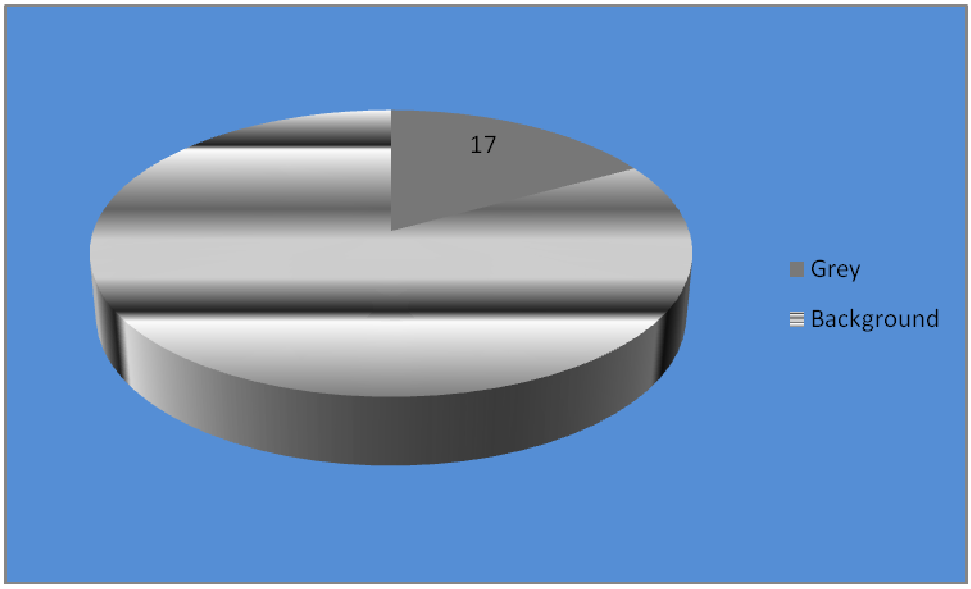


Figure 24. KWIC Grey 17.

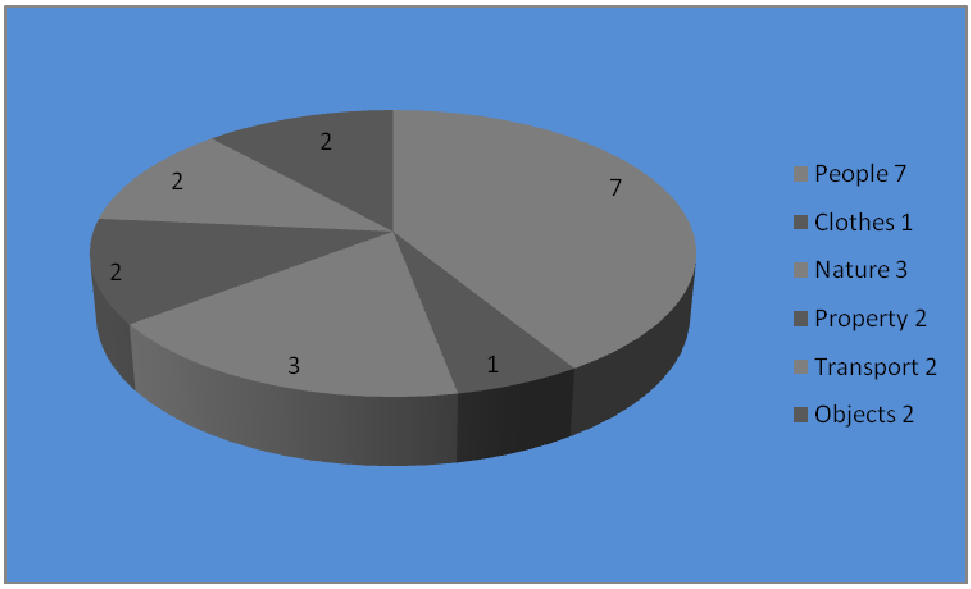


Figure 25. KWIC Grey Categories (manual count).

The author has selected seven collocates as **Clusters/N-grams** "2"minimum to "2" maximum tokens, search term position (on the left) checked, see the **table below.**

5.6.23. How Fitzgerald Designated Grey in his Color Lexicon

Rank	Frequency	Range	Cluster
1	1	1	Grey beard
4	1	1	Grey haze
5	1	1	Grey land
5	1	1	Grey men
6	1	1	Grey little
9	1	1	Grey old
16	1	1	Grey scrawny

Table 15: Grey Clusters/N-Grams

The writer F.Scott Fitzgerald designated the basic color term grey predominantly "maleness" (beard, and men), barren land, as a diminuitive quality (little), to portray poverty (scrawny), mirage-like (haze), and less attractive (old) in relation to the glamorous main characters of the novella.

After exploring the text with Antconc a concordancer tool, we prepared a list of the so-called non basic color terms (Berlin and Kay 1969:5-6) or alternatively, "elaborate"

color terms (Steinvall, 2011:220-223) from F.Scott Fitzgerald´s color lexicon. The terms Fitzgerald chose were derived from pigment dyes, nature, land minerals and the sea. The high salience of colors derived from pigment dyes are further evidence that this color lexicon was associated with **modern society**. The theme of gold with pink is mirrored in nature as in line 8 KWIC "pale", ..pale gold odor of kiss-me-at-the-gate (a fuschia plant) and manmade pigments, line 1 KWIC "pink", ...and there was a pink and golden billow of foamy clouds..(The Great Gatsby page 101, Planet e-books). These "ECTs" revealed Fitzgerald´s connectedness with his color lexicon.

5.7. Fitzgerald´s Elaborate Color Terms

If we consider some examples following the Berlin and Kay (1969:5-6) criteria for non-basic color terms, in comparison to the monolexemic basic color term green KWIC 17, apple green is not a basic color term it has a restrictive category and low salience of 1. Equally, autumn-leaf yellow has a salience of 1, and is not easy to recall. These creative terms, reveals to us the writers connection with his literature.The "cement" color also refers to a restricted class as it was used for walls and in contrast to grey with 17 KWIC, cement only has 1 KWIC. The metallic colors were important in *The Great Gatsby*, gold had a higher salience than some basic color terms with 10 KWIC, as did silver. Crimson, and wine signify other color terms but are forms of red, they are therefore outside of the accepted criteria.

From our group of elaborate color terms (Steinvall 2011:) an "alternative color hierarchy"of eleven could be constructed as follows: Milky white, inky, crimson, autumn-leaf yellow, apple-green, robin´s egg blue, tan, lavender, rosy, coral, and nebulous. Apart from lavender, it is an elaborate set with low salience in contrast to the B&K universals. These terms are from a western ideology, they reveal to us a need to define and order our lives and environments through color classifications.

“Elaborate” **KWIC** non basic colors	Fitzgerald´s The Great Gatsby (e-media)
Aluminium (page 136)	Land mineral
Apple-green (page 99)	Pigment
Ash-grey (page 27)	Pigment
Autumn-leaf yellow (page 21)	Nature
Blonde (page 28)	Dye
Blue honey (page 38)	Nature
Brass (page 97)	Land mineral
Caramel (page 70)	Pigment
Cool blue (page 125)	Nature
Coral (page 99)	Sea mineral (pigment)
Cement (page 29)	Land mineral
Cream (page 69)	Pigment
Crimson (page 123)	Pigment/Jewel
Dark blue (page 28)	Pigment
Gas blue (page 48)	Pigment
Gold (main pages 2, 10, 90, 97,98,113 and 163)	Land mineral
Golden (5 pages:47, 86, 101, 129, 161)	Pigment
Indian blue (page 99)	Pigment Fitzgerald´s The Great Gatsby (e-media)
Inky (page 57)	Pigment
Lavender (6 pages:30, 48, 91, 98, 99, 158)	Nature
Lemon (page 90)	Nature
Light blue (page 28)	Pigment
Metallic (page 129)	pigment
Milky white (page 33)	Nature
Nebulous (page 101)	Nature
Opal (page 45)	Jewel
Pearl (page 191)	Jewel
Robin´s egg blue (page 45)	Pigment
Rosy (page 14)	Pigment
Silver (3 main pages:25, 90, 161)	Land mineral
Straw (page 10)	Nature
Tan (page 123)	Pigment
Wine (page 10)	Nature

Table 16: Non-Basic Color Terms

5.8. The Metallic Set

As the metallic set is significant in *The Great Gastby*, a pie chart has been produced. See below.

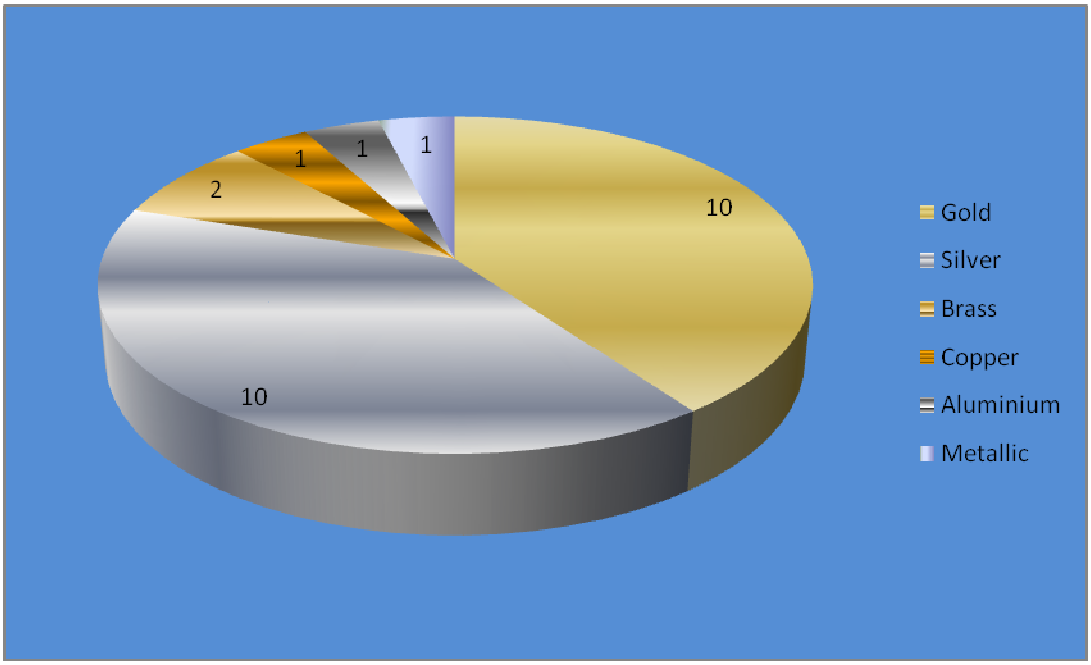


Figure 26. Gold and metallic colors.

6. DISCUSSION CHAPTER

6.1. Motivation

The current paper set out to initiate a new direction in "The Great Gatsby" via Colour Science, to place in the mind of the viewer a broader understanding of color vision and **trichromacy**. In addition, the author tried to communicate certain beliefs of color philosophy including primitivism, and eliminativism. On the one hand, this was complex territory to tread but on the other hand, it aimed at replacing the "static" color and symbolism theme in the novella. If we consider Allen (2010) and his argument of "plausability" perceiver with normal colour vision, object seen under natural daylight and we relate this to *The Great Gatsby* page 153, and the luminosity of Gatsby´s suit under the moonlight, this would go against normal conditions of perception and imbue the pink suit with an intensity of light, and a distortion of its original appearance, yet still in our minds we would attempt to retain an image of a "pink" suit. Additionally, if we consider Johnston (1992) and the disposition of a "canary yellow" thing in relation to the car Gatsby owns, on

page 69 Nick describes it as a rich cream color, on page 147 Michaelis says it is light green, and on page 150, Wilson describes it as a yellow car.

6.2. Pure Research

On the one hand the choice of pure research to analyse color terms in “The Great Gatsby” has widened the illocution of “color”. On the other hand due to its “exploratory” nature, the author had to limit the accumulation of information, and stem some aspects. For example, the online American Time Magazine Corpus has only been utilised for basic color term frequencies during the 1920s but in the future would serve as a source for deeper investigation.

6.3. A Recapitulation of the Focus and Main Question

“Although the novella was written in the 1920s, does a Berlin and Kay (1969) set of **eleven** English basic color terms exist in Fitzgerald´s lexicon?” The findings have demonstrated support for the B&K color model. This shows to us that the literature was written by an author in an industrialised nation.

6.3.1. A Summary of the Results

The results revealed that every B&K (1969) basic color term except “**purple**” exist in *The Great Gatsby*:white, black, red, yellow, green, blue, brown, pink, orange and grey. The author made a subjective decision to use a non basic color term “lavender” a lighter purple, to complete the set. This challenged B&K, as the non basic color term lavender, had the same frequency as pink KWIC 6. In addition, I made a subjective decision to select clusters/*n*-grams to reveal how Fitzgerald designated his color terms in the novella.

6.3.2. An Examination of the Results in Relation to Existing Research

Berlin and Kay´s color hierarchy is still the impetus for ongoing color research today in modern society, and with indigenous culture. In relation to other scholarly research of “blue”Davies and Corbett, (1994) and Androulaki (2006), argued for 12 basic color terms for Russian and Greek. The current paper can support this argument as Fitzgerald´s lexicon included light blue and dark blue. In contrast non basic colors for blue had low salience of 1 KWIC for example **robin´s egg blue**, this term is not monolexemic, it is derived from an

object, and it would not be psychologically salient in the idiolect of the writer (American English).

6.3.3. An Indication of the Importance of the Findings

To our knowledge, this is the first study to address color terms extensively using the B&K model, an e-media corpus of *The Great Gatsby* and a concordance tool "Antconc".

The findings suggest that further research would be beneficial in Fitzgerald´s other literary work to evaluate the subjectivity of the writer regarding designation of colors within a larger color domain. I would also propose an investigation of etymology of color names both basic, and elaborate.

6.3.4. Explanation of the Results and The Time Magazine Corpus.

In order to avoid **"visual overload"** I have decided, **the color frequencies** between "*The Great Gatsby*", and The American **Time Magazine** Corpus for the basic color terms (Belin and Kay, 1969), would appear in the discussion section. The color term **white** was the most salient in the corpora with a frequency of 49 in the novella and 4181 in *Time*. Although **yellow** was more salient in the novella at 22, **green** had a higher frequency in "*Time*" at 889, compared with 552 for yellow. Brown had a low frequency in *The Great Gatsby* of 7, but a high frequency of 1058 in the reference corpus. If we compare the "bct" purple it had a frequency of 129 in *Time*, in contrast lavender had only 20, this is an indication of the **high saliency** of a basic color term versus the **low saliency** of a non basic color term.

6.3.5. Here are the frequencies

The Time Magazine Corpus (1923-2006) is made up of 275,000 articles and is based on 100 million words. It was created by a linguistics professor Mark Davies in 2007. In contrast the e-media version of the novella has 193 pages, and 50649 tokens (words). "White" in the novella :Frequency 49, in *Time* Frequency 4181. "Black" in the novella F:11, in *Time* F:1776. "Red" in the novella F:9, in *Time* F:1763. "Yellow" in the novella F 22, in *Time* F:552. "Green" in the novella F:17, in *Time* F:889. "Blue" in the novella F:21, in *Time* F:870. "Brown in the novella F:7, in *Time* F:1078. **Purple** did not exist in the

novella, in *Time* F:129 for purple. “Lavender” in the novella F:6, in *Time* F:20. “Pink” in the novella F:6, in *Time* F:194. “Orange”in the novella F:1, in *Time* F:173, and grey in the novella F:17 and in *Time* F:456. **This comparison is for the 1920s**.

6.4. Limitations of the Study

Aside from tackling new and profound “Scientic Knowledge”, the current paper was stemmed due to the word limit imposed for a Master Thesis. The author would consider a continuation study appropriate for a doctoral dissertation.

6.4.1. Implications or Practical Applications of the Study

The present dissertation has focused on the basic color terms of Brent Berlin an anthropologist, and Paul Kay a linguist. Corpus Linguistics analysis has added fresh terminology, and the use of a concordance tool has helped to avoid human error when frequencies were recorded. These new approaches to *The Great Gatsby* have offered ongoing scholarly research new theoretical combinations, and the possibility for schools to create interesting pedagogical materials.

6.5. Recommendations for Further Research

Regarding the non basic color terms, an extensive amount of “elaborate”(Steinvall 2011) color terms were recorded. In particular **the blue group** expressed Fitzgerald´s engagement with his subject:blue cool, blue honey and Indian blue. The **metallic group** was found to be significant in *The Great Gatsby*, “Gold” had a KWIC of 10 concordances, in contrast some Berlin and Kay basic color terms had lower salience (red, pink, and orange). This gives support to Okazawa et al´s 2011 study, and is a recommendation of the present dissertation for further research, and a survey proposal.

7. CONCLUSION

In order to address the knowledge gap surrounding the notion of color, the current paper interpreted that the **desideratum** of *The Great Gatsby* was a new color direction.

Three main research questions were formulated: What exactly is color? , in the first part of the paper, this question was addressed via **theories** of Color Science, Color Vision, and Color Philosophy. Thus, a repetition of the Color and Symbolism theme in the novella was deterred.

Moreover, the election of pure research worked effectively to answer the second question and search for the existence of eleven "**basic color terms**" in *The Great Gatsby*. This concept of restricted *color foci*, had a linguistics origin derived from Berlin and Kay´s (1969) seminal work and their evolutionary and universal basic color terms hierarchy. Their work, gave an impetus to the main framework of the dissertation. This cross-cultural research, helped to further justify a new color direction, and to increase the body of information related to Fitzgerald´s color lexicon for a more robust "color-led" debate.

An e-media version of *The Great Gatsby* from Planet e-books, formed a corpus for the color exploration work, and the methodology for the current paper utilised a concorancer tool Antconc. Both qualitative, and quantitative measures recorded relevant color domain criteria with the objective to increase the knowledge surrounding Fitzgerald´s color lexicon. The third question was structured to investigate the subjective **designation** of the writers color terms in "The Great Gastby".

The creation of a small corpus taken from a celebrated work of literature, in combination with a corpus linguistics tool, are freely available, **accessible** internet resources, generating fresh ideas that I would suggest as a methodological approach for future scholars, and a concept for the development of interesting pedagogical resources.

Besides basic color terms, an abundance of non basic "**elaborate**" (Steinvall, 2011) color terms were also recorded, evidence that the domain of color was sufficient enough for a single project, without the need to incorporate other themes such as character analysis in the novella.

A future recommendation for doctoral research would be to include an investigation of Fitzgerald´s other work, and the "Etymology" of color terms. In addition, paying particular attention to the "metallic set" is a proposal, along with the possibility of a **color naming questionnaire**.

BIBLIOGRAPHY CITATION MASTER THESIS 2016

Abbott, F.F.(1907).The Use of Language as a Means of Characterization in Petronius.*Classical* Philology, *2*(1), 43-50. Retrieved from http://www.jstor.org/stable/261660.

Adams, Truslow.(1931). "American Dream" concept in *The Epic of America*, 214-215. Retrieved from http://www.loc.gov/teacher/classroommaterials/lessons/american-dream/students/thedream.html

Allen, K.(2009).The Connotations of Color Terms, Color Based X-Phemisms [PDF].

Allen, K.(2010)."In Defense of Natural Daylight". *Pacific Philosophical Quarterly, 91*(1),1-18. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0114.2009.01355.x/full

Androulaki et al.(2006). Basic Colour Terms in Modern Greek:Twelve terms including two blues, *Journal of Greek* Linguistics, *7*(1), 3-47. Retrieved from http://booksandjournalsbrillonline.com/content/journals/10.1075/jgl.7.03and

Anthony, L.(2014). Software tool Antconc (version 3.4.4). Retrieved from http://www.laurenceanthony.net/software.html

Balme, M.G.(1974).The Millionaires Dinner Party:An Adaptation of the Cena Trimalchionis of Petronious. Retrieved from https://www.amazon.com/Millionaires-Dinner-Party-adaptation-Trimalchionis/dp

Barbieri, A.(2015,March12th).The invention of the colour purple. the guardian.Retrieved from https:www.theguardian.com/lifeandstyle/2015/mar/12/the-invention-of-the-colour-purple.

Barbour, B.M.(1973).*The Great Gatsby* and the American Past. Retrieved from http://search.proquest.com/openview/f97bb347db061c2c3226dba272f332/1?pq-origsite=gscholar&cbl=1819563.

Beran, O., & Organon, F. (2012). "Basic Color Categories" In The Language Game Perspective, *The Academy of Sciences of the Czech Republic*, Praha. [PDF].

Berlin, B.and Kay, P. (1969). *Basic Color Terms:Their Universality and Evolution*. University of California Press.

Bieber, D.et al.(1998).*Corpus Linguistics:Investigating Language Structure and Use*. Cambridge University Press.

Biggam, C.P. ((2011). *New Directions in Colour Studies*. John Benjamins. Retrieved from https//www.benjamins.com/catalog/z.167.

Biggam, C.P. (2012). The Semantics of colour:A historical approach by Carole P...

Retrieved from www.linguisticsociety.org/sites/default/files/10_89.4Dedrick.[PDF]

Bohmövá, H.(2010). Colour Systems in English in Comparison with Czech (Thesis). [PDF]

Boynton,R.M.(1996),1 Human Color Vision [PDF]. Retrieved from www.um.es/phi/aguirao/master/color.pdf

Brogaard, B.(2012). Color Eliminativism or Color Relativism?, *Taylor and Francis Online, 41*(2), 305-321. Retrieved from http://dx.doi.org/10.1080/05568641.2012.699175

Brown, R.W.& Lenneberg, E.H. (1954). A Study in Language and Cognition, *The Journal of Abnormal and Social Psychology*, *49* (3), 454-462. APA PsycNet. Retrieved from http://www.dx.doi.org/10.1037/h0057814

Byrne, A.(2001). "Do colours look like dispositions?" Reply to Langsam and Others. *The Philosophical Quarterly*, *51*(203), 238-245. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.0031-8094.2001.00227.x.

Canterbery, E.R.(1999). Thorstein Veblen and *The Great Gatsby*, *Journal of Economic Issues, 33* (2), 297-304. Retrieved from DOI:http://dx.doi.org/10.1080/00213624.1999.11506159.

Casson, R.W.(1994). "Russet, Rose and Raspberry":The development of English Secondary color terms". *Journal of Linguistic Anthropology*, *4*(1), 5- 22. Retrieved from http://onlinelibrary.wiley.com/doi/10.1525/jln.1994.4.1.5/full

Chalupa, A. (2015). F.Scott Fitzgerald on Writing *The Great Gatsby*. Big Think. Retrieved from http://www.bigthink.com/purpose-inc/f-scott-fitzgerald-on-writing-the-great-gatsby.

Chomsky, N.(1965). Universal Grammar[PDF]. Retrieved from https://english.wisc.edu/rfyoung/333/ug.pdf

Cohen, J.(2009). *"The Red and the Real":An Essay on Color Ontology*, Oxford University Press.

Collins Dictionary (20016). Sapir-Whorf Hypothesis, Retrieved from http://www.collinsdictionary.com/dictionary/english/sapir-whorf-hypothesis.

Computational Linguistics, Indiana University. Retrieved from http://cl.indiana.edu/~md7113/...ngrams/05-ngrams.pdf

Crawford, T.D.(1982). Defining "Basic Color Terms"*Anthropological Linguistics*, *24*(3), 338-343. Retrieved from http://www.jstor.org/stable/30027848.

Damen, M.(n.d). Petronius:Cena Trimalchionis (Satyricon Chapters 2-3)[PDF]. Retrieved from http://www.usu.edu/markdamen/latin1000/Readings/1020B/31Petronius2.pdf

Davies, I.,Davies,C.,and Corbett,G.(1994). The basic color terms of Ndebele, *Journal of African Languages and Cultures*,7(1) 36-48. Taylor and Francis ltd, Retrieved from http://www.jstor.org/stable/1771749.

Davies, I., and Corbett, G.(1994).The Basic Color Terms of Russian, *Linguistics-An Interdisciplinary Journal of the Language Sciences, 32*,(1) 65-90. Retrieved from https://www.degruyter.com/view/j/ling.1994.32.issue-1/ling.1994.32.1.65/ling.1994.32.1.65.xml.

Davies, M.(2007). *TIME Magazine* Corpus. Retrieved from http://corpus.byu.edu/time.

Delgado, A.R.(2004). Order in Spanish Colour Words:Evidence against Linguistic relativity, *British Journal of Psychology*, *95*, (1), 81-90. DOI:10.1348/000712604322779479.Retrieved from https://www.nbci.nlm.nih.gov/pubmed/15005869..

Dubose, M.D.(2012). From "Absolution" through Trimalchio to *The Great Gatsby*, A Study in Reconception, Wiley Online Library,10 (1), 73-92. Retrieved from https://wwwonlinelibrarywiley.com/doi/10.1111/j.1755.6333.2012.01076.x/full.

Elmore, A.E.(1970). Color and Cosmos in *The Great Gatsby*, *The Sewanee Review, 78*, (3),427-443. The John Hopkins University Press. Retrieved from https://www.jstor.org/stable/27541823

Geiger, L. (1880). *Contributions to the History of the development of the Human Race*. Truber & Company.

Gert, J.(2008). "What Colors Could Not Be":An Argument for Color Primitivism. *The Journal of Philosophy*, *105*(3), 128-155. Retrieved from http://www.jstor.org/stable/20620083

Gidley, M.(1973). Notes on F.Scott Fitzgerald and the passing of the Great Race. *Journal of American Studies*, 7(2),171-181. Cambridge University Press. Retrieved from DOI:https://doi.org/10.1017/500218758000

Goldstein, J., Davidoff J., and Roberson, D.(2009). "Knowing color terms enhances recognition:Further evidence from English and Himba. *Journal of Experimental Child Psychology*, *102*, (2), 219-238. Retrieved from www.sciencedirect.com/science/article/pii/S0022096508000878

Grant, M.(2004). Colourful Characters:A Note on The Use of Color in Petronius. *Hermes*, 132(2), 244-247. Retrieved from http://www.jstor.org/stable/4477602

Hardin, C.L.(1988). *Color for Philosophers:Unweaving the Rainbow.* [PDF].Retrieved from www.sfu.ca/~kathleea/colour/docs/Hardin-ColorForPhilosophers.pdf

Kay, P., & Maffi, L.(1999). Color Appearance and the Emergence and Evolution of Basic Color Lexicons, *American Anthropologist*,*101*(4), 743-760. Retrieved from http://onlinelibrary.wiley.com/doi/10.1525/aa.1999.101.4.743/full

Huxtable,R.J.(2001). The Mutability of Blue, *Molecular Interventions* (MI), 1(3),141-144. Retrieved from http://www.2001-triggered.clockss.org/servecontent?url=http://molinterv.aspetjournals.org%2F%3%2F141.full.

Ibrahim, R.A.(2014). Expanding the Domain of English Influence:The Issue of Colour Naming in some Indigenous Languages. *European Scientific Journal*. Retrieved from

http://www.search.proquest.com/openview/972ble9aea638117b3ca26153f686cc6/1?pq-origsite=gscholar&cbl=576353

Ishikawa, Shin´ichin. (2004). A Corpus Based Approach to Basic Colour Terms in the Novels of D.H.Lawrence, *English Corpora Under Japanese Eyes.* Rodopi. Retrieved from http://booksandjournals.brillonline.com/content/books/b9789004333758s011

James.C. (2014). Oxford English Dictionary (OED) Blog, Colourful languages:Colours in International Idioms. Retrieved from http://blog.oxforddictionaries.com/2014/09/colourful-language-colours-international

Johnson, E.G.(1977). The Development of Color Knowledge in Preschool Children *48*,(1), 308-311.Wiley online library on behalf of *The Society for Research in Child Development*.Retrieved from http://www.jstor.org/stable/1128918

Johnston, M.(1992). How to Speak of the Colors. *Philosophical Studies*,*68* (3) 221-263.doi:10.1007/13F00694847. Retrieved from http://linkspringer.com/article/10.1007%2FBF0069487?L1=true.

Kaiser, P.K., and Boynton R.M.(1996). Color Vision Theory. Retrieved from color.psych.upenn.edu>brainard>papers [PDF].

Kay, P.(2002). Color Categories are not Arbitrary. *Society for Cross-Cultural Research,* Retrieved from Santa Fe.kay@cogsci.berkeley.edu.

Kay, P.,& McDaniel.C.K.(1978). The Linguistic Significance of the Meanings of Basic Color Terms, *Language*, 54,(3) 610-646, Linguistic Society of America. Retrieved from http:// www.jstor.org/stable/412789.

Kay, P., Berlin, B., Maffi, L., Merrifield, W.R., Cook, R, (2009) WCS:*The World Color Survey*. Retrieved from http://www.icsi.berkeley.edu/wcs/data.html.

Kay, P., and Maffi. L. (1999). Color Appearance and the Emergence and Evolution of Basic Color Lexicons, *American Anthropologist 101*(4), 743-760. Retrieved from http://onlinelibrary.wiley.com/doi/10.15257aa.1999.101.4.743/full

Koreman, J.S.(1975). “Only Her Hairdresser”. Another Look at Daisy Buchanan. *American Literature*, *46*(4), 574-578. Retrieved from http://www.jstor.org/stable/2924582.

Kothari, C.R.(2004). *Research Methodology:Methods and Techniques*:, 3-6. Retrieved from https://www.books.google.es/books/about/Research_methodology.html?id=hz9wSHys0

Lance, J.(2000). *The Great Gatsby*:Driving to Destruction with the Rich and Careless at the Wheel. *Studies in Popular* Culture, *23*(2),25-35.Retrieved from http://www.jstor.org/stable/2341454.

Lenneberg, E., and Roberts, J.(1953). The Denotation of Language Terms. *The Linguistic Society of America.* Bloomington, Indiana.

Lenneberg, E., and Brown, R.W (1954). A Study in Language and Cognition. *The Journal of Abnormal and Social Psychology*,*49*(3), 454-462. APA PsycNet. Retrieved from http://dx.doi.org/10.1037/h0057814.

Levinson, S.C.(2000). Yélnî Dnyne Language, *Journal of Linguistic* Anthropology,10(1),3-55. Retrieved from http://onlinelibrary.wiley.com/doi/10.1525/jlin.2000.10.1.3/full

Lin, Luo., MacDonald., & Tarrant. (2001). A Cross-Cultural Colour-Naming Study Part 1:Using an Unconstrained Method, *Color Research &* Application, *26*(1), 40-60. DOI:10/1002/1520-6378(200102)26:1<40::AID-COL5>3.0.CO;2-X.

Lindsey, D., and Brown, A. (2009). Universality of color names, *PNAS, 103*(44). DOI:10.1073/pnas.0607708103. Retrieved from http://www.pnas.org/content/103/44/16608.long.

Lock, J., (1690). An Essay Concerning Human Understanding. Retrieved from http://www.philosophypages.com/hu/4.1.htm,

Long, R.E.(1966). *The Great Gatsby* and the Tradition of Joseph Conrad. *Texas Studies in Literature and Language, 8* (2), 257-276. Retrieved from http://www.jstor.org/stable/40753900.

Maclaury,R.E.(1987). Color-Category Evolution and Shuswap Yellow-with-green, *American Anthropologist*, 89(1),107-124. Retrieved from http://onlinelibrary.wiley.com/doi/10.1525/aa.1987.89.1.02a00060/full

Martin, A.(2015). Graphic Communications Open Textbook. Retrieved from https://opentextbc.ca/graphicdesign/

Maslow, A.(1943). A Theory of Human Motivation, *Psychological* Review, *50*(4), 370-396, APA PsycNet. Retrieved from http://dx.doi.org/10.1037/h0054346.

Maund, Barry.(2012).“Color”, The Stanford Encyclopedia of Philosophy. Retrieved from http://plato.stanford.edu/entries/color.

McEnery,T., Hardie, A.(2011). *Corpus* Linguistics:Method, *Theory and Practice*. Cambridge Textbook in Linguistics.

McManus, I.C.(1983), Basic Colour Terms in Literature, *Language and Speech*, *26*, (3), 247-252. Retrieved from http://las.sagepub.com/content/26/3/247.short

Mental Floss. (2014). “19 Colors You´ve Probably Never Heard of”. Retrieved from http://www.mentalfloss.com

Millgate, M.(1962). Scott Fitzgerald as Social Novelist:Statement and Technique in *The Great Gatsby*. *The Modern Language Review*. 57(3), 335-339. MHRA. Retrieved from http://www.jstor.org/stable/3721823

Morgan, G.(1993). Basic Colour terms Comparative Results for French and Russian, *Journal of French Language Studies*, 3(1),1-17. DOI:https://doi.org/10.1017/50959269500000326.

Morley, J. (2014). Academic Phrasebank, The University of Manchester. Retrieved from http://www.phrasebank.manchester.ac.uk.

Molotsky, I.(1999, November 27th). The New York Times, Early Version of *Gatsby* Gets a Chance of Its Own. Retrieved from http://www.nytimes.com/1999/11/27/books/early-version-of-gatsby-gets-a-chance.

Munsell Color System General Information. Retrieved from http://munsell.com/.

Mylonas, D., and MacDonald, L.(2016). Augmenting Basic Color Terms, *Color Research & Application*, *41*,(1), 32-42. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/cd.21944/full.

Okazawa, G., Koida, K., & Kamatsu, H., (2011), Categorial Properties of the Colour term "GOLD", *Journal of Vision (JOV)*, 11(8), doi:10.1167/11.8.4.

Online Etymology Dictionary (2016). Retrieved from http:www.etymonline.com/.

Oxford English Dictionary Online (2016). Retrieved from https://en.oxforddictionaries.com/definition/luminary

Oxford English Dictionary Online (2016). Retrieved from https://en.oxforddictionaries.com/definition/menippean

Peter, L.H., and Demory, P. (1988). Nostromo and *The Great Gatsby*,405 (1).*PROQUEST*: Retrieved from http://searchproquest.com/openview/86845194a673496f4e0cc0bbcb23206/1?pq-ori

Petronius (Late 1st century AD) *The Satyricon*. Retrieved from https://www.amazon.com/Satyricon-Meridian-Classics-Petronius/dp/0452010055

Planet e-book. (2016). *The Great Gatsby*, F.Scott Fitzgerald. Retrieved from http://www.planetebook.com/about.php.

Purves, D., et al.(2004). *NeuroScience* (3rd Ed.), Sunderland (MA), *Sinauer Associates.*

Retrieved from http://www.ncbi.nlm.nih.gov>NCBI>Literature>Bookshelf.

Purves, D., et al (2004). *NeuroScience* (3rd Ed.), https://bioloskiblog.files.wordpress.com/2012/08/neuroscience-3ed-dale-purves.[PDF]

Quirk, W.J. (2009). The American Scholar (e-media). Retrieved from https://theamericanscholar.org/living-on-500000-a-year/#WBiDmtTHAsY

Rooda, A., and Williams, D.R.(1999). "Letters to Nature", *Nature International Weekly Journal of Science*, *397*, 520-522. Retrieved from www.nature.com/journal/v397/n6719/abs/394520a0.html.

Rubenstein, E.M. Internet Encyclopedia of Philosophy. Retrieved from http://www.iep.utm.edu/color/.

Samkanashvili, M.(2013). Uses of Symbols and Colors in *The Great Gatsby* by F.Scott.Fitzgerald, *Journal of Education*. Retrieved from http://www.journal.ibsu.edu.ge.

Saunders, B.(2000). Revisiting Basic Color Terms – *HN*. Retrieved from http://human-nature.com/science-as-culture/saunders.html.

Schrillo, J.A.(2000). Tutorial on the Importance of Color in Language and Culture, Wake Forest University. Retrieved from http://college.wfu.edu/psychology/wp-content/uploads/Schrillo2001.pdf

Shaw, K.(2013). Oxford English Dictionary (OED) Blog, "Drunk Tank Pink, International Klein Blue? Charting the Outer reaches of the Colour Spectrum". Retrieved from http://blog.oxforddictionaries.com/2013/07/colours/

Skorinkoko, J.L., et al.,(2006), A rose by any other name [hellip]:Color-naming influences on...*Psychology & Marketing*, *23*(12), 975-993 . Online library Wiley. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/mar.20142/pdf

Smart, J.J.(1995), "Looks Red" and Dangerous Talk. *Philosophy*, *70(*274), 545-554. Doi:http://dx.doi.org/10.1017/S0031819100065797

Stallman, R.W.(1955).*Twentieth Century Literature*, *1(*1), 5-12. Hofstra University. Retrieved from http://www.jstor.org/stable/441023

Steinvall, A.(2011). "The Power of Colour Term Precision", *New Directions in Colour Studies*, John Benjamins.

Sturges, J., and Whitfield, T.W., (1995). Locating Basic Colours in the Munsell Space, *Color Research and Application*, *20*(6), 364-376. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/col.5080200606/abstract

Swinkels, I., (2015). Unusual Features of Modern Irish (Thesis) University of Leiden. Retrieved from https:www.openaccess.leidenuniv.nl

The Great Gatsby. Retrieved from https://www.amazon.com/Great-Gatsby-F-Scott-Fitzgerald/dp/1781396833

The Literary Shed. Retrieved from http://theliteraryshed.co.uk/see/book-covers-we-love-/f-scott-fitzgeralds-the-great-gatsby-francis-cugat-1925

The Munsell Color System Figure. Retrieved from https://www.britannica.com/search?query=munsell%20color%20system

The Visible Spectrum Figure. Retrieved from https://www.britannica.com/search?query=light%2c%20the%20visible%20spectrum

Thompson, E., Palacios, A., and Varela, F.J. (1992). Ways of Coloring:Comparative Color Vision as a Case Study for Cognitive Science, *Behavioral and Brain Sciences,15*,(1), 1-26. Cambridge University Press. DOI:https://doi.org/10.1017/S0140525X00067248.

Turton, D., (Jun, 1980). MAN, There´s No Such Beast:Cattle and Colour Naming Among the Mursi, New Series, *15* (2) 320-338, *Royal Anthropological Institute of Great Britain and Ireland*. http://www.jstor.org/stable/2801674

USA Today, (2013, May 7th). Retrieved from https://www.usatoday.com/story/life/books/2013/05/07/the-great-gatsby-is-a-best-seller-this-week-/2133269/

West.,James L.W.III., (2000, January). Almost a Masterpiece/Humanities. Retrieved from http://www.neh.gov/humanities/2000/januaryfebruary/feature/almost-masterpiece

West, L.W.III. (2002). *Trimalchio:An Early Version of The Great Gatsby*. Cambridge University Press.

Westbrook, T.S.,(1960). Nature and Optics in the Great Gatsby. *American Literature 32* (1), 78-84. Retrieved from www.http://www.jstor.org/stable/2922804

What is the Sapir-Whorf Hypothesis?, Kay, P., & Kempton, W., (1984) Based on a powerpoint presentation by N.T., Rusiyanadi,1-29. Retrieved from Slideshare.

Wierzbicka, A.,(2005). There are no "Color Universals", But There are Universals of Visual Semantics, *Anthropological Linguistics*, *47*(2), 217-244 .Retrieved from http://www.jstor.org/stable/25132327?seq=1#page_scan_tab_contents

Wierzbicka, A.,(2008). Why there are no "Colour Universals" in language and thought, JRAI,*14* (2), 407-425. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9655.2008.00509.x/full.

Witkowski, S.R. et al.(1981),Where Do Trees Come From?, *MAN*, New Series,*16*(1), 1-14. DOI:10.2307/2801972. Retrieved from http://www.jstor.org/stable/2801972.

Wood, F.A., (1905). The Origin of Color-Names. *Modern Language Notes 20*, (8), 225-229. The John Hopkins University Press. DOI:10.2307/2917519. Retrieved from http://www.jstor.org/stable/2917519

Wyler, S., (1984). *Modes of Interpretation:Essays Presented to Ernst Leisi on the occasion of ...His 65th Birthday*. (Old English Colour Terms). Retrieved from http://books.google.com

Wyler, S., (2006). *Colour Terms in the Crowd:Colour Terms in Use*. Die Deutsche Bibliothek.

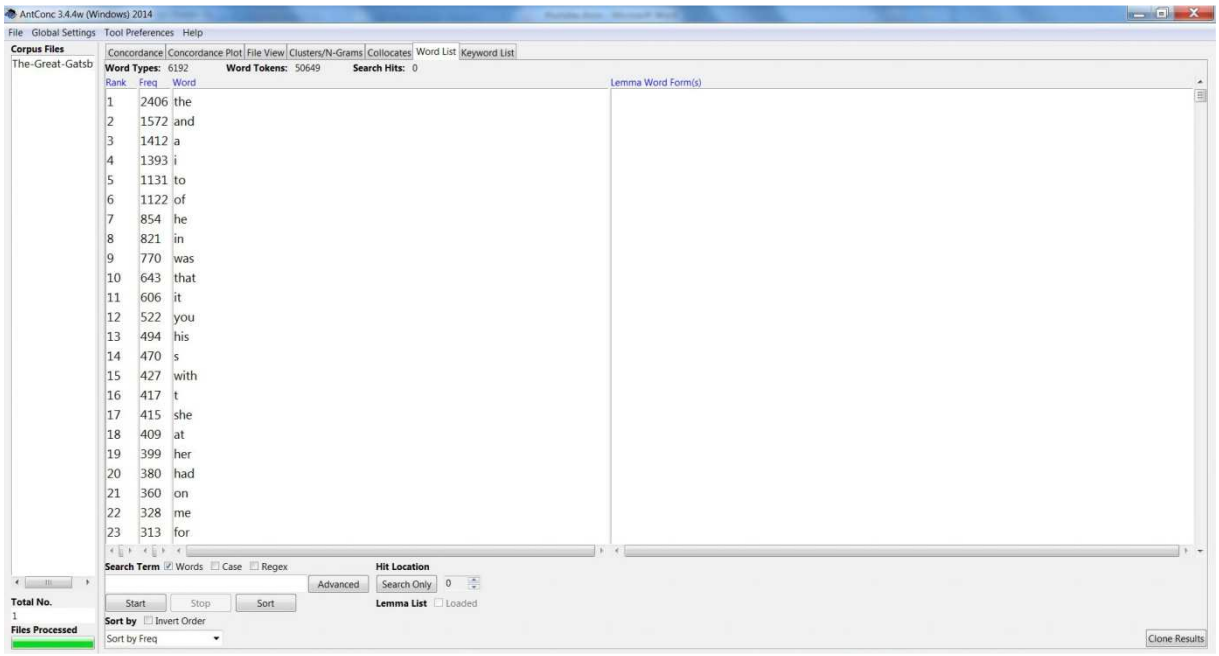
Zhang, H., (2015). Symbolic Meanings of Colors in *The Great Gatsby*. Studies in Literature and Language, *C S Canada*,*10*(6) Retrieved from http://www.cs.canada.net/index.php/sll/article/view/7178/7572

Zhang, S., (2015). Color Associations with Masculine and Feminine brand personality among Chinese consumers. Concordia University, (Master Thesis). Retrieved from http://spectrum.library.concordia.ca/979896

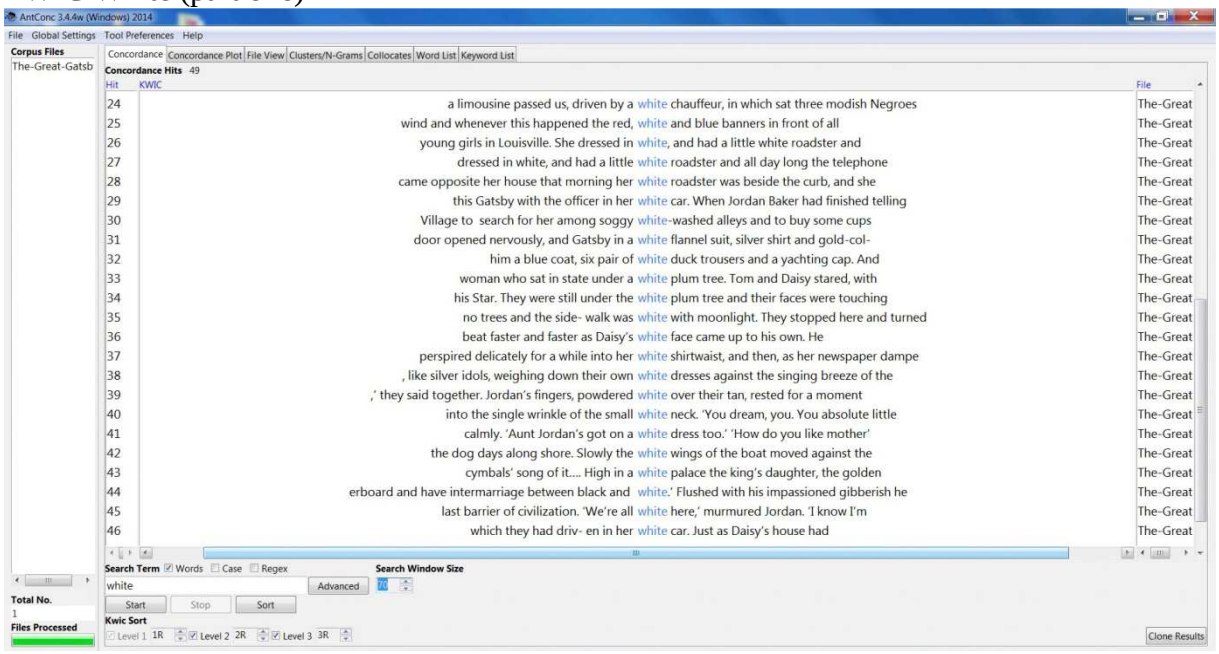
Zoltán, Simon.(1996). Reviewed work:R.Berman, *The Great Gatsby and Modern Times*, *HJEAS*, *2*(1) 192-195. Retrieved from http://www.jstor.org/stable/41273926

APPENDICES In relation to the Methodology Section.

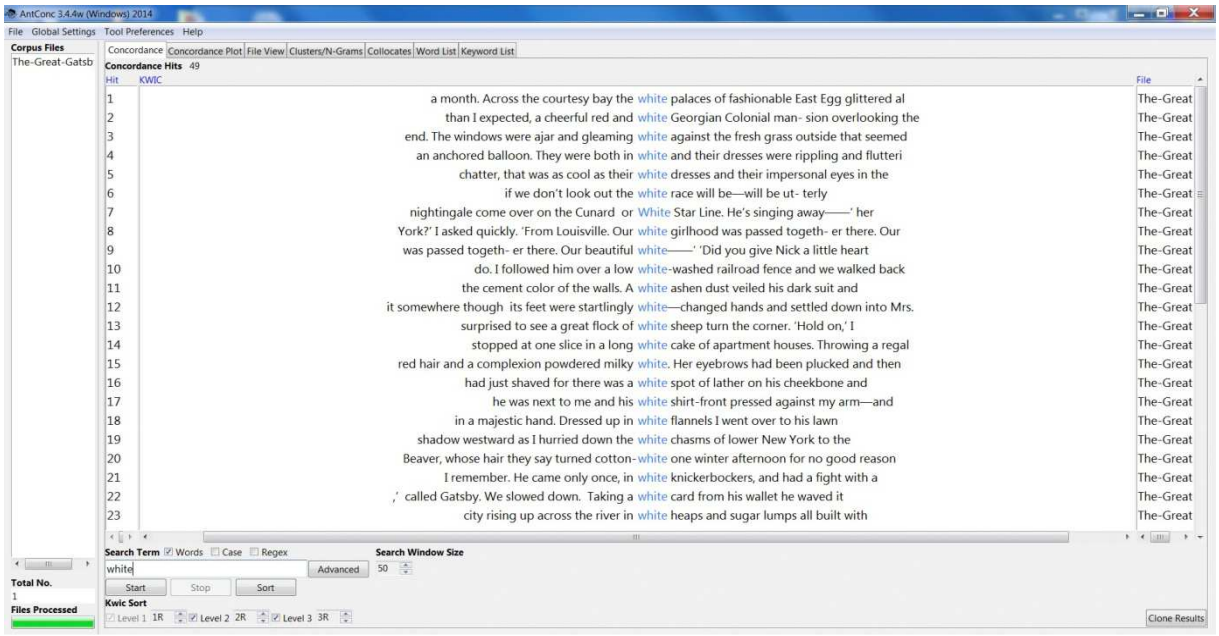
The Great Gatsby (e-media) Total number of words **50649**



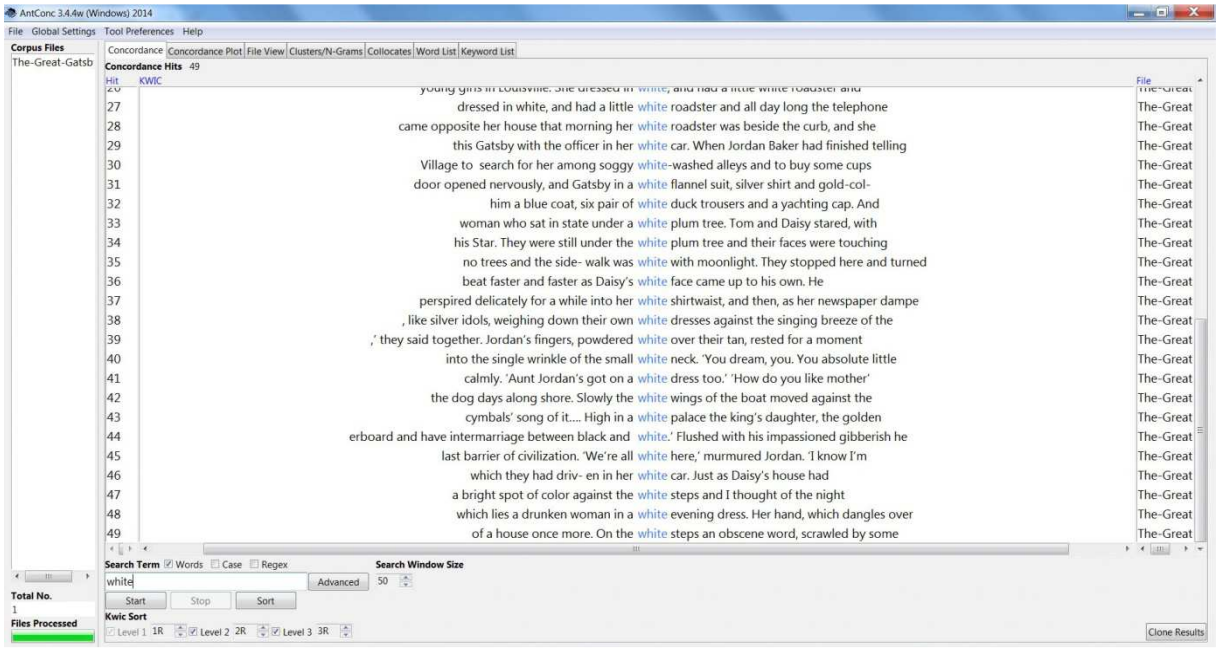
KWIC White (part one)



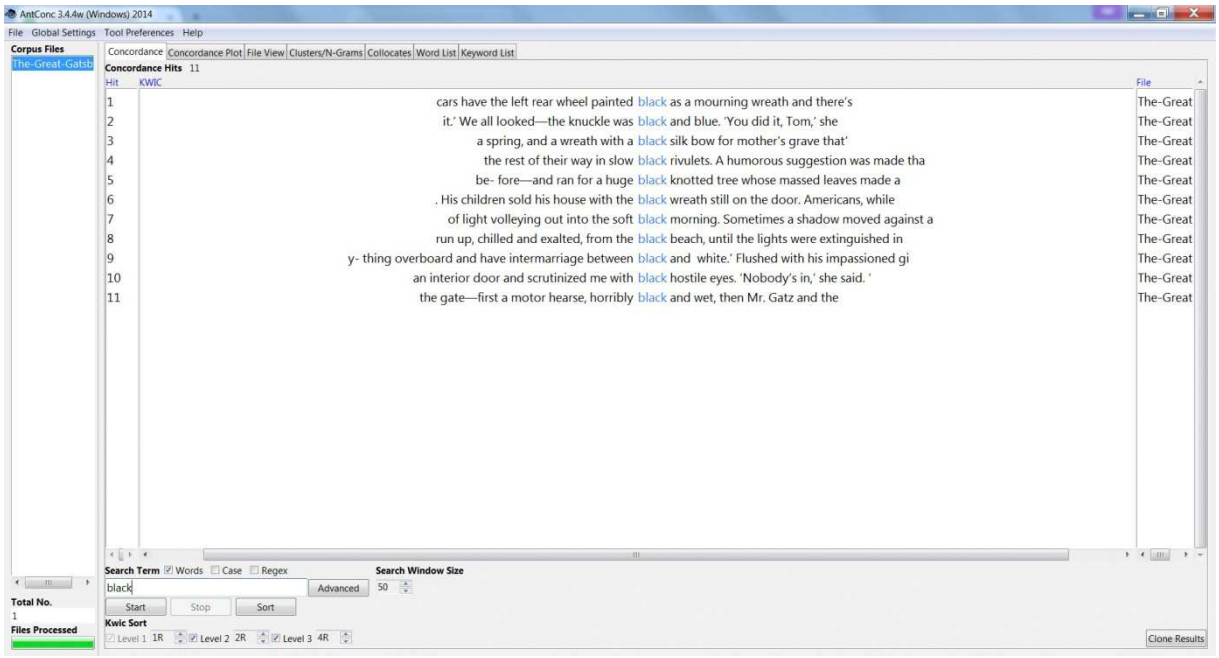
KWIC White (part two)



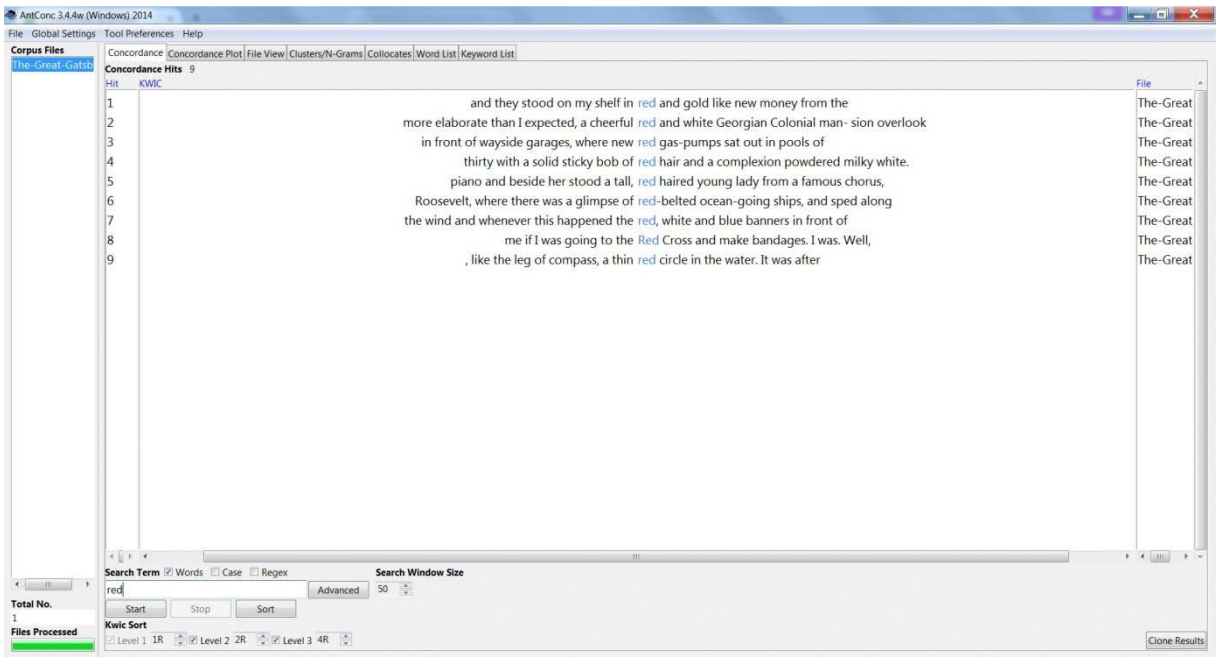
KWIC White (part three)



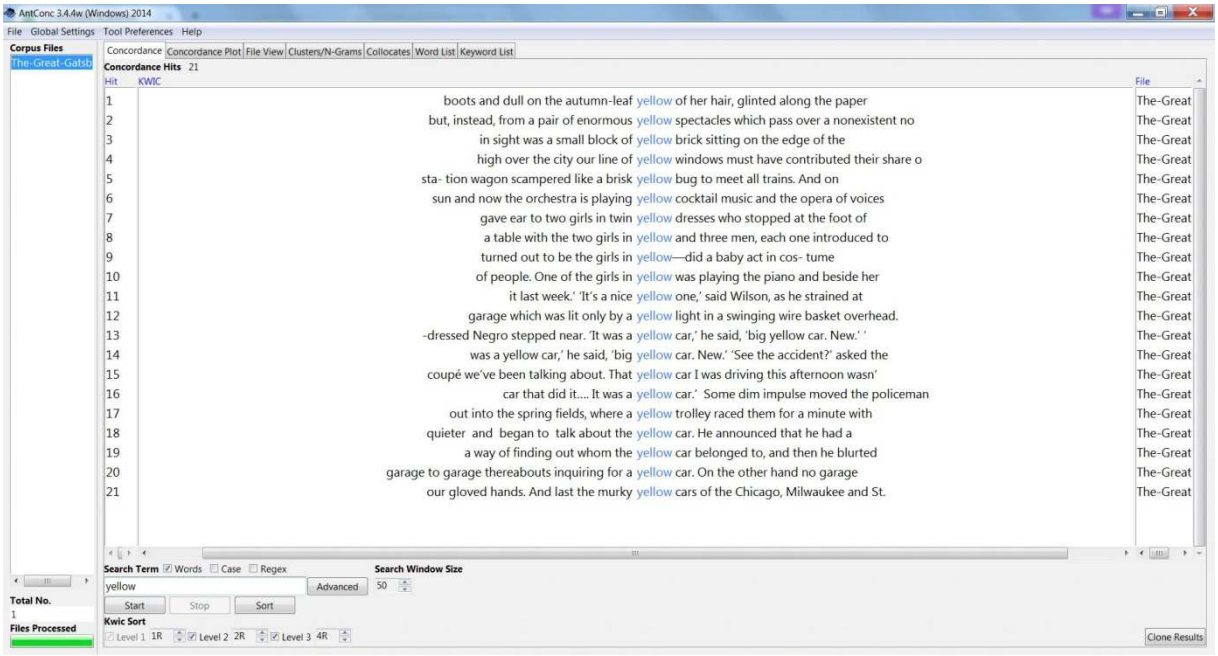
KWIC Black



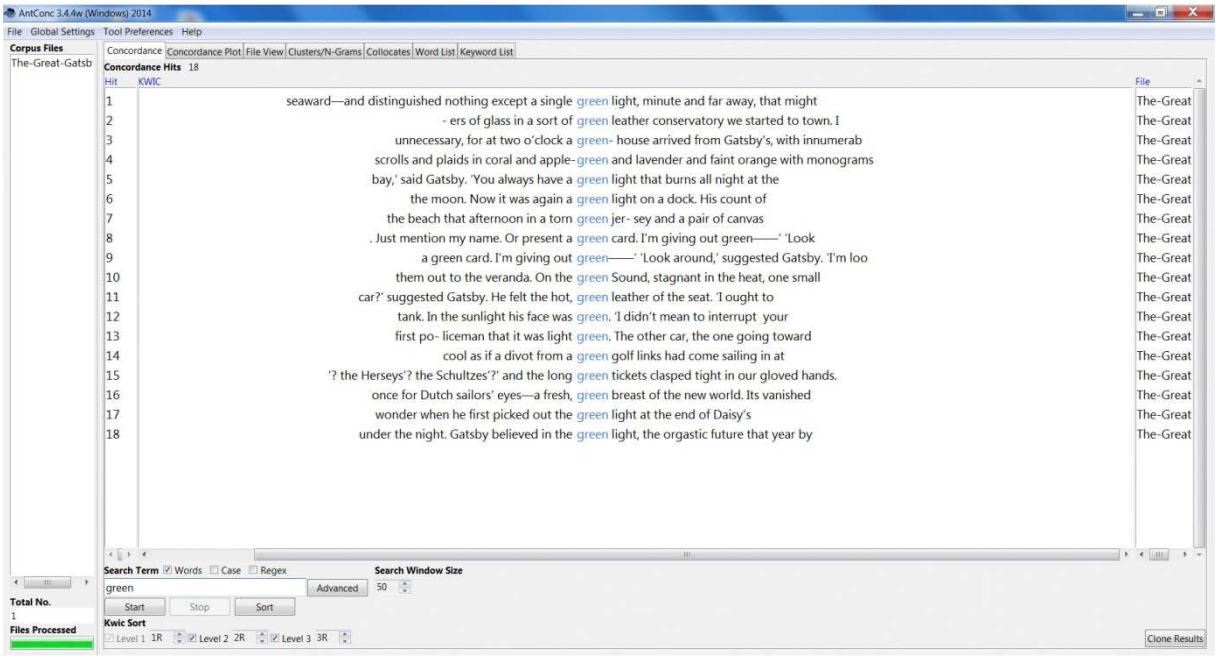
KWIC Red



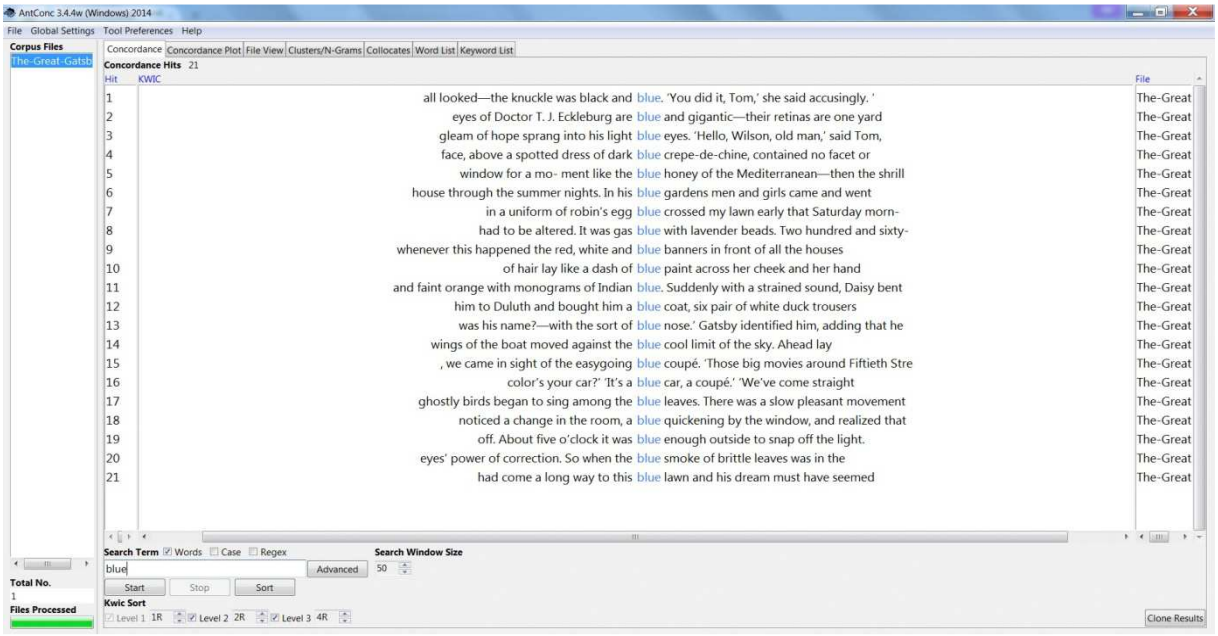
KWIC Yellow



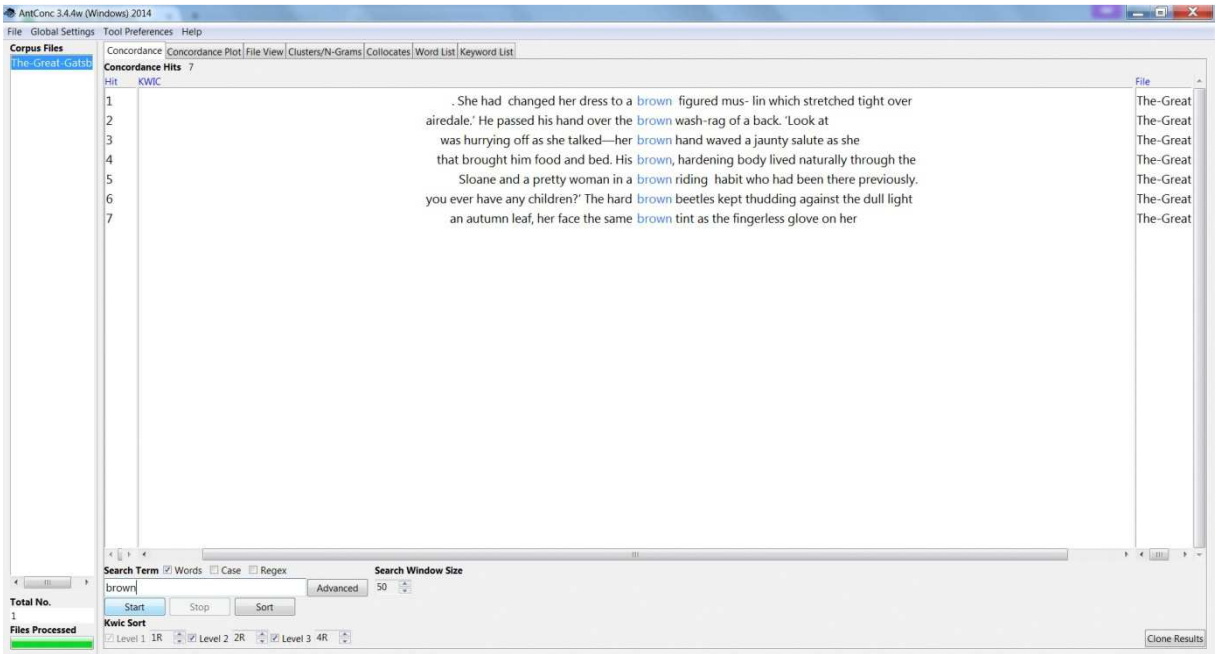
KWIC Green



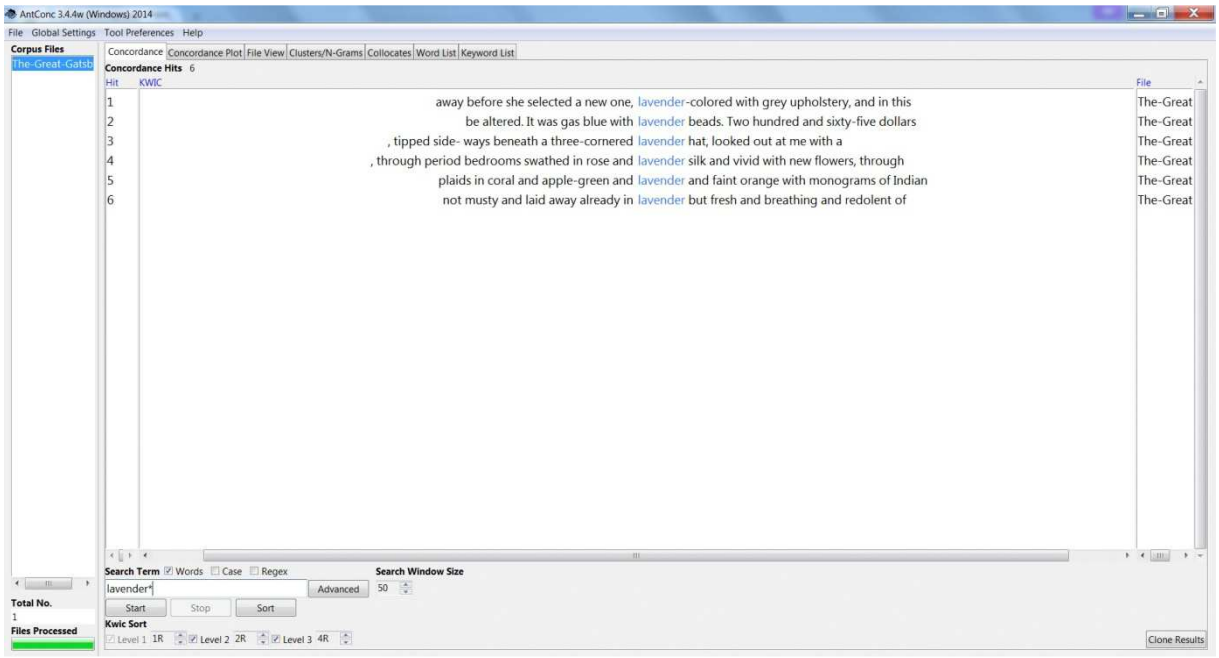
KWIC Blue



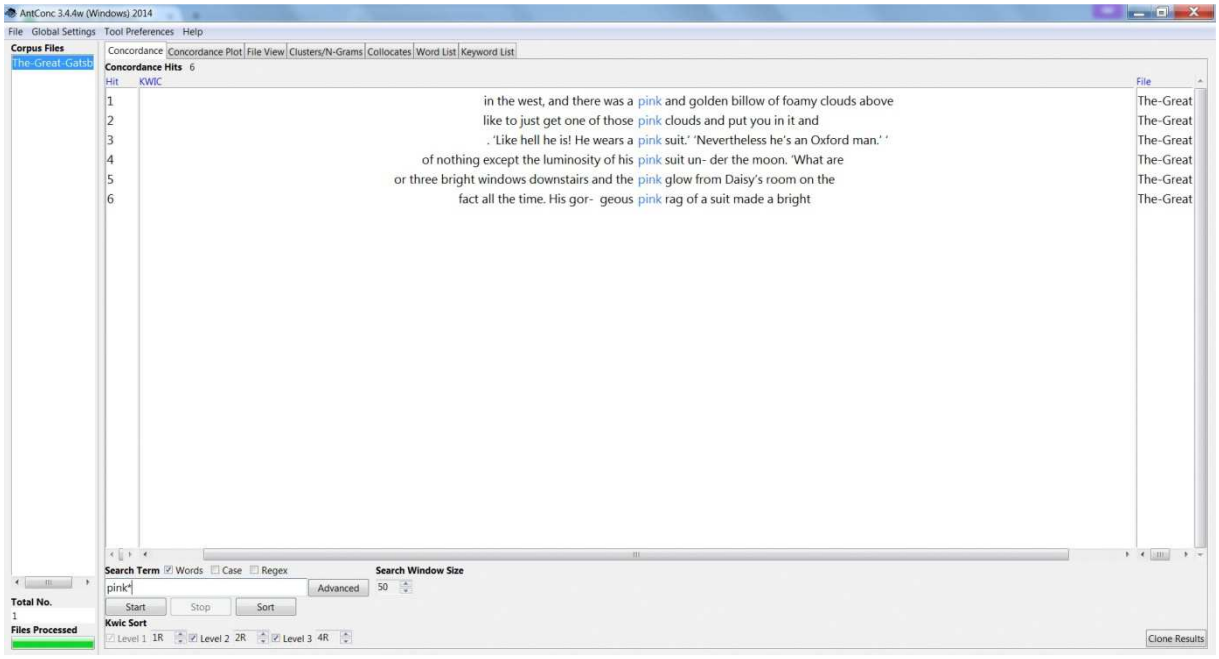
KWIC Brown



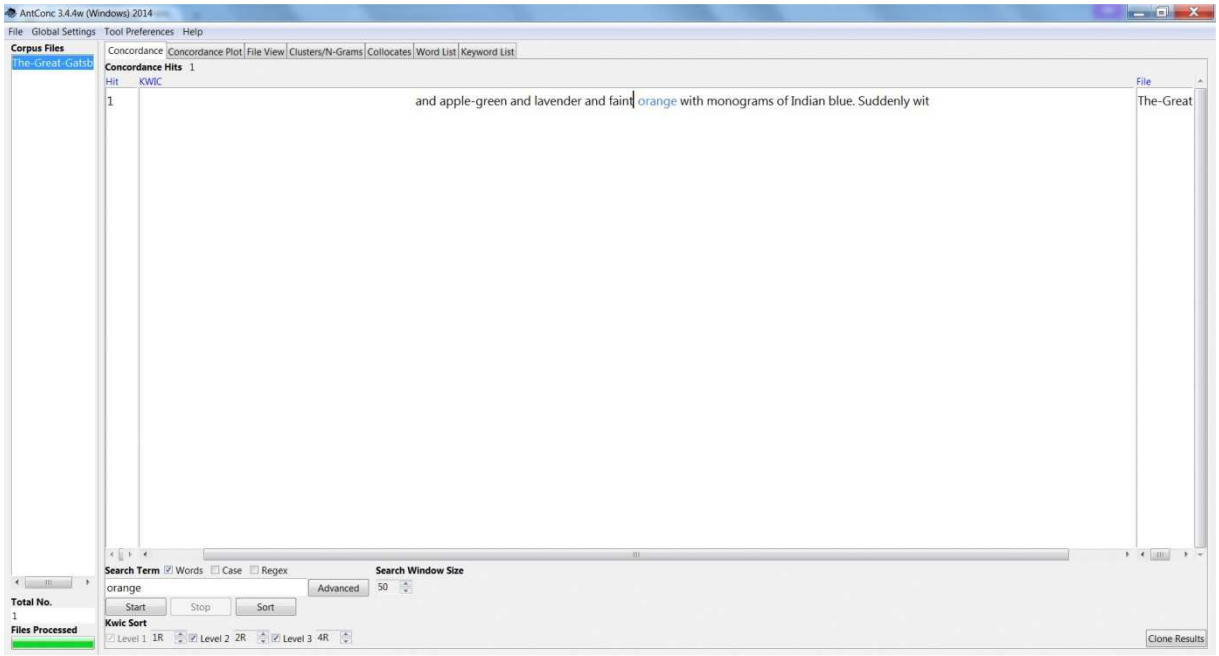
KWIC Lavender



KWIC Pink



KWIC Orange



KWIC Grey