

# Semantic Distributions of the Color Terms, *Black* and *White* in Taiwanese Languages

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## Abstract

This study, based on a variety of data sources, investigates the linguistic and cultural characteristics associated with the *black* and *white* expressions among Taiwanese Mandarin, Taiwanese Hakka, and Taiwanese Southern Min. The meaning distributions of the data profile four types: prototypical meanings, metonymic extensions, metaphorical extensions and idiosyncratic examples; and the associated cultural factors are examined. Some meaning extensions are widespread across the three languages, whereas some are language-specific because of cultural roots. Among the three languages, Taiwanese Mandarin develops the most prolific usages and this may be ascribed to the prosperity of cultural, economic or technological developments of the language.

## 1 Introduction

Studies of color terms can be found in fields like linguistics, psychology, neurophysiology or anthropology. The earlier representative work from a linguistic perspective can be attributed to Berlin and Kay's (1969) investigation of 98 languages, in which all languages are claimed to share similarity regarding the foci of basic color terms and to have similar evolutionary stages regarding color terms. Some studies (e.g. Derrig, 1978) propose cross-cultural generality in the extensional meanings of basic color terms and

other studies (e.g. Wierzbicka, 1996) probe into human understanding of color terms based on conceptual prototypes.

Black and white are universally perceptible to all mankind and are the only two colors at stage one in Berlin and Kay's (1969) sequence of color evolution. Speakers of Taiwanese Mandarin (TM), Taiwanese Hakka (TH) and Taiwanese Southern Min (TSM) also share some similarities in the usages of the color terms *black* and *white*. However, while the three languages are so contiguous geographically in Taiwan, variations exist among usages of color terms, some of which are due to cultural factors. Hence, investigating the usages of the color terms *black* and *white* in TM, TH and TSM, we aim to uncover the similarities and variations in the meaning extensions of *black* and *white*, and further to find the cultural factors behind them.

## 1.2 The Data

The TM data are collected from *MOE Revised Mandarin Chinese Dictionary*, *Academia Sinica Balanced Corpus of Mandarin Chinese* and *The NCCU Corpus of Spoken Chinese*, and are transcribed into 漢語拼音 Hànyǔ Pīnyīn 'Mandarin spelling' Phonetic Symbols. Taiwan Google Research Engine is also used to double check whether the data from the Chinese dictionary belong to Taiwanese Mandarin. Proper names are excluded. In total, 209 tokens of 黑 *hēi* 'black' color terms and 362 tokens of 白 *bái* 'white' color terms are found.

The TH data are gathered from *MOE Taiwanese Hakka Dictionary of Common Words*, *The NCCU Corpus of Spoken Taiwanese Hakka*,

*Min and Hakka Language Archives, Taiwanese Hakka Proverbial Expressions Dictionary, Hakka Dictionary of Taiwan, Sìxiàn Hakka Dictionary, A Chinese-English Dictionary Hakka-Dialect, Taiwanese Hakka Origins of Lexicon, Legend, Proverbs Anthology, Hakka Proverbs the Second Hundred—the Latest One Hundred Hakka Proverbs* and *Interesting 1500 Hakka Proverbs*, and are transcribed based on Taiwanese Hakka Pīnyīn Program designated by National Language Committee in 2009. The tone diacritics of 四縣 Sì-xiàn dialect are rendered for the data. In total, 68 items of 烏 *vu* ‘black’ color terms and 91 items of 白 *pag* ‘white’ color terms are found.

The TSM data are gathered from *MOE Taiwanese Southern Min Dictionary of Common Words, Taiwanese Concordancer, Taiwanese Southern Min Lexicon Dictionary, Tōngyōng Taiwanese Southern Min Dictionary, Min and Hakka Language Archives, Táoyuán Taiwanese Southern Min Proverbs and Riddles (1), Táinán Taiwanese Southern Min Proverbs Collection, Taiwanese Southern Min Proverbs Dictionary, Origin of Taiwanese Southern Min Expressions, Learning Taiwanese Southern Min Together, The Wisdom of Taiwanese Southern Min and Taiwanese Southern Min Proverbs*, and are transcribed with tone diacritics based on Taiwanese Southern Min Rome Pīnyīn Program issued by National Language Committee in 2008. In total, 119 tokens of 烏 *oo* ‘black’ color terms and 99 tokens of 白 *pèh* ‘white’ color terms are found.

## 2 Previous Studies on Color Terms

The doctrine of the Sapir-Whorf hypothesis emphasizes the relativity of semantic structures instead of the role of linguistic universals. Nevertheless, studies of color terms (Berlin and Kay, 1969; McDaniel, 1974) hold that “all languages share a universal system of basic color categorization” and that “these universals are inherent in the human perception of color” (Kay and McDaniel, 1978: 610). Berlin and Kay (1969) investigate 98 languages, and contend that “the referents for the basic color terms of all languages appear to be drawn from a set of eleven universal perceptual categories, and these categories become encoded in the history of a given language in a partially fixed order”(4). They

delineate seven evolutionary stages of basic color terms and black and white are the only two colors at stage one.

Some studies propose that languages share cross-cultural generality in the connotative meanings of basic color terms. Kay and McDaniel (1978) present the existence of biologically based semantic universals about color terms. Wierzbicka (1996) and Goddard (1998) maintain that visual and environmental things should be referred to as common reference points for color meanings. Take black and white for example. The most obvious distinction in all colors is the light vs. dark distinction. The most significant environmental prototypes of this distinction are the night and day because “the cycle of day and night is a recurrent and universal (or near-universal) human experience” Goddard (1998: 126). In sum, the representative colors for day and night are white and black, respectively.

Berlin and Kay (1969) point out that Chinese reaches stage five and its basic color terms are 黑 *hēi* ‘black’, 白 *bái* ‘white’, 紅 *hóng* ‘red’, 綠 *lǜ* ‘green’, 藍 *lán* ‘blue’ and 黃 *huáng* ‘yellow’. Cheng (1991, 2002) identifies five basic color terms for TH and TSM: for TH, 烏 *vu* ‘black’, 白 *pag* ‘white’, 紅 *fung* ‘red’, 黃 *vong* ‘yellow’ and 青 *qiang* ‘grue category of blue and green’, and for TSM 烏 *oo* ‘black’, 白 *pèh* ‘white’, 紅 *âng* ‘red’, 黃 *ňg* ‘yellow’ and 青 *tshenn* ‘grue category of blue and green’. In addition, Zeng (2002) examines color terms from traditional 陰陽五行 Yīn-Yáng-Wū-Xíng ‘Yin Yang Five Elements’. He claims that since the color black in Chinese is situated in the north and belongs to winter, during which the world is in a recession period, *hēi* has always been regarded as inauspicious, disastrous, evil and negative in the Chinese community. The color white on the other hand is located in the north-east which is the position of death in Chinese 風水 Fēng-Shuǐ. Consequently *bái* has been connected with Chinese funerals and the funeral clothes are white.

While color universals seem to be pervasive among the three languages, language-specific usages exist. Uncovering color terms of different languages or dialects may open a window to the different facets of their lives (Cheng, 2002; Huang, 2003; Liang, 2005; He and Zeng, 2006; Zeng, 2002 and Xie, 2011). A comparison of color terms

in TM, TH and TSM so as to observe their linguistic and cultural characteristics is worthwhile. Furthermore, preliminary analysis of the data shows that metonymic or metaphorical extension for color words happen only when they collocate with their modified components. We surmise that only two types of meanings are associated with the color terms. One refers to the meaning of the physiologically visual color, and the other refers to the extended meanings of the gestalt chunk. More in-depth investigation of the data will profile a more systematic distribution, as will be shown by the study.

### 3 Metaphor and Metonymy

The contemporary theory of metaphor (e.g., Lakoff and Johnson 1980; Lakoff 1993) considers metaphor to be a conceptual and inherent part of human thoughts and languages. Conceptual metaphor can be understood as a mapping from a source domain to a target domain. For example, in the conceptual metaphor LOVE IS A JOURNEY, the source domain is JOURNEY and is mapped onto the target domain, LOVE. The mapping is strictly structured and there are ontological correspondences. The English expressions of this conceptual metaphor can be illustrated by these sentences: Look *how far we've come*. We'll just have to *go our separate ways*. Ungerer and Schmid (2006) emphasize that another key element in metaphor is the mapping scope, "a set of constraints regulating which correspondences are eligible for mapping from a source concept onto a chosen target concept" (119). Most importantly, the mapping scope is culturally constrained and deeply entrenched in speakers' minds in a certain culture.

Kövecses and Radden (1998) define metonymy as "a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain, or ICM" (39). ICMs (Idealized Cognitive Models) refer to a network of entities within one ontological realm and these entities are related to each other by specific conceptual relationships. They categorize metonymy-producing relationships into two major types: Whole ICM and its parts and Parts of an ICM.

## 4 Analysis

The data of the color term *black* or *white* in TM, TH, and TSM are categorized according to the meaning distributions based on different cognitive mechanisms. The prototypical meaning of *black* and *white* indicates their physiologically visual color. Metonymic extensions represent conceptual entities which derive from the source domain of the visual color black or white within the same ICM. Metaphoric extensions undergo a conceptual mapping from a source domain of the visual color to a different target domain. The metaphor ABSTRACT QUALITY IS PHYSICAL QUALITY (Goatly, 2011) is generalized to cover all the data. Idiosyncratic examples cover proverbial expressions or arbitrary usage of *black* and *white*. The overall distribution of the data across the three languages is reported in Table 1.

### 4.1 Meaning Distributions of *Black*

The prototypical meanings of *black* account for a significant proportion in all categories across the three languages. Examples such as 黑髮 *hēi-fǎ* 'black hair' in TM, 烏雲 *vu<sup>1</sup>-iun<sup>2</sup>* 'dark clouds' in TH or 烏豆 *oo-tāu* 'black beans' in TSM can illustrate.

Through mappings within ICMs, *black* expressions in the three languages have various metonymic extensions. For example, 黑手 *hēi-shǒu* 'a mechanic' in TM is a case of the metonymy PART FOR WHOLE. Mechanics' hands are constantly stained and therefore their distinguishing black hands are used (PART) to stand for their occupation (WHOLE). In addition, 烏人 *vu<sup>1</sup>-ngin<sup>2</sup>* 'the black race' in TH illustrates a case of the metonymy DEFINING PROPERTY FOR CATEGORY. The skin color of Negro is black and is thus used (DEFINING PROPERTY) to refer to the black race (CATEGORY). 烏鬚到白鬚 *oo-tshiu-kàu-pèh-tshiu* 'from youth to old age' in TSM is a substantiation of the metonymy APPEARANCE FOR THE STATE THAT CAUSED IT. Youngsters' beards are black whereas the elder's beards are white. Beards of different colors represent different age periods and thus *oo-tshiu-kàu-pèh-tshiu* is from youth to old age.

Metaphorical extensions in the three languages are robust and diverse because

numerous abstract attributes of the target domain can be conceptualized through the association of the color black. Some cases of metaphorical extensions are prevalent across the three languages. To begin with, when something is hidden and unseen in darkness, it is regarded as secret and mysterious. 黑箱作業 *hēi-xiāng-zuò-yè* ‘an unknown operation’ in TM, 烏面賊 *vu<sup>ㄨ</sup>-mien-ced* ‘objects from unknown resources’ in TH and 烏批 *oo-phue* ‘an anonymous letter’ in TSM carry such an implication. Furthermore, the attribute of mystery which is usually considered negative extends to the notion of viciousness regarding people’s inner temperaments and the notion of illegality concerning people’s outer conducts. 黑心 *hēi-xīn* in TM, 烏心腸 *vu<sup>ㄨ</sup>-xim<sup>ㄨ</sup>-cong<sup>ㄨ</sup>* in TH and 烏漚肚 *oo-lok-tōo* in TSM all refer to people’s evil heart and vicious mind. 黑道 *hēi-dào* ‘gangsters’ in TM, 烏店 *vu<sup>ㄨ</sup>-diam* ‘a store extorting an extra large sum of money from customers’ in TH and 烏市 *oo-tshī* ‘a black market’ in TSM are related to illegal and underground behavior and activities. In addition, reputations being blackened can be manifested through the *black* expressions such as 抹黑 *mǒ-hēi* ‘smear people’s reputation’ in TM and 烏名單 *oo-miâ-tuann* ‘a black list’ in TSM.

On the other hand, some metaphorical extensions exclusively exist in one language. Some of these language-specific usages originate from cultural heritages or historical roots. For example, the TSM term 烏狗 *oo-káu*, whose origin manifests rich Taiwanese culture, contains the extensional meaning ‘fashionable and handsome’. The notion of keeping a low profile is revealed by the expression 知白守黑 *zhī-bái-shǒu-hēi*, a line of classical drama in TM. The case 走黑運 *zǒu-hēi-yùn* in TM, which derives from terminologies of magical calculations in Chinese culture, implies inauspiciousness and unluckiness. The case 股市開黑盤 *gǔ-shì-kāi-hēi-pán* in TM particularly describes the sluggish phenomenon in the stock market via the conceptualization of the color black. In addition, other language-unique metaphorical expressions emerge because they have become entrenched frozen chunks in the language; cases such as 烏白來 *oo-péh-lâi* ‘reckless, capricious’ and 烏有 *oo-iú* ‘disappearing, nothing’ in TSM can illustrate.

Still other exclusive metaphorical extensions are influenced by English; cases such as 黑馬 *hēi-mǎ* ‘a black horse’ and 黑色幽默 *hēi-sè-yōu-mò* ‘black humor’ in TM can illustrate. The distribution of metaphorical extensions of *black* across the three languages is reported in Table 2.

Finally, there are some idiosyncratic examples, whereby *black* is arbitrarily used; cases such as 黑甜鄉 *hēi-tián-xiāng* ‘dreamland’ in TM or 烏紗 *oo-se* ‘bribery’ in TSM can illustrate. Also, proverbial expressions invariably carry some moral lessons or exhortation functions (Lakoff and Turner, 1989); cases such as 近朱者赤, 近墨者黑 *Jìn-zhū-zhě-chì, Jìn-mò-zhě-hēi*. ‘People are easily influenced by the environment’ in TM or 烏矸仔貯豆油, 無得看 *Oo-kan-á té tâu-iû, bô-tit-khàn*. ‘Don’t judge a person by his appearance.’ in TSM can illustrate.

Metaphorical extensions can carry either positive or negative connotations. Regarding *black*, negative meanings account for a dominant proportion (79%) across the three languages. Such a tendency is natural since human conceptual universal about the color term *black* (Wierzbicka, 1996; Goddard, 1998) is the dark night, which somehow conveys the implications of mystery and ominousness. This tendency also corresponds to the traditional viewpoints of the color black in the Chinese community (Huang, 2003; Liang, 2005; Zeng, 2002). According to *Yin Yang Five Elements*, the color black belongs to winter when things in the natural world are during a recession period, hence plausibly accounting for the fact that the color term *black* develops so many negative metaphorical extensions.

#### 4.2 Meaning Distributions of *White*

The prototypical meaning of *white*, which represents the physiological color white, can be seen across the three languages. Examples such as 白雪 *bái-xuě* ‘white snow’ in TM, 白米 *pag-mi* ‘white rice’ in TH and 白紙 *péh-tsuá* ‘white paper’ in TSM can illustrate. Since white is the representative color of human conceptual universal about daytime, it can schematize the condition of brightness and light such as 白天 *bái-tiān* ‘daytime’ in TM, 白晝 *pag-zu* ‘daytime’ in TH or 當頭白日 *tng-thâu-péh-jit* ‘bright daytime’ in TSM.

Metonymic extensions are diverse across the three languages. For instance, in TM 白眼 *bái-yǎn* ‘showing the white eyeball’ referring to a cold stare or a disdainful look realizes the PHYSIOLOGICAL EFFECTS FOR EMOTION metonymy. When a person looks at others with white eyeballs, he shows an indifferent and contemptuous attitude toward them. In TH, the case 采白 *cai`-pag* ‘things that are used in a wedding, or a funeral’ is the substantiation of the metonymy APPEARANCE OF THE OBJECT. In Hakka culture, 采 *cai`* means different colors or auspicious signs and usually stands for objects in a wedding. 白 *pag* symbolizes the white garments worn in a traditional funeral. In TSM, the case 白賊七仔 *pèh-tshát-tshit-á* ‘a person who likes to tell lies and play tricks on others’ originates from a well-known TSM folk story. Through the metonymy CATEGORY FOR DEFINING PROPERTY, 白賊 *pèh-tshát* stands for lies as can be seen in another TSM case 講白賊 *kóng-pèh-tshát* ‘telling lies’.

Some metaphorical extensions are widespread across the three languages. The concept of brightness can further delineate clear and transparent meanings; cases such as 明白 *míng-bái* ‘clear’ in TM or 打白講 *da`-pag-gong`* ‘frankly speaking’ in TH can illustrate. In addition, the white color which is without any hues can represent the idea of plain flavor as 白滾水 *pèh-kún-tsuí* ‘plain boiled water’ in TSM illustrates. The meanings of clarity and transparency can further extend to represent human’s morality and innocence as implicated through 清白 *qīng-bái* in TM and its equivalent counterparts in TH and TSM.

Moreover, from another perspective, the color white which lacks hues can metaphorically imply emptiness or nothing as exemplified by cases like 平白無故 *ping-bái-wú-gù* ‘without any reason or cause’ in TM, 白手捉魚 *pag-su`-zog`-ng`* ‘building up fortune from scratch’ in TH or 白手成家 *pik-siú-sîng-ka* ‘building up fortune from scratch’ in TSM. Such extensions can further represent the concept of doing something in vain and being futile. Cases such as 白費力氣 *bái-fèi-lì-qì* ‘all efforts have been in vain’ in TM, 打白行 *da`-pag-hang`* ‘come without achieving purpose’

in TH and 白講 *pèh-kóng* ‘speaking in vain’ in TSM carry such implications. Another extension is gaining something without paying as manifested by 白吃白喝 *bái-chī-bái-hē* in TM, 白食 *pag-siid* in TH or 白吃白喝 *pèh-tsiáh-pèh-lim* in TSM, all denoting having food or drink for free. Furthermore, the notion of nothingness can depict a situation in which people are so helpless that they cannot do anything in the face of an event. This extension is realized via the chunks 白白 *bái-bái* in TM and 白白 *pèh-pèh* in TSM as used in the TM sentence, 難道白白地看他們被欺負? *Nán-dào báibái dì kàn tā-men bèi-qī- fù?* ‘We cannot do anything but watch them being bullied?’

While many metaphorical extensions regarding *white* are prevalent in the three languages, some language-specific extensions still exist. For example, in TM, the white color can be associated with an abstract concept of legality, as in the case 白道 *bái-dào* ‘legal organization’. In addition, the white color indicates blankness on a piece of paper as in the case 繳白卷 *jiǎo-bái-juàn* ‘submitting a blank answer sheet in an exam’. Another usage 不拿白不拿 *bù-ná-bái-bù-ná* ‘It is wasteful if you don’t take it.’ indicating a pity or a wasteful matter in TM is often used colloquially. Such a usage occurs in a fixed chunk: 不 *bù-verb*-白 *bái*-不 *bù-verb*, with the same verb repeated twice. The distribution of metaphorical extensions of *white* across three languages is reported in Table 3.

Finally, idiosyncratic cases where *white* is arbitrarily used can also be seen across the three languages. Cases such as 白日眉 *pag-mug`-mí`* ‘brazen-faced and shameless people’ in TH or 青磅白磅 *tshenn-pōng-pèh-pōng* ‘out of sudden’ in TSM can illustrate. Proverbial expressions containing *white* possess a wide variety of implications; cases such as 白紙黑字 *Bái-zhǐ-hēi-zì* ‘substantial and convincing evidence’ in TM or 白白的布染到烏 *Pag-pag-did`-bu- ngiam-do-vu`* ‘Innocent people are slandered and accused falsely.’ in TH can illustrate.

Regarding meaning connotations of the *white* expressions, non-negative meanings take up a significant proportion (78%) in all three languages. Such a tendency is natural because the human conceptual universal about the color *white*

(Wierzbicka, 1996; Goddard, 1998) is the day, which carries the notion of brightness and hopes. This tendency may have something to do with people's observation of sunlight, which is white at the brightest moment (Xie, 2011), hence plausibly accounting for the dominant developments of non-negative meanings of the color term *white*.

### 4.3 Cultural Factors in Color Terms

One type of cross-cultural variation that Kövecses (2005) stipulates is alternative metaphor. Among the three types of alternative metaphor, the scope of the source is relevant for the discussion of color terms. The scope of source refers to the set of target domains that a particular source domain can correspond to. In terms of the source domain of the color black or white, TM has the most corresponding target domains (10 for black, 9 for white), TH has the least (4 for black, 5 for white) and TSM lies in between (7 for black, 6 for white). This indicates that TM has the widest scope of source, TH has the narrowest and TSM is in between. In brief, TM has the most versatile metaphorical extensions for both *black* and *white*.

Berlin and Kay (1969) once address the relationship between color lexicons and cultural and technological development as follows: "Color lexicons with few terms tend to occur in association with relatively simple cultures and simple technologies, while color lexicons with many terms tend to occur in association with complex cultures and complex technologies" (104). In other words, the number of color lexicons proportionally indicates the complexity of cultural and technological developments. From our data analysis, TM has the widest distributions of *black* and *white*, TSM lies in the second and TH has the least. Therefore, we presume that the complexity of TM color terms is closely related to the vivacity of cultural, economic or technological developments in TM.

Some usages also reflect intra-cultural variations, including the style dimension and the subculture dimension. The style dimension refers to linguistic variation along with levels of formality. For example, proverbial expressions of color terms invariably carry some moral lessons as illustrated by 近朱者赤, 近墨者黑 *Jìn-zhū-zhě-chì, Jìn-mò-zhě-hēi* 'People are easily influenced by the environment.' in TM. In addition, versatile usages are developed colloquially; cases such as

黑掉 *hēi-diào* in TM as in the sentence 他在商業界黑掉了 *Tā zài shāng-yè-jiè hēi-diào le* 'His reputation is damaged in the field of commerce.' can illustrate. Also, some slang usages such as 白賊七仔 *pèh-tshát-tshit-á* 'a great liar' in TSM are found.

The distinction of subcultures would lead to unique metaphorical conceptualization of important concepts. For example, the extended meaning 'illegal, underground' is relevant to the subculture of judicial organizations, law officers and governmental bureau. In TM, related usages such as 黑官 *hēi-guān* 'illegitimate government employees' or 掃黑 *sǎo-hēi* 'cracking down on crimes' are found. The metaphorical extension 'low, sluggish, not prosperous' in TM also displays another subculture dimension. Cases such as 開黑盤 *kāi-hēi-pán* and 長黑 *cháng-hēi* can only be seen in the stock market. Therefore, there are expressions like 股市開黑盤 *gǔ-shì kāi-hēi-pán* 'The stock market is sluggish.' and 股市長黑 *gǔ-shì cháng-hēi* 'The stock price is tumbling'. Moreover, some usages refer to certain types of people. In TM, 白丁 *bái-dīng* or 白民 *bái-mín* refers to commoners or illiterate people. The equivalent terms 白身 *pag-siin* in TH and 白丁 *pèh-ting* in TSM also reveals this subculture dimension.

### 5. Concluding Remarks

This study explores the semantic similarities and differences regarding *black* and *white* expressions among TM, TH and TSM. Black and white are the two most fundamental colors in the natural world as designated at stage one in Berlin and Kay's (1969) evolutionary sequence. The meaning distributions of the data profile four types: prototypical meanings, metonymic extensions, metaphorical extensions and idiosyncratic examples; and the associated cultural factors are examined. Some metaphorical extensions are widespread across the three languages; some are language-specific because of cultural roots, or entrenched frozen chunks. Among the three Taiwanese languages, TM develops the most prolific usages and this may be ascribed to the prosperity of cultural, economic or technological developments of the language.

The *black* and *white* expressions also distinctively contrast with each other concerning positive and negative connotations in TM, TH and TSM. Negative extensions associated with *black* expressions take up a significant proportion whereas non-negative extensions associated with *white* expressions account for a dominant proportion. Such a tendency may have something to do with human conceptual universals about black and white, connecting with the dark night and the bright day, respectively. The dark night implies mystery and ominousness while the bright day conveys hopes and brightness. This tendency also corresponds to the traditional viewpoint of *Yin Yang Five Elements* about black and white, with the former indicating a sign of recession and dormancy, and the latter indicating people's observation of sunlight. In addition, *black* and *white* expressions reveal evident contrasts of metaphorical extensions such as mystery and clarity, viciousness and innocence and illegality and legality.

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Table 1: Category Distributions of *Black* and *White* in TM, TH, and TSM

Category	TM		TH		TSM	
	<i>black</i>	<i>white</i>	<i>black</i>	<i>white</i>	<i>black</i>	<i>white</i>
Prototypical Meaning	46.14% (97)	30.47% (110)	56.18% (50)	39.47% (45)	51.19% (86)	47.69% (62)
Metonymic Extensions	11.96% (25)	14.68% (53)	2.24% (2)	12.28% (14)	10.12% (17)	15.38% (20)
Metaphorical Extensions	30.62% (64)	27.70% (100)	24.72% (22)	32.45% (37)	20.83% (35)	25.39% (33)
Idiosyncratic Examples	11.01% (23)	24.38% (88)	16.85% (15)	15.79% (18)	17.86% (30)	11.54% (15)
Total	100% (209)	100% (361)	100% (89)	100% (114)	100% (168)	100% (130)

Note: The number in the parentheses indicates the number of tokens.

Table 2: Distributions of Metaphorical Extensions of *Black* in TM, TH, and TSM

Category	TM	TH	TSM
Secret, Mysterious	17.19% (11)	28.57% (2)	8.57% (3)
Evil, Vicious	26.56% (17)	28.57% (2)	20% (7)
Illegal, Underground	25% (16)	28.57% (2)	28.57% (10)
Disgraceful, Dishonorable	7.81% (5)		2.86% (1)
Depressed, Frustrated	7.81% (5)		
Keeping a low profile	1.56% (1)		
Unexpectedly excellent	1.56% (1)		
Sarcastic, Biting	3.13% (2)		
Inauspicious, Unfortunate	6.25% (4)		
Low, Sluggish	3.13% (2)		
Fooling around		14.29% (1)	
Fashionable			11.43% (4)
Reckless, Capricious			25.71% (9)
Becoming nothing, Empty			2.86% (1)
Total	100% (64)	100% (7)	100% (35)

Table 3: Distributions of Metaphorical Extensions of *White* in TM, TH, and TSM

Category	TM	TH	TSM
Clear, Transparent	18.18% (20)	18.52% (5)	15.15% (5)
Moral, Unimpeachable	5.45% (6)	3.70% (1)	6.06% (2)
Legal	10.00% (11)		3.03% (1)
Plain, Ordinary	15.46% (17)	18.52% (5)	30.30% (10)
Empty, With nothing	13.64% (15)	25.93% (7)	9.10% (3)
In vain, Be futile	28.18% (31)	14.81% (4)	21.21% (7)
For Free	5.45% (6)	18.52% (5)	12.12% (4)
Powerless, Helpless	1.82% (2)		3.03% (1)
Wasteful	1.82% (2)		
Total	100% (110)	100% (27)	100% (33)