

# A Bank of English Corpus Study of *smart* and *intelligent*

Michael IWANE-SALOVAARA

Keywords : Corpus linguistics, smart, intelligent, lexical priming

## 1 Introduction

This paper will focus on the uses of *smart* and *intelligent*. The initial reason for choosing these two adjectives centred on my intuitive understanding of how *smart* is used and what I regarded as inaccurate use by my Japanese students. After consulting British and American dictionaries I discovered that my intuition was not accurate. Once I began to investigate these two words in the Bank of English (BoE) I further discovered that these two synonyms are less similar and more complex than what I had previously assumed.

This paper will first provide a brief overview of the literature of corpus linguistics with particular attention to intuition, collocation, semantic prosody, and lexical priming. This is followed by an analysis of *smart* and *intelligent* across the subcorpora that make up the BoE corpus. Then this paper will split into two separate discussions, one on *smart* and the other on its synonym *intelligent*. Each discussion will focus on different aspects of corpus linguistics. Finally, I will briefly introduce a possible analytical tool for rare collocations.

Due to the breadth of this topic and the limitations of this paper I will only be able to touch on a few of the many issues within corpus linguistics in general and with *smart* and *intelligent* in particular.

## Part I

### 2 Literature Review

#### 2.1 Intuition and corpus linguistics

The advent of computers has radically changed the nature of corpus linguistics by transforming a painstakingly slow cataloguing and indexing process that took lifetimes to complete into a near instantaneous production of corpus data only dreamed of a generation ago (Kennedy 1998: 5–7). Before the computer the most relied upon tool, and at that time perhaps the most reliable, was human intuition. This reliance on intuition may partly explain Chomsky stating in 1965:

The structural descriptions assigned to sentences by the grammar, the distinctions that it makes between well-formed and deviant, and so on, must, for descriptive adequacy, correspond to **the linguistic intuition of the native speaker** (whether or not he may be immediately aware of this) in a substantial and significant class of crucial cases. (Chomsky 1965: 24 cited in Hunston and Laviosa 2001: 108<sup>1)</sup>; emphasis added)

With the development of powerful computers and the establishment of mega-corpora, Rampton (1990) challenges the Chomskian notion that being a native speaker automatically endows that speaker with the expertise to intuitively describe language. Expertise is something granted by an institution and can more readily be assessed and challenged by others (Rampton 1990: 99). For the language learner, expertise more clearly defines the parameters of “the body of knowledge” to be acquired while the intuition of the native speaker makes it difficult for the learner to assess the competence of the teacher and the reliability of what is being taught (*ibid.*).

EFL learners can be in a situation where they have to mediate between the native speaker descriptions of language on one hand and the expert pre-

scriptions found in grammar books -- a process that can undermine the credibility of the teacher. Hunston (2002: 20–21) lists several areas where “intuition is particularly unreliable”.

- judgements about collocations: adverb-adjective collocates are more difficult to intuit than verb-noun collocates.
- judgements about frequency: it is difficult to intuitively sense which word *smart* or *intelligent* is more frequent.
- semantic prosody and pragmatic meaning: in other words, it is not easy to see the macro patterns revealed by a corpus from a micro and intuitive perspective.
- details of phraseology: the difficulty in explaining why a phrase may seem a bit off or unnatural.

Of course this is not to say that intuition is not useful or necessary when doing corpus-based research. Hunston goes on to list where intuition is required (Hunston 2002: 22–23)

- Where a corpus provides information on frequency, intuition is required to determine “whether something is possible”.
- Conclusions derived from evidence are corpus specific and are not necessarily facts about language or register.
- Intuition is required to interpret the evidence offered by a corpus.
- Corpus data are out of the “spatial context” from which they are derived.

In sum, intuition and a corpus are two of the many tools required in language study (Hunston 2002: 23). Recognising patterns involves intuition and judgement as well as simple observation (Hunston and Laviosa 2001: 37) or, as Hoey (2005: 30) puts it, intuition that is “primed”.

## 2.2 Collocation

Firth (1957) is generally credited for introducing collocation as a “technical

term” and defined it “statements of the habitual or customary places of [a] word” (1968: 181 cited in Xiao and McEnery 2006: 105). While Sinclair defines collocation simply as “the occurrence of two or more words within a short space of each other in a text” (1991: 170; *cf* Sinclair 2003: 173) others emphasise frequency or co-occurrence (Hunston 2002: 68; Hoey 2005: 3; Xiao and McEnery 2006: 105).

The notion of co-selection (Sinclair 2003: 174) identifies words that stand complete and do not require other words to complete the meaning, of which there are two types: selective and focusing. The *selective* type of co-selection “is the familiar relationship between an adjective and the noun it modifies” where the noun designates the set and the adjective the subset (Sinclair 2003: 178) (i.e. sky: blue sky, cloudy sky, etc.). In other words, the adjective and noun phrase has a single meaning while the *focusing* type of co-selection focuses on an aspect of the noun which may appear to be redundant (i.e. physical activity, physical injury) (2003: 36, 175).

Sinclair (1991: 115) identified two types of collocations: upward and downward. Collocates with a higher frequency than the NODE are upward collocations and “tend to bring out phraseological features, features of characteristic usage” (Danielsson 2003: 118). Collocates with a lower frequency are downward collocations which “tend to bring out semantic features” and is more informative than upward collocations (Danielsson 2003: 118).

The idiom principle as defined by Sinclair is “the apparently simultaneous choice of two words” (1991: 110) or more “where one decision leads to more than one word” (1991: 111). Sinclair added that “normal texts” operate mostly on the *idiom principle* relying on the *open-choice principle* “whenever there is a good reason” (1991: 114). Unexpected choices are evidence of a switch from the *idiom principle* to the *open-choice principle* (*ibid.*). An example of the *idiom principle* is *beautiful woman* while the title of Leonard Cohen’s novel

*Beautiful Losers* (1966) exemplifies the *open-choice principle*.

Applying Sinclair's open-choice and idiom principles to "normal texts" which contain mostly "expected choices" does not clearly define what is "normal" or "expected". Also what is expected may not be found in the data particularly when gender is introduced. In other words, what is said about women may not be said about men and vice-versa. At some point what is expected, like intuition, fails to provide adequate guidance (see section 3.4.2 Gender).

### 2.3 Semantic Prosody

Semantic prosody goes beyond the "intuitive and impressionistic level" and the individual collocation by identifying "pattern[s] of collocations" revealed in a corpus (Cotterill 2003: 291). Using a corpus to identify semantic prosody is "invaluable since it permits large-scale searches for patterns of word behaviour" to identify racism, sexism and asymmetry (Cotterill 2003: 292). Hunston (2002: 120) discusses semantic prosody as a subtle means of constructing "otherness" (*c.f.* Caldas-Coulthard and Moon 1999 – sexism; Krishnamurthy 1996 – racism) or introducing a "contagion" (Danet 1980 cited by Cotterill 2001: 294) in order to perpetuate a stereotype or manipulate an audience as in the O.J. Simpson murder trial (Cotterill 2001).

When it comes to gender distinctions Hunston (2003: 121) postulates that "findings suggest that women and men are construed differently" in popular media thus "affirming [the] inequality between the genders in society." She refers to contrasting lists of adjectives applied to women and men compiled by Caldas-Coulthard and Moon (1999) and identifies a problem in interpreting the results; does one assume sexism exists in the data and search for it or does the data reveal sexism (Hunston 2002: 121)? The caution she offers is to be clear on the steps taken "between what is observed and the interpretation placed on those observations" (2002: 123). It remains a challenge to identify

the subtlety of semantic prosody within a body of decontextualised concordance lines while keeping one's bias - ideological or personal - in check.

## 2.4 Lexical Priming

Collocation gives semantic prosody content or semantic prosody gives collocation its form. Whitsitt argues that the act of observing semantic prosody is in fact an emptying of meaning from the item under observation (2005: 293). However, according to the “prosodists” meaning is unidirectional from collocation to empty word form; Whitsitt argues for the plausibility of meaning going in both directions (Whitsitt 2005: 295 also see n.16). This is a position I also accept.

### 2.4.1 Definition of Lexical Priming

Collocation challenges the traditional theory that “lexical item as an isolated element organised by syntax, realised by phonology, and latterly cross-referenced by text” (Hoey 2003) and consequently the Chomskian view that “grammar is generated first” as well as Pinker’s emphasis on the primacy of meaning or semantics (Hoey 2005: 1). By focusing on collocation and “naturalness” Hoey (2005: 2) inverts the traditional hierarchy and argues that lexis is the foundation from which grammars and meaning are outputted (2005: 9). The “interlocking” and pervasive character of collocations is fundamental to sentence construction (Hoey 2003) and a key to creating a natural text (*cf.* Hoey’s (2005: 5–7) discussion of a Bill Bryson excerpt). Because collocations are pervasive they are also subversive with “each lexical item primed for collocational use” (Hoey 2003) and accounts for the “[recurring] co-occurrence of words” (2005: 7).

It is at this point that Hoey seems to have stepped away from semantic prosody in favour of connecting prosody with the knowledge a person has in

recognising that two words such as *murder* and *commit* collocate (Whitsitt 2005: 297).

In the example of *beautiful woman*, Hoey might argue, there is no semantic explanation as to why *beautiful* co-occurs with *woman* ten times more frequently than with *man*<sup>2)</sup>. As Whitsitt (2005: 298) argues, there may be semantic reasons why words collocate however they ignore the role experience plays in *priming* the words to collocate the way they do. For example the connection between *woman* and *beautiful* has been repeated endlessly in art, literature, music, advertising and popular culture, etc. and therefore has been *primed* in our minds to naturally collocate in a way that *Beautiful Losers* (Cohen 1966) does not - or at least did not before Cohen wrote his novel.

While *semantic prosody* involves the “imbuing” of meaning from one word form to another (Louw 1993: 157; *c.f.* Whitsitt 2005: 288) *semantic association* is the association of words (not forms) or word sequences “in the mind of the language user” (Hoey 2005: 24). This seems to imply that the language user has greater linguistic autonomy in terms of meaning than in the grammar and semantic based theories of language. To borrow from Louw, meaning is “imbued” to a collocation from the mind of the language user rather than from between word forms. However the autonomy of the language user depends on how “primed” the user is. For example creative writers and speakers can be regarded as being more autonomous than the general populous.

## 2.5 Summary

Finding the evidence of the movement of meaning within a corpus is relatively straightforward; determining how or why meaning moves is much more difficult. One of the problems identified by Whitsitt (2005: 295) has to do with the language used to talk about language, specifically the metaphors used, which in themselves can hinder and limit research through imprecision. How-

ever, patterns do emerge and determinations are made and knowledge is expanded. Hoey's development of lexical priming stems from his earlier work on semantic prosody.

## Part II

### 3 Discussion: *smart* and *intelligent*

I have chosen to analyse *smart* and *intelligent* for four reasons. First, I had intuitively regarded these words as basically synonymous. Even though I had been aware that *smart* could be used to describe the appearance of a person or thing, I had assumed this usage to be dated and falling out of circulation thus creating a tautology based on my usage and extrapolating that to English usage generally. Second, in my experience most Japanese speakers of English seem to use *smart* to refer to appearance more frequently than native speakers of English. Third, typically I would point out to my students that *smart* is a synonym of *intelligent*. So I wanted to confirm what I had been teaching. Finally, after reading the presentation notes prepared by Caldas-Coulthard and Moon (1999) I became curious about the use of *intelligent* and gender. In particular how meaning can change in two-adjective descriptions of women and men.

#### 3.1 Dictionaries (see Appendix 1)

While the American Longman Dictionary of Contemporary English Online shows that my understanding of *smart* is biased toward American usage<sup>3)</sup>, the OALD 7<sup>th</sup> Ed. clearly contradicts my assumptions regarding *smart*. Also, though *smart* and *intelligent* are synonyms, *smart* has a much wider range of meaning and usage, which I will now discuss.

### 3.2 Bank of English (BoE)

For this research I accessed the Bank of English (BoE) using *telnet*. Since part of my research involves examining British and American usage I decided not to include the Australian **oznews** and Canadian **strathy** corpora. Also the initial results revealed that the large volume of concordance lines required a culling of the corpus.

#### 3.2.1 Culling the corpus

Investigation of the frequency values of each corpus revealed that among the British corpora the **brmags** corpus provided about 28% (2,118) of the concordance lines for *intelligent* (7,566) due to a large volume of personal ads seeking companionship. However, these repetitive and formulaic ads (*c.f.* Stubbs 2001) do not conform to what Sinclair would have called “normal text” nor are the lexical choices expected outside this specialised genre so I decided to exclude **brmags** from my analysis. The frequency of *smart* and *intelligent* in each corpus are in Table 1.

Corpus	<i>smart</i>	<i>intelligent</i>
British	7,837 (80%)	5,448 (78.6%)
American	1,946 (20%)	1,481 (21.4%)
	9,783	6,929

**Table 1** Frequency of *smart* and *intelligent*

Finally, one problem similar to that related to the personal ads problem is the repeated lines from within and throughout the media corpora which I have not resolved. On one hand, the spread of a particular line ensures more people read it, but only one source (writer, editorial team, ad agency, etc.) wrote it. This contrasts with other written materials which are published once

and tend not to produce very many repeated concordance lines. I have tried to remove all repeated concordance lines, but I am not sure the resulting frequency figures signify anything more than general trends of usage.

The sub-corpora used throughout this paper are as follows:

British corpus	newsci, sunnow, brbooks, guard, econ, bbc, wbe, brephem, indy times, brspok
American corpus	usacad, usephem, npr, usspok, usbooks, usnews

Table 2 British and American subcorpora

### 3.2.2 Characteristics of *smart* in the corpora

A trend found in the **newsci** corpus shows *smart* moving away from the dictionary-identified British usage of describing fashion, intelligence, and technology to almost exclusively referring to technology (see Appendix 2). The rough equivalent in the American corpus (**usacad**) displays a wider usage to include people, behaviour, and non-technology-based things (see Appendix 3). While both are academic corpora, I suspect this difference has little to do with them being either British or American. Instead they reflect the range of data collected from national and international sources. The science based **newsci** corpus is naturally more specialised than the wider ranging **usacad** corpus.

Unlike the **brmags** corpus, the **newsci** corpus is included in the larger British corpus because technology is a significant subcategory across all corpora and more importantly it is relevant to many of my Japanese business and engineering students who study ESP.

One unexpected discovery (see Appendix 4) is wide fluctuation in the number and range of evaluative collocates there are in the British corpora

from under 15 (**brephem** 6, **newsci** 8, **wbe** 10, **econ** 12, **bbc** 15) to over 25 (**brspok** 26, **times** 27, **brbooks** 32). The American corpus is does not fluctuate as widely. The notable exception is the **usspok** subcorpora which is a significantly smaller corpus overall and only 20 concordance lines for *smart*.

A further difference can be found between the **bbc** and the **npr** subcorpora. The **bbc** subcorpus has a narrower evaluative range than the **npr** subcorpus. This seems to reflect the differences in usage where, as I will show, the British use *smart* more negatively with people whereas in American usage *smart* replaces *intelligent* and is used more positively.

### 3.3 Analysis of *smart*

I have restricted my analysis to only nouns in the R 1 position and have placed them into the following categories: animates; behaviour; inanimates: technology, business, etc.; inanimates: style.

Overall the British corpus (see Appendix 2) could be divided into two sub-categories: people; colloquialisms. The people category includes *smart people*, *smart women*, *smart guy*. The colloquial category includes *smart arse*, *smart ass*, *smart alec*. These colloquialisms and their derivatives are common throughout the individual corpora though none were found in the **bbc**, **wbe**, and **econ** subcorpora. This perhaps reflects the more conservative nature of these media. Other colloquial expressions in the individual subcorpora were *smart cookie* and *smart cookies*. A third category not in the British corpus but evident in the individual subcorpora is position i.e. lawyer, businessman, users, etc.

The table below provides a statistical sketch of *smart* in the British corpora.

Category	British R 1 noun collocates of “smart” (1,617 lines)
animates 14.3% (232 lines)	people, set, alec, arse, ass, guy, alecs, aleck
behaviour 14.3% (231 lines)	moves, move, talk thing, form, turn, way
inanimates: technology, business, etc. 55.2% (892 lines)	cards, card, money, bombs, car, drugs, weapons, cars, socket, bomb, idea, tags
inanimates: style 16.2% (262 lines)	materials, suit, clothes, restaurant, suits, city, res- taurants, London, hotels, hotel

**Table 3** British corpus: smart+R 1

The table below provides a statistical sketch of *smart* in the American corpora.

Category	American R1 noun collocates of “smart” (377 lines)
animates 39% (147 lines)	people, ass, guy, aleck, set, ones, women, man, girl, person, woman, consumer, shopper, rats
behaviour 17.2% (65 lines)	thing, move, way, choice, alecky, investing, values,
inanimates: technology, business, etc. 42.2% (159 lines)	bombs, valley, bomb, money, weapons, marketing, cars, investment, highways, station, financial, pills
inanimates: style 1.6% (6 lines)	looking

**Table 4** American corpus: smart+R 1

### 3.3.1 British and American Nouns: Similarities and Differences

A comparison of the R 1 nouns found in the t-score pictures of the British

and American corpora shows usage patterns that match the dictionary definitions outline above (see Appendix 2). There are similarities in the frequency ratio in referring to *smart* behaviour even though the specific collocates show some differences. Both corpora show frequent use of *smart* to refer to technology and business with military and money dominating the frequency list. Significant differences are found in reference to the animates (i.e. people and other living things). The British corpus reveals a tendency to use nouns that generally have a negative evaluation (*smart Alec*, *smart arse*, *smart ass*, *smart Alecs*, *smart Alec*) and while the American corpus shares some of the same negatively evaluated nouns it also has a wider range of positively evaluated nouns (*smart people*, *smart guy*, *smart set*, *smart ones*, *smart women*, *smart man*, *smart girl*, *smart person*, *smart woman*, *smart consumer*, *smart shopper*).

The main difference is the use of *smart* to refer to style. While British references to *smart* style cover a wide range of things (i.e. *clothes*, *buildings*, *shops*, *cities*), the American corpus has only a single reference to appearance (*smart looking*).

I did not expect the absence of *smart* referring to someone's physical appearance. Among the Japanese learners of English we often hear *smart* used to describe a person's body shape or size. For example I have had many conversations that go something like this:

Learner : She is *smart* .

Interlocutor : You mean she is clever?... *intelligent* ?

Learner : No, she looks *smart* ... slim.

Although the above conversation is a simulation, it does contain a fairly common ambiguity in Japanese learners' speech when using *smart*, which is noted by a clarifying question by the interlocutor.

### 3.3.2 Learner *smart* survey

After talking with Japanese friends, colleagues and students to confirm that their use of *smart* does include references to body shape and size. I conducted a paper survey among my students (see Appendix 5).

The subjects of this survey were English majors at a Japanese women's university I taught at. Their English language abilities ranged from high beginner (over TOEIC 300) to intermediate (under TOEIC 500) with most being in the high beginner to low intermediate range (TOEIC 350–450).

With above mentioned ambiguity in mind I preselected four target sentences. The first 2 sentences were intended to reveal that ambiguity among Japanese learners while the latter 2 sentences were intended to confirm their understanding of the other main meanings of *smart*. They were embedded in a list of 15 sentences on the assumption that students at all levels would most likely recognise these 4 sentences as valid and meaningful<sup>4)</sup>. The results (Table 5; cf Appendix 4) indicate that this assumption was reasonable.

1. She is <u>smart</u> .	Agree (39)	Disagree (1)
6. Kitajima is a <u>smart</u> swimmer.	Agree (37)	Disagree (3)
9. She is a <u>smart</u> student.	Agree (38)	Disagree (2)
13. You are <u>looking</u> very <u>smart</u> .	Agree (33)	Disagree (7)

Table 5 Japanese learner Agree/Disagree

The students were then asked to choose which definition they think *smart* refers to. The results (Table 6) confirmed the ambiguity in understanding sentences 1 and 6 and the relative clarity of sentences 9 and 13.

	intelligent	body shape/size	style
1. She is <u>smart</u> .	20	10	9
6. Kitajima is a <u>smart</u> swimmer.	13	17	9
9. She is a <u>smart</u> student.	33	4	2
13. You are looking very <u>smart</u> .	9	12	18

Table 6 Learner usage of *smart*

The third part of the survey (Table 7) was to get picture of how *smart* is used by these students. According to the survey my students used *smart* to refer to body shape or size 57.9% of the time; style 54%; intelligent 37.8%.

<b>body shape/size:</b>	always 23.7%	most of the time 34.2%	sometimes 18.4%	rarely 18.4%	never 5.3%
<b>style:</b>	always 32.4%	most of the time 21.6%	sometimes 24.3%	rarely 18.4%	never 2.7%
<b>intelligent:</b>	always 10.8%	most of the time 27.0%	sometimes 24.3%	rarely 35.1%	never 2.7%

Table 7 How *smart* is used by Japanese learners of English

This survey is only intended to show the presence of a usage trend. Further investigations are required to investigate usage patterns in particular the prominence of *smart* in learner English compared with its use in Japanese as a borrowed word.

### 3.3.3 Summary

This analysis of R 1 nouns is very brief and is meant only to outline the differ-

ences between British and American usage of *smart* as well as identify a Japanese usage.

From the corpus evidence there seems to be a greater tendency in British English to use *smart* negatively when referring to people while American usage is generally more positive.

The unexpected result of Japanese English learners having their own usage of *smart* merits further investigation. What seems to be happening is that *smart*, as a borrowed word in the Japanese language, is being filtered back into their spoken English with additional meaning tacked on.

### 3.4 Analysis of *Intelligent*

I was intrigued by the presentation by Caldas-Coulthard and Moon (1999) which did a gender analysis of adjectives in British newspapers. What drew my attention was that *intelligent* was used to describe only women. This raised several questions. Was it understood that men were intelligent and therefore it was not necessary to mention it? If that was the case, how did the reporters consider women? I do not intend to directly answer those questions in this paper, but they have spurred me to examine what adjectives are used to describe women and men.

First, a survey of which nouns *intelligent* collocate with in the British and American corpora (see Appendix 6 a, 6 b). The nouns have been divided into four categories in both corpora: animates: human; animates: non-human; behaviour; and, inanimates. Only nouns in the R 1 position were analysed. The results of the two corpora can be seen in these two tables below.

Category	R 1 noun (43 collocates)
animates: human 52.7% (664 lines)	man, people, woman, person, women, men, agents, player, girl, face, agent, consumer, child, reader, eyes, footballer, boy, lad, adults
animates: non-human 12.1% (152 lines)	life, beings, animals, creatures
behaviour 12.3% (155 lines)	behaviour, debate, use, questions, conversation, way, interest, decisions
inanimates 23% (289 lines)	finance, machines, agents, pads, agent, football, robots, environments, software, transport, thing production

**Table 8** British corpus - *intelligent* +R 1 nouns

Note: *agent* and *agents* refer to both people and things.

Category	R 1 noun (35 collocates)
animates: human 51.1% (179 lines)	people, man, woman, men, person, women, guy, consumer, girl, eyes, students, he
animates: non-human 26.9% (94 lines)	life, beings, alien, species, creatures, animals, subjects, animal
behaviour 13.4% (47 lines)	choice, questions, decisions, behaviour, use, conversation, thought, way, guessing
inanimates 8.6% (30 lines)	machines, pitch, design, film, energy

**Table 9** American corpus - *intelligent* +R 1 nouns

### 3.4.1 British and American Nouns: Similarities and Differences

When referring to other people both corpora show evidence that British and

American speakers use *intelligent* about half the time. A significant difference is that in the British subcorpora *intelligent* is often used with sport (agents, agent, player, footballer) while the American subcorpora collocate around work or avocation (businessman, chef, historian, poet). However the top six collocates are the same (albeit in different order).

The range of collocates for non-human animates is doubled in the American corpus (8 collocates) as is the frequency of use (26.3%). Even when the 8 collocates are used to search the British corpus there is only a slight increase of 12 additional lines.

While the behaviour category shares many similarities in terms of frequency and collocates, the differences are quite interesting. While one would assume that the concept of an *intelligent debate* is a widely held discourse goal there is no mention of it in the American corpus. In fact with respect to “debate”, the only evaluative collocates in the American corpus point to confrontation (*heated, intense, bitter, considerable, lively, fierce, vigorous, acrimonious, open, divisive, spirited, ongoing*). While the British corpus does include confrontational debates (*heated, fierce, lively, etc.*) it also contains positively evaluated collocates that indicate depth (*serious, real, intellectual*).

The other collocate found only in the British corpus is *intelligent interest*. At first this collocation struck my non-British ears as being redundant. However, since *interest* also collocates with *high, little, keen, nominal, and academic* (to list only a few), *intelligent interest* makes sense. One explanation why it seems somehow incorrect is that I have yet to be primed (Hoey 2005) to use it.

Overall, the British corpus indicates a wider, more common application than the American corpus. This seems to complement the generally positive and wide use of *smart* in American English.

### 3.4.2 Gender: adjectives + *intelligent*

Due to the relatively low overall number of concordance lines involved with this particular discussion both the British and American corpora as defined above will now be combined.

To place *intelligent* in relation to other adjectives in positions L 1 and L 2 I did a general survey using the search strings JJ+and+JJ+woman | women and JJ+and+JJ+man | men (Appendix 7 a) as well as JJ+JJ+woman | women and JJ+JJ+man | men (Appendix 7 b). Though there were some surprises (i. e. the high frequency of adjectives describing male sexual orientation) *intelligent* (with the conjunction *and*) ranked in the top 5 for both genders. However, without the conjunction *and* there is a significant drop in rank (Appendices 8 a, 8 b) and ratio while the number of occurrences rose (Table 10).

	Total # of concordance lines	occurrence of <i>intelligent</i> at L 2	occurrence of <i>intelligent</i> at L 1
JJ+and+JJ+woman   women	626	16 (2.6%)	17 (2.7%)
JJ+and+JJ+man   men	1,081	24 (2.2%)	17 (1.6%)
JJ+JJ+woman   women	4,531	30 (0.7%)	27 (0.6%)
JJ+JJ+man   men	8,903	30 (0.3%)	23 (0.3%)

**Table 10** Survey of two-adjectives and of *intelligent* with woman/women and man/men

There is much to be said about the data. I will, however, focus on only one of the interesting patterns.

#### 3.4.2.1 Unexpected “expected choice”?

Sinclair’s *idiom principle* centres on “expected choice” (1991: 114), however looking at the adjective collocates for *intelligent* (woman, women, man, men) I have noticed what is **not** there as much as what is there.

For example, there are numerous concordance lines where *powerful* collocates with *woman* (67), *women* (82), *man* (289) and *men* (192). However there is only one concordance line where *powerful* collocates with *intelligent men*.

minister since the war. **Intelligent and powerful men** accepted

There is no evidence of *powerful* collocating with *intelligent woman/women*.

Similarly, there are numerous concordance lines where *successful* collocates with *woman* (38), *women* (84), *man* (46) and *men* (45). However there are only two concordance lines where *successful* collocates with *intelligent woman/women*.

proletariat, and where **intelligent, successful women** feel that 36-year-old **successful and intelligent woman**. But then Maria

There is no evidence of *successful* collating with *intelligent man/men*.

This lack of fidelity between adjectives and nouns as the number of adjectives increase seems to suggest that English speakers may be conditioned or *lexically primed* to associate power and intellect with men and not women as well as success and intelligence with women and not men. Admittedly the sample is very limited, however, there seems to be little difference between what is expected and intuition (Whitsitt 2005: 295). Had there been numerous concordance lines with “powerful, intelligent women” or “intelligent, successful men” I would not have noticed because I would have intuitively expected them to be there. Their absence is unexpected.

This is where Hoey’s lexical priming (2005) may be helpful in identifying the social aspect of lexical choice. Although Hoey (2003: 1) prefers to use the term “loaded” and Whitsitt the metaphor of a gun (2005: 298) to illustrate lexical priming, I prefer the term “condition” (as in to *prepare*) and the metaphor of priming a surface (i.e. wall or canvas) for a coat of paint. Regardless of ter-

minology and metaphor, priming in both cases implies preparation. We are primed to expect that the nouns that follow *successful* and *powerful* include both genders but when *intelligent* is added we are differently primed.

Possible explanations as to why “successful (and) intelligent man/men” and “intelligent (and) powerful woman/women” do not appear may be because of socially constructed lexical gender biases: intelligent men are assumed or expected to be successful or visa-versa; intelligent women are not assumed or expected to be powerful or visa-versa. These lexical biases may be a hold-over of a time before sexism was widely regarded as a social problem. These questions require more in-depth analysis than what this paper can provide.

#### 3.4.2.2 Rare Collocation Set

Another problem with this data set is the paucity of data (Appendices 8 a, 8 b). Most of the collocates in my data set do not meet the minimum frequency of 3 concordance lines (Xiao and McEnery 2006: 105). This raises the question regarding corpus linguistics research: if a collocation does not meet this frequency standard, does it exist? Many researchers (as above) generally set 3 concordance lines as a minimum, however, this limit ignores possible insights provided by singletons.

A possible solution is to categorise the adjectives into similar groupings and create what I call a *rare collocation set* (RCS). From each of the 16 searches I removed all non-singleton co-occurrences. I identified five categories: Appearance, Ability, Intellect, Character, and Other (Table 11). The singleton concordance lines (Appendices 8 a, 8 b) were analysed and the adjectives were grouped within each category. The groupings were not focussed on synonyms. With lexical priming in mind I tried to group the adjectives according to their similarities in meaning when combined with *intelligent* and the gender based nouns<sup>5</sup>). This may have ended up as what Hoey refers to as “woolly

confusion” (2005: 3), but I was curious in finding a way to organise these singletons.

There are several interesting patterns in this RCS, however I comment only on one. In the Character category the largest group for *intelligent woman/women* emphasises a seriousness that dominates the description of women with intelligence. Over on the male side the adjectives describing men emphasise the warmer side of the male character. Although, none of the rare collocates seem out of place, what is striking is the lack of balance. This may be because of lexical priming and therefore a window on how language is used and not used. Or it may reflect a faulty methodology in how the concordance lines were collected, culled and organised. I will leave this deeper analysis for another time.

### 3.5 Summary of *smart and intelligent*

While dictionaries provide a snap shot of meaning, a mega-corpus like the BoE provides more precise information. For example, who uses *smart* and how it is used differently in different contexts (colloquial or technological) and locations (the UK or the USA). Similarly the brief examination of *intelligent* shows that gender may have an effect on prosody or association (Hoey 2005).

## 4 Teaching implications

While teaching EFL is not a major theme of this paper I would like to make a few comments. Immediate implications for teaching EFL affect my reliance on intuition to explain how language is used. To state the obvious, I am not in Canada and learner language needs in Japan and elsewhere extend beyond regional explanations. Intuition is of course needed, but so is consideration of the learners' own language usage needs.

Women (61)		Men (55)
<ul style="list-style-type: none"> <li>attractive (4), lovely, beautiful (2)</li> <li>sexy, desirable, delicious</li> </ul>	Appearance	(none)
<ul style="list-style-type: none"> <li>older • stylish</li> </ul>		<ul style="list-style-type: none"> <li>attractive • little • young</li> </ul>
<ul style="list-style-type: none"> <li>resourceful (2), self-sufficient, able, capable</li> <li>creative, artistic</li> </ul>	Ability	<ul style="list-style-type: none"> <li>able (5), competent, hardworking, vital</li> </ul>
<ul style="list-style-type: none"> <li>energetic (2) • successful (2)</li> <li>busy</li> </ul>		<ul style="list-style-type: none"> <li>powerful • professional</li> </ul>
<ul style="list-style-type: none"> <li>witty (2), articulate, fluent, literate</li> <li>astute, discerning, sharp, thoughtful</li> </ul>	Intellect	<ul style="list-style-type: none"> <li>reasonable (2), rational, reflective, thoughtful</li> <li>articulate (5), eloquent, witty</li> <li>cultivated, cultured</li> </ul>
<ul style="list-style-type: none"> <li>sophisticated</li> </ul>		
<ul style="list-style-type: none"> <li>strong (4), independent (2), mature (2), forthright, practical, sturdy</li> <li>sensitive, gracious, pleasant, warm</li> <li>brisk, demanding opinionated</li> </ul>	Character	<ul style="list-style-type: none"> <li>amiable (2), agreeable, genial, likeable, loveable, nice, sensitive</li> <li>dynamic, engaging, interesting, forceful</li> <li>generous, good, kind-hearted</li> <li>calm, quiet</li> <li>honest, sincere</li> <li>independent, proud</li> </ul>
<ul style="list-style-type: none"> <li>funny • sane • wonderful</li> <li>generous</li> <li>passionate • sensible</li> </ul>		<ul style="list-style-type: none"> <li>mature (2) • sensible • brave</li> <li>charming</li> </ul>
<ul style="list-style-type: none"> <li>exceptional</li> </ul>	Other	<ul style="list-style-type: none"> <li>lucky</li> </ul>

**Table 11** Rare Collocation Set (RCS) - Adjective, *intelligent* with gender

Note 1: ungrouped words are below the dotted line.

Note 2: The numbers in parentheses represent the number of singleton citations across all search results

Note 3: Although adjectives such as *attractive* and *beautiful* for women and *sensitive* for men were culled from the data set, they remained if they were singletons in an individual search.

Longer term implications involve rethinking how I introduce and explain language. Hoey's lexical priming, for instance, places the emphasis on the associations made by language users/learners giving them greater autonomy. This would seem to imply providing a learning environment and teaching methodology that is meaningful for the learner in the sense that they can make their own associations or primings. I will be exploring this area in my dissertation.

## 5 Conclusion

Before starting this paper I thought I had a well-developed intuitive sense of how words are used and by whom. Given the amount written on intuition it is safe to say my attitude was not atypical of how many language teachers think. However, studying common words like *smart* and *intelligent* surprised me how complex these words are. While intuition in language teaching should not be dismissed, it needs to be informed by expertise in order to better equip both the language teacher and learner. And, as this brief corpus study has shown, there is no lack of teaching material from regional usage to genre usage, from the colloquial to the technical, from complimentary collocates to gender differences.

This last point, how meaning can change (i.e. *intelligent women* implies a different meaning than *intelligent and sensible women*), I find very fascinating and will continue to examine collocation and meaning as well as continue to evaluate *semantic prosody* and *lexical priming*.

Finally, this paper serves only as an introduction. Even for a "brief" discussion any one of the points raised merits a separate paper. I have highlighted some of the issues in corpus research, the similarities and differences of *smart* and *intelligent* as well as touch on gender differences and introduced a possible method for analysing singletons. I hope to use this paper to launch into

further detail the issues raised and briefly described.

### Primary References

- Caldas-Coulthard and Moon (1999) 'Curvy, hunky, kinky: using corpora as tools in critical analysis' Paper read at the Critical Discourse Analysis Meeting, University of Birmingham, April 1999. (Unpublished)
- Cohen, L. (1966) *Beautiful Losers*. Toronto: McClelland & Stewart.
- Cotterill, J. (2003) 'Domestic Discord, Rocky Relationships: Semantic Prosodies in Representations of Marital Violence in the O.J. Simpson Trial' *Discourse & Society* 12/3:291-312. London: Sage Publications.
- Danielsson, P. (2003) 'Automatic extraction of meaningful units from corpora: A corpus-driven approach using the word *stroke*' *International Journal of Corpus Linguistics* 8/1:109-127. Amsterdam: John Benjamins.
- Hoey, M. (2003) 'Lexical priming and the properties of text' ([www](http://www.monabaker.com/tsresources/LexicalPrimingandthePropertiesofText.htm)) <http://www.monabaker.com/tsresources/LexicalPrimingandthePropertiesofText.htm> (July 16, 2007)
- Hoey, M. (2005) *Lexical priming*. Abingdon: Routledge
- Hornby, A. S. *et al* (2005) *Oxford Advanced Learners Dictionary, 7<sup>th</sup> Edition*. Oxford: OUP
- Hunston, S. and S. Laviosa (2001) *Corpus Linguistics*. Birmingham: Centre for English Language Studies, The University of Birmingham.
- Hunston, S (2002) *Corpora in Applied Linguistics*. Cambridge: CUP.
- Kennedy, G. (1998) *An Introduction to Corpus Linguistics*. Essex: Pearson Education Limited.
- Longman *Dictionary of Contemporary English Online*. ([www](http://pewebdic2.cw.idm.fr/)) <http://pewebdic2.cw.idm.fr/> (May 14, 2007)
- Rampton, M. (1990) 'Displacing the 'native speaker': expertise, affiliation, and inheritance' *ELT Journal* 44/2:97-101. OUP.

- Sinclair, J. (1991) *Corpus, Concordance, Collocation*. Oxford: Oxford University Press.
- Sinclair, J. (2003) *Reading Concordances*. London Pearson Education.
- Stubbs, M. (2001) *Words and Phrases*. Web: access for chap 1. (www) <http://www.uni-trier.de/uni/fb2/anglistik/Projekte/stubbs/book2001.htm> (July 15, 2007).
- Whitsitt, S. (2005) A critique of the concept of semantic prosody. *International Journal of Corpus Linguistics* 10:3 p.283–305.
- Xiao, R. and McEnery, T. (2006) Collocation, Semantic Prosody, and Near Synonymy: A Cross-Linguistic Perspective. *Applied Linguistics* 27/1: 103–129. OUP.

### Secondary References

- Chomsky, N. (1962) Paper given at the University of Texas 1958, 3rd Texas Conference on Problems of Linguistic Analysis in English, Austin, University of Texas, p. 159. In Leech (1991:8).
- Danet, B. (1980) “Baby” or “Fetus”? Language and the Construction of Reality in a Manslaughter Trial, *Semiotica* 32:187–219.
- Firth, J. R. (1957) *Papers in Linguistics*. London: OUP.
- Firth, J. R. (1968) ‘A synopsis of linguistic theory 1930–1955’ in F.R. Palmer (ed.) *Selected Papers of J.R. Firth 1952–1959*. pp. 1–32. Bloomington: Indiana University Press.
- Krishnamurthy (1996) ‘Ethnic, Racial and Tribal: The Language of Racism?’. In C. R. Caldas-Coulthard and M. Coulthard (eds) *Texts and Practices: Readings in Critical Discourse Analysis*, pp. 129–49. London: Routledge.
- Louw (1993) Irony in the text or insincerity of the writer? The diagnostic potential of semantic prosodies, in M. Baker *et al* (eds) *Text and Technology*, pp. 157–76. Amsterdam: John Benjamins.

A Bank of English Corpus Study of *smart* and *intelligent*

- 1) Hunston and Laviosa, Corpus Linguistics provides two different dates: 2000 on the publishing information page; and July 2001 in the footer of every page thereafter. I have chosen 2001 as the likely publishing date throughout this paper.
- 2) Bank of English: “beautiful woman” 601 matching lines; “beautiful man” 63 matching lines.
- 3) I am aware the dictionaries use NAmE, however, however having grown up in Canada my own English usage is a mix of British and American English. Therefore I will refer specifically refer to American English throughout this paper. Also I am aware that younger Canadians are much more America oriented than I and may use what is referred to as North American English.
- 4) The second of these sentences refers to “Kitajima” who is a famous Japanese Olympic champion swimmer.
- 5) I need to stress that the groupings are not definitive and that someone else would mostly likely come up with different groupings and rationales for doing so.

Appendix 1: Dictionary definitions of *smart* and *intelligent*

Dictionary	smart	intelligent
<p><b>British</b></p> <p>Oxford Advanced Learners Dictionary 7<sup>th</sup> Edition</p>	<p>clean/neat (esp. BrE)</p> <ol style="list-style-type: none"> <li>(of people) looking clean and neat; well dressed in fashionable and/or formal clothes;</li> <li>(of clothes, etc.) clean, neat and looking new and attractive; intelligent (esp. NAmE)</li> <li>intelligent; fashionable (esp. BrE)</li> <li>connected with fashionable rich people: smart restaurants; quick</li> <li>(of a movement, etc.) quick and usually done with force</li> <li>computer-controlled</li> <li>(of a device, esp. of a weapon/bomb) controlled by a computer, so that it appears to act an intelligent way.</li> </ol>	<ol style="list-style-type: none"> <li>good at learning, understanding and thinking in a logical way about things; show this ability;</li> <li>(of an animal, a being, etc.) able to understand and learn things;</li> <li>(computing) (of computer, program, etc.) able to store information and use it in new situations.</li> </ol>
<p><b>American</b></p> <p>Longman Dictionary of Contemporary English Online</p>	<ol style="list-style-type: none"> <li>intelligent: (esp. NAmE) intelligent or sensible</li> <li>disrespect: trying to seem clever in a disrespectful way</li> <li>neat: (esp. BrE)             <ol style="list-style-type: none"> <li>a smart person is wearing neat attractive clothes and has a generally tidy appearance</li> <li>smart clothes, buildings etc are clean, tidy, and attractive</li> </ol> </li> <li>fashionable: (esp. BrE) fashionable or used by fashionable people</li> <li>technology: smart machines, weapons, materials etc are controlled by computers and are designed to react in a suitable way depending on the situation</li> <li>the smart money is on somebody/something used to say that a particular person or thing is likely to do something or be successful</li> <li>quick: (esp. BrE) a smart movement is done quickly, especially with force</li> </ol>	<ol style="list-style-type: none"> <li>an intelligent person has a high level of mental ability and is good at understanding ideas and thinking clearly;</li> <li>an intelligent comment, question, conversation etc shows that you have thought about something carefully and understand it well;</li> <li>an intelligent creature is able to think and understand;</li> <li>an intelligent machine, system etc is able to learn and use information.</li> </ol>

Appendix 2 a: British corpora *smart* R 1 nouns

Corpus	animates	behaviour	inanimates: technology, business, etc.	inanimates; style
<b>British</b>	people, set, alec, arse, ass, guy, alecs, aleck	moves, move, talk thing, form, turn, way	cards, card, money, bombs, car, drugs, weapons, cars, socket, bomb, idea, tags	materials, suit, clothes, restaurant, suits, city, restaurants, London, hotels, hotel, shops arts
brbooks	she, arse, alec, lawyer, set, cookie, ass, he, alecs, businessman, girls, boy, one, woman, you, people	move, thing, answer	idea	restaurant, suit, restaurants, appearance, clothes, money, London, dresser, suits, shops, address, dinner, places, law
brepthem	user, cooks, clientele, cookies, aviator	talk	socket, card, points, award, plastic, Nite-Lites, Litter Campaign, rewards	wallet, precincts, bouquet, jacket, dress, hotels, case, design, frock, skirts, outfit
indy	alec, ass, arse, cookie, kids	moves*, move, thing, catch, talking	money, cards, card, bombs, car, piece, idea, weapons, cars, meter, missile, script*	suits, clothes, London, restaurants, trousers, cafes, drinks, dressing, dress, suit, shops
bbc	they, designer, blonde	running	shells, card, cards, money, house, plugs, wheelchair, plug	uniforms, house, suburb, horse race, guard of honour, offices, seat, table lamp, shops, club, street, car
wbe	people, ones, headhunter, veterans, guy, patient, producers	way, move, choices, approaches, schmoozing, rally, moves, path, contracting, hiring	cards, card, money, secrets, ones, cameras, television, materials, marketing, companies, business, bombs, exams, eyeballs, labels, phones, databases, deals, machine	displays
newsci	alick, aleck, bureaucrat, generals	alecky	materials, drugs, cards, drug, structures, canola, software, battery, bombs, dust, money, boxes, exercise, weapons, way, helmets, catalysts, award, gun, pigs, batteries, ship, bomb, technologies, material, computer, technology, violins, buzzword, spreadsheet, charger, navel, badge, spreadsheets, cocktails	(none)

sunnor	hurdler, predator, set, alect, stayer, filly, alect, girls, novice, performer	move, form, save, saves, effort, turn, stop, shot,	money, bombs, car, cards, card, mart, football, cars, hotel, business	suit, suits, clothes, city, trousers,
guard	people, arse, alect, set, alect, performer, investor, operators, guy	move, thing, form, save, piece of	cards, card, money, bombs, weapons, bomb, cars, missiles, career, car, ID card, materials, concrete, marketing, technology, ball	suit, restaurant, clothes, suits, office, dresses, shops
econ	set, investors	move	cards, card, money, pills, cars, car, tvs, highways, mobile, weapons, telephones, machines, tv, drugs, weaponry, phones, pill, highway, phone, mines, farming, bombs, roads, homes, marketing, road, organisation, department, growth, end	suits, hotel, hotels, chateaux, uniforms, suit, houses, London
times	set, alect, ass, alect, people	moves, move, thing, turn, sanctions, pass, way, thinking,	money, card, car, bombs, cards, tags, cars, procurement, bomb	restaurant, city, suit, clothes, hotels, London, address, addresses, restaurants, hotel, society, trouser, suburb
brspok	shopper, people, arse, she, modelers, God, their	shopping, way, move, thinking,	card, cards, bomb, transport system	trousers, suit, clothes, dress, place, complets, yachts, motors, Belfast, jacket, shirts suits, coat, nights, shoes, cars, organization, car

Notes:

**moves\***: almost all of the concordance lines were from a weekly article with “Smart Moves” as part of the title.  
**script\***: this is an example where *smart script* could be either emphasising intelligence, style or both.  
**newsci** is almost exclusively technology and business oriented.  
**sunnor** is predominantly sports oriented (football & horse racing).

Appendix 3: American corpora *smart* R1 nouns

Corpus	animates	behaviour	inanimates:technology, business, etc.	inanimates; style
<b>American</b>	people, ass, guy, aleck, women, man, girl, person, woman, consumer, shopper, rats*	thing, move, way, choice, alecky, investing, values	bombs, valley, bomb, money, weapons, financial, marketing, cars, investment, highways, station, pills	looking
usacad	people, alecks, raccoons, consultant, housewife, guy, counterparts, mouth, person, individual, man, students, men	alecky, choices, selection, thing, side, moral codes, study strategy, interest	language*, money	(none)
usephem	consumer, photographers, shopper shoppers	way, investing, borrowing, shopping, buy, choice, start, buys, debut, styling	money, station, data, valley, investment, picture, sound, bombs, savings, rate, cursors, nightlight, cleanser, hinge, easel, dialing	looking, arts, fitting, stylish
usbooks	ass, people, aleck, <i>set</i> , guy, ones, women, girl, woman, rats, girls, person, mouthed, fellow, son, man, interviewers	move, thing, politics, alecky, cracks	bombs, marketing, bomb, weapons, highways, cars	<i>set</i> , looking, cafes, stylish
usnews	homeowner, guy, people, wards, mouthed, ass shopper, liberals, pitcher, boy	thing, basketball, hit, game, alecky, investing, moves, strategy, talk	valley, money, calculator, weapons, microscope, munitions, managements, mines, newsletter, weapon, economics, glass, package	silk blouse, graphics
npr	guy, aleck, hearts, ones, people, man, ass, guys, person, heart, walrus	thing, move, reporting, alecky, calculating	bombs, bomb, weapons, pills, tv, cars, machines, weapon, missile, money, ammunition	(none)
usspok	people, kids, man, test-taker	(none)	classrooms, crime bill, economic policies	(none)

Note:

\*"rats" demonstrates the limitations of this charts since they are also regarded as instruments of scientific research.

\*\*"language" is another word that could be classified elsewhere i.e. behaviour.

**usephem** "smart arts" appears to be a commercial expression that may refer to style.

**usbooks** "smart cracks" as in "wise cracks"

**usnews** "smart companies" and "smart marketing" do not refer to high technology but to intelligent companies and marketing..

Appendix 4 Evaluative L 1 collates for *smart*

Evaluative collates for <i>smart</i> - British corpora					(R1)
Corpus	degree (L1)		negative	state (L1)	
	positive	neutral			
British(26)	very, so, really, as, pretty, extremely, quite, rather, super, ultra		too, get,	neutral	neutral
brbooks(32)	very, so, as, pretty, real, get, really, extremely, damned, bloody, rather		too, was, were, get, not,	a, the, look, street, some, looks, be, are, called, these, looked, is, this	enough
brpphem(6)	very		(none)	a, be, been, some, look, looked, looking, looking, looks, usually, considered, are, being, these, something	enough
Indy(22)	very, so, extremely, really, rather, terribly, similarly, as, quite,		too, get, little,	a, these, this, plain	enough
bbc(15)	very, rather, as		was	a, the, look, some, is, looks, be, are, being	enough
wbc(10)	very, as, more		too, get, was	a, look, the, stays, some, this, are, be, is	obviously enough
newsci(8)	as, so, very, most, uniquely		(none)	a, being, these	enough
sunnow(19)	very, so, really, pretty, as		too, get	a, called	enough
guard(17)	very, so, pretty, rather, really, as		too, not, getting	a, the, some, look, looks, looking, be, this, looked, these, something	enough
econ(12)	seemed, too, consciously		seemed, too,	a, the, are, called, be, look, looking	enough
times(27)	very, too, really, so, get, extremely, pretty, quite, perfectly		too, get	a, the, some, look, called, these	enough
brspoke(26)	very, really, so, quite, terrifically, fashionably, extremely, rather		nor, neither, too, were	a, the, street, some, look, is, are, looks, called, looking, be, seem, otherwise, this, however	enough
				a, the, some, look, is, are, looks, called, looking, be, seem, otherwise, this	enough

Evaluative collates for <i>smart</i> - American corpora					(R1)
Corpus	degree (L1)		negative	state (L1)	
	positive	neutral			
American (31)	very, so, as, pretty, real, really, quite, tough, extremely, damned, become, always	neutral	was, too, get, were, not	a, s, be, street, re, are, is, being, called, some, the, am, looking	neutral
usacad(19)	as, very, so, terribly, exceptionally, perfectly, extremely, quite, generally		gets, get, too	street, the, a, is, be, some	enough
usephem(12)	truly, always, sound		get	a, re, street, is, this, s, the	enough
usbooks(32)	very, so, pretty, as, real, tough, damned, plenty, damn, extremely, particular(ly), right, getting, quite		was, too, were, get, not, nearly,	a, be, are, street, is, being, some, called, been, looking	enough
usnews(22)	very, as, so, actually, seemingly, pretty, probably		get, was, become	the, a, are, being, plain, street, some, is, am, called, be	enough
npr(23)	very, so, as, really, pretty, quite, probably, real		too, was, get, not, were	a, are, be, called, street, no, those, these	obviously enough
usspok(9)	very, as		not	a, the, some, have, be	enough

Note: Although semantic prosody is basically a determination of whether a collocation is positive or negative, I thought that these two options were too limiting and sought to introduce a neutral evaluation. I also tried to consider the effect grammatical words had on evaluation. However, this was leading me away from the question I was trying to answer so I abandoned for now this particular inquiry. I will pick up on it another time.  
I have included this data to support some of the points made in section 3.2.

Appendix 5: Learner Survey Results

Survey about the word **smart**

Remember there are no wrong answers.

[Do page 1 first.]

1. Read the following sentences and circle whether you agree or disagree.

Example: Look at the <u>smart</u> sky.	Agree	Disagree
<b>1. She is <u>smart</u>.</b>	<b>Agree (39)</b>	<b>Disagree (1)</b>
2. That is a <u>smart</u> blue dress.	Agree (16)	Disagree (24)
3. I want to buy a <u>smart</u> car.	Agree (23)	Disagree (17)
4. The weather today is <u>smart</u> .	Agree (10)	Disagree (20)
5. Yesterday I went to this really <u>smart</u> cafe in Namba.	Agree (12)	Disagree (18)
<b>6. Kitajima is a <u>smart</u> swimmer.</b>	<b>Agree (37)</b>	<b>Disagree (3)</b>
7. That is a <u>smart</u> new building.	Agree (14)	Disagree (26)
8. That is a <u>smart</u> tree.	Agree (21)	Disagree (19)
<b>9. She is a <u>smart</u> student.</b>	<b>Agree (38)</b>	<b>Disagree (2)</b>
10. The military are using <u>smart</u> bombs.	Agree (13)	Disagree (27)
11. I want to buy a <u>smart</u> phone.	Agree (22)	Disagree (18)
12. Don't get <u>smart</u> with me.	Agree (15)	Disagree (25)
<b>13. You are looking very <u>smart</u>.</b>	<b>Agree (33)</b>	<b>Disagree (7)</b>
14. He asked for a <u>smart</u> ice cream.	Agree (2)	Disagree (38)
15. That was a <u>smart</u> movie.	Agree (18)	Disagree (22)

Appendix 5: Learner Survey Results (continued)

[Do this page **second**.]

2. Check if you think **smart** in these sentences means intelligent, body shape/size, or style.

**Remember there are no wrong answers.**

	intelligent	body shape/size	style
She is <u>smart</u> .	20	10	9
Kitajima is a <u>smart</u> swimmer.	13	17	9
She is a <u>smart</u> student.	33	4	2
You are looking very <u>smart</u> .	9	12	18

3. When you use the word **smart** which meaning do you use?

**Remember there are no wrong answers**

**body shape/size:** always (9) most of the time (13) sometimes (7) rarely (7) never (2)

**style:** always (12) most of the time (8) sometimes (9) rarely (7) never (1)

**intelligent:** always (4) most of the time (10) sometimes (9) rarely (13) never (1)

Thank you for your time!

Appendix 6 a: British corpora *intelligent R 1 nouns*

Corpus	animates: human	animates: non-human	behaviour	inanimates
<b>British</b>	man, people, woman, person, women, men, <i>agents</i> , player, girl, face, <i>agent</i> , consumer, child, reader, footballer, boy, lad, adults	life, beings, animals, creatures	behaviour, debate, use, questions, conversation, way, interest, decisions	finance, machines, <i>agents</i> , pads, <i>agent</i> , football, robots, environments, software, transport, thing, production
brbooks	man, woman, people, person, men, child, girl, they, youngster, women, caretakers, persons, adult, guy, eyes, face, Germans, girls	creatures, beings, animals, race	behaviour, questions, interest, use	force, terminal, connection, techniques
brmags	woman, people, man, women, lady, guy, person, student	life	approach, interest	lyrics
brepheh	children, parent, adults, self, person	animals	insight, knowledge, hiss, merge, updating, argument, meditation, behaviour, monitoring, hearing, answer, questions	systems, water, environment, periodical, font, instrument, interface, graphic, versions, heaters, publications, gain, software, word, display treatment
indy	people, person, consumer, man, woman, women, girl, face, she, men, politician, reader, agents child, player	life, martians, beings, species, animals	conversation, running, probe, discrimination, coverage, planning, question, playing	production, devices, summary, machines, novels, guide, houses, pop, rock
bbc	people footballer, academic, man, pedestrian, babies, fellow, ones, child, officer, children, we, they	creature, creatures, animals, animal,	use, guesswork, thinking, dialogue, interest, response	novel, telescope, computer, campaign
wbe	<i>agents</i> , individual	beings	choices, decisions call, compromise, spending, voting, competition	network, system, toys, networks, property, buses, island, screen automated, mix, organisation, techniques, organisation, <i>agents</i> , building, communicators, civilization, imitation, desktop, ads, motors, character, cards, card, enterprise, features, forms, type, materials

newsci	<i>agent, agents</i> ; people, man, person	life, beings, animals, species, being, angels	behaviour, behaviours, manner, choices, search, account, response,	pads, machines, robots, machine, <i>agent, agents</i> , software, transport, , island, computer, pad, buildings, prosthesis, leg, versions, microwave, floor, culture, road, conservation, materials, car, building, computers, set, cells, pallet, cursors, nightflight
sunnow	man, player, woman, person, people, girl, footballer, men, players, adults, youngsters, lad, fellow, leader, boy, women, politician, <i>driver</i> , guy, child, girls, striker	life	lay-off/layoffs, chip, passing, display, pass, running	football, finance, thing, ball, <i>driver</i>
guard	people, man, <i>agent, agents</i> , woman, women, person, children, men, adult, boy, students, lad, reader, mayor, adults, opponents	life, animals	response, <i>production</i> , questions, conversation, discussion	<i>agent, agents, production</i> , play, turbine, robots, comedy, ideas, football, architecture
econ	<i>agents</i> , man, reader, people, men, women, human, he, Muscovites	beings	debate, opinion, use, interest, way, eclecticism, messaging, irreverence, illumination, browsing, interrogation, guesswork, discrimination	<i>agents</i> , machines, transport, vehicle, computers, book, government, tower, biography, island, policies, abridgement, transponders, communicators, commentaries, lavatories, lyrics
times	man, people, woman, person, women, player, boy, reader, agent, man, she, footballer, politician, girl	life, beings, animals, dinosaurs	debate, movement, way, promptings, guesses, reading	environment, thriller, novel, thing, football, machines, buildings, forms, software, piece
brspoke	people, person, man, woman, he, girl, readers, engineers, listeners, player, lad, lady, men	life, beings, birds	conversation, sounding, responses, orders, accent, sitting	terminals, terminal, spasms, hunk

Appendix 6 b: American corpora *intelligent R I* nouns

Corpus	animates: human	animates: non-human	behaviour	inanimates
American	people, man, woman, men, person, women, guy, consumer, girl, eyes, students, he	life, beings, alien, species, creatures, animals, animal	plotting, choice, questions, use, decisions, behaviour, thought, way, guessing	machines, pitch, subjects, design, film, energy
usacad	people, subjects, woman, individual, students, infants, citizens, man, children, sculptor, chef, businessman, lover, poet, observer, historians	species	behavior, use, functioning, decisions, thinking, coaching, objection, reporting, judgments, opinions, anti-communism	
usephem	folks, people, reporters, lover, lady	creatures, breeds	choice, guessing, conversation, decisions, tinkering, songwriting, accompaniment, feast, discussion, decision, approach, sense	pitch, alternative, function, systems, communicator, synthesizers, charging, keyboard, machines, vehicles, thing, investment, design, news, system, features, account
usbooks	people, man, woman, men, women, person, consumer, <i>racés</i> , girl, laymen, eyes, face,	life, beings, alien, species, animals, creatures, animal, entity, <i>racés</i> , being, dog,	questions, thought, choices, judgements, guesswork	machines, energy, computers, design, money, skincare
usnews	businessman, minister, adults, players, man, people	beings, life	plotting, adaptation, retort, environmentalism, commentary, manner, judgment, perspective, buying, management, work	film, automation, peace, machines, community
npr	he, man, people, woman, person, men, participant, bride, electorate, viewers	life, walrus, beings, spiders, mammals, creature, alien	choice, decision, way, interpretations, conversations, dictatorship	communications/communicators, thrillers, epic, software, signals
usspok	adult, kids, people		guessing, ways, way	

Note:

- Both *judgement* and *judgment* are present in the American corpora.
- Words that have multiple meanings are in *italics* i.e. *racés*
- All variants of truncated words in the t-score picture separated by a / . i.e. communicat is presented as communications/communicators

Appendix 7 a: Two-adjective (with the conjunction *and*) survey with woman/women and man/men

JJ+and+JJ+woman women 626 occurrences	JJ+and+JJ+man men 1,081 occurrences
more and more NODE	homosexual and bisexual NODE
beautiful beautiful NODE	gay powerful NODE
young <b>intelligent</b> NODE	<b>intelligent</b> more NODE
<b>intelligent</b> white NODE	good honest NODE
strong independent NODE	more <b>intelligent</b> NODE
attractive attractive NODE	tall heterosexu NODE
black black NODE	black decent NODE
white talented NODE	rich honourable NODE
aggressive glamorous NODE	warm gay NODE
famous asian NODE	strong gentle NODE
energetic older NODE	young white NODE
charming charming NODE	decent sensitive NODE
educated lesbian NODE	wealthy straight NODE
tall influenza NODE	honest charming NODE
good pregnant NODE	brave evil NODE
talented patient NODE	wise dangerous NODE
ambitious powerful NODE	shy good NODE
elderly poor NODE	gentle handsome NODE
weak outspoken NODE	evil friendly NODE
capable desirable NODE	straight interestin NODE
bright vivacious NODE	old kind NODE
younger resourcefu NODE	great likeable NODE
powerful sensual NODE	ambitious hispanic NODE
rich assertive NODE	powerful thoughtful NODE
old feeble NODE	honourable selfish NODE
articulate courageous NODE	modest competent NODE
heterosexuhispanic NODE	sick reasonable NODE
lively witty NODE	big violent NODE
passionate selfish NODE	thoughtful old NODE
clever energetic NODE	lesbian ambitious NODE
honest elegant NODE	clever generous NODE
lovely wealthy NODE	brilliant attractive NODE
brilliant clever NODE	quiet successful NODE
active bitter NODE	dangerous private NODE
warm pretty NODE	successful unassuming NODE
profession successful NODE	large lovable NODE
successful bad NODE	open wiser NODE
single motherly NODE	white courageous NODE
large impression NODE	sane cultivated NODE
big anorexic NODE	polite arrogant NODE
beguiling obese NODE	cruel energetic NODE
obese bisexual NODE	relaxed humble NODE
feisty manipulati NODE	weak influenza NODE
veiled contented NODE	sensitive healthy NODE
forceful serene NODE	proud angry NODE
courageous literate NODE	violent quiet NODE
hispanic articulate NODE	bright black NODE

Appendix 7 b: Two-adjective survey with woman/women and man/men

JJ+JJ+woman women 4,531 occurrences	JJ+JJ+man men 8,903 occurrences
young young NODE	young young NODE
other old NODE	other old NODE
beautiful black NODE	tall black NODE
old haired NODE	old gay NODE
more pregnant NODE	grand haired NODE
attractive white NODE	little little NODE
tall asian NODE	angry white NODE
poor older NODE	big military NODE
strong single NODE	nice bearded NODE
dark little NODE	dark green NODE
small battered NODE	more hard NODE
single profession NODE	handsome older NODE
big beautiful NODE	dirty big NODE
non elderly NODE	small bodied NODE
several blonde NODE	poor thin NODE
white other NODE	white handsome NODE
naked muslim NODE	short eyed NODE
large breasted NODE	bright key NODE
fat attractive NODE	grey strong NODE
<b>intelligent intelligent</b> NODE	several asian NODE
grey naked NODE	able holy NODE
lovely fat NODE	quiet single NODE
elderly eyed NODE	fine rich NODE
healthy pretty NODE	haired albanian NODE
black skinned NODE	large fat NODE
short unmarried NODE	rich local NODE
pretty independen NODE	thin wise NODE
red confident NODE	strong mannered NODE
thin hearted NODE	good elderly NODE
older albanian NODE	decent bald NODE
nice mature NODE	fat blind NODE
bright younger NODE	healthy muslim NODE
tiny wild NODE	strange wiry NODE
wonderful poor NODE	bearded blond NODE
little wise NODE	lonely <b>intelligent</b> NODE
successful thin NODE	sad powerful NODE
haired tory NODE	wise heterosexu NODE
good strong NODE	elderly straight NODE
unmarried powerful NODE	grumpy quiet NODE
sexy adult NODE	gentle poor NODE
vulnerable successful NODE	ambitious dark NODE
ordinary catholic NODE	<b>intelligent</b> balding NODE
normal bodied NODE	mild skinned NODE
shy heterosexu NODE	clever hearted NODE
ethnic vietnamese NODE	sick homosexual NODE
privileged southern NODE	beautiful honest NODE
independen busted NODE	older bespectacl NODE
slim childless NODE	black blooded NODE
talented slender NODE	brave muscular NODE
silly victorian NODE	earnest good NODE

Appendix 8 a: Search scripts and concordance lines for adjective (JJ). *intelligent*, woman/women  
 JJ+intelligent+woman

when she chose, was an acute, intelligent woman. <p> But you didn't know time. <p> While Judith, a brisk, intelligent woman with ambitions of her own, was a hard case, a demanding intelligent woman with a lot of mouth on especially such a feisty, funny, intelligent woman. But Alex is going to need as a title for the independent, intelligent woman of 25-35 and beyond. The afflicted. I'm a perfectly sane, intelligent woman and that's what scares the described her as 'a sharp, intelligent woman". Not much chance, then, up a bit." <p> She was a strong, intelligent woman in her late fifties. Some and Miss Manners, " a stylish, intelligent woman who brought up her the Jamie household. A thoughtful, intelligent woman, she appears to be one of nothing about this warm, intelligent woman that would make you each other. Audi is a wonderful, intelligent woman. Her husband called her

JJ+intelligent+women

Woman's Hour. She talks of busy intelligent women who need to be kept that plenty of funny, literate, intelligent women might choose to focus say these things; it is mature, intelligent women -- like funny, quirky Anne metropolitan, feminist, witty, intelligent women. For Viva! 963 AM

JJ+and+intelligent+woman

talking, immensely energetic and intelligent woman, is already fired up with fall of Lily Bart, a lovely and intelligent woman with every prospect of

but she was a sophisticated and intelligent woman who he believed had early promise as a strong and intelligent woman, turns out to be from a 36-year-old successful and intelligent woman. But then Maria Bentley She was a self-sufficient and intelligent woman, who prided herself on her

**JJ+and+intelligent+women**

disappoint all those delicious and intelligent women who've called you." And of public schools. Strong and intelligent women, who in a better system intelligent+and+JJ+woman

<p> For example, another obviously intelligent and articulate woman wrote to me health status examination <p> An intelligent and energetic woman, Tiffany batters! My mother was a highly intelligent and exceptional woman who doted confession, from this strikingly intelligent and fluent woman, that she is a a more rounded picture of an intelligent and generous woman who, if she 16 November 1992 <p> When an intelligent and mature woman, who is a , of cancer, was a tireless, highly intelligent and passionate woman who made a dumped-on victim, but an ordinary, intelligent and pleasant woman. The obvious comes across as an exceptionally intelligent and resourceful woman whose and thin. <p> AN UNASSUMING though intelligent and witty woman, long content to

**intelligent+and+JJ+woman**

of staying single. For years three intelligent and discerning women shared his Thornton. Both are strong-minded, intelligent and forthright women, who argued divorcee) I know well, both very intelligent and practical women, changed

vlcds is the number of extremely intelligent and sensible women I know who intelligent+JJ+woman

fit from a description from an intelligent, astute woman who was there. " in creation. What this slender, intelligent, creative woman thought of this I think she is a very pleasant, intelligent, gracious woman with most of was struggling to explain why an intelligent, independent woman stays with a within the family, especially an intelligent, sensitive woman lamenting lost somewhat difficult one. Beautiful, intelligent, sexy woman, very articulate. We Cave describes as a 'very brave, intelligent, sturdy woman who just gets on

intelligent+JJ+women

with me. I know so many attractive intelligent able women in their thirties and that they watch pornography, and intelligent, artistic women boast of being work presents strong, independent, intelligent, capable women characters trying romantic needs? And why do so many intelligent, desirable women still humiliate presenting images of confident and intelligent older women, the magazines are suggesting that these independent, intelligent, opinionated women represented a light of these relationships with intelligent, resourceful women, and her do you know? I'm talking about intelligent, sensitive women; ones you like is of a group of successful, intelligent, strong women getting together to the proletariat, and where intelligent, successful women feel that late

Appendix 8 b: Search scripts and concordance lines for adjective (JJ), *intelligent*, man/man

JJ+intelligent+man

because he is such an amiable, intelligent man, but as much as Henman He was by every account a brave, intelligent man whose career had been mostly Babangida. He was a forceful, intelligent man, trying to put Nigeria's gruff blustering a kind-hearted, intelligent man who deeply respected his me to do that." <p> A likeable, intelligent man, Stefanki does not appear to models is no way for a mature, intelligent man to behave. Then he'll unable to believe that the quiet, intelligent man from a good family has an MP last week as 'the stupidest intelligent man in the northern hemisphere". meet a more attentive, thoughtful, intelligent man. Charming is the word the reduced by a stroke from a vital, intelligent man to a bedridden misery.

JJ+intelligent+men

divide between these sincere, intelligent men could scarcely be wider. Yet towards these hardworking, intelligent men and women who make our power

JJ+and+intelligent+man

why Neville, an extremely able and intelligent man, has formed this most parole, he was an articulate and intelligent man whose autobiographical Soul it was to have this attractive and intelligent man care for me. <p> But shortly because he seems a calm and intelligent man. But running China's age, a courteous, cultivated and intelligent man, an extremely hard-working

a decision from an honest and intelligent man who knows no robotics and him to be a very interesting and intelligent man. The conversation flowed that Mr Milosevic was a proud and intelligent man. He was doing his job,

#### JJ+and+intelligent+men

staff must be composed of able and intelligent men possessing the courage to parole, he was an articulate and intelligent man whose autobiographical Soul so often by apparently earnest and intelligent men - some of them, strange as one of the most knowledgeable and intelligent men in the field. Sometimes you gods want to turn such nice and intelligent men as Crosland and Mr to strong, brave, rational, and intelligent men." According to

#### intelligent+and+JJ+man

of lay officials in government. An intelligent and able man, a political as they were hysterical. An intelligent and amiable man, who was for our host at times. He's an intelligent and charming man." <p> I'm sure away are they, sir?" Huckfield, an intelligent and earnest man, persisted. <p> plural marriage. Green, a highly intelligent and eloquent man, continues to business. Dobbo, undoubtedly an intelligent and engaging man, is unlikely to must have been the most charming, intelligent and generous man. He did no oppressors. He was a civilised, intelligent and good man. He sought peace s behalf. She said: 'He was an intelligent and loveable man who always Johnson, however, was a tough, intelligent and lucky man. Exactly how to the title character--a deeply intelligent and reflective man compelled by

Lords. He said: The father is an intelligent and sensible man. He understands a book about his life in rugby. An intelligent and witty man, he could talk  
intelligent+and+JJ+men

of fatigue. He has the company of intelligent and agreeable men of greater of fuss by some good-looking, intelligent and articulate men. It sounds than you!" <p> It is the custom of intelligent and competent to marry women prime minister since the war. intelligent and powerful men accepted picture of generous motives by 'intelligent and reasonable men", saying 'the  
intelligent+JJ+man

city. He lived by the day. An intelligent, able man-he was in the gutter. Roger Seelig was when he - an intelligent, articulate man claimed he could but behind the guise lies a highly intelligent, cultured man, who is just as this duty Kesselring- an intelligent, genial man known as ' smiling was crazy. So did Chernin - a very intelligent little man, mackenzie was A good man wrote this book, an intelligent, mature man. He taught me a Line, Fisher struck Nichols as an intelligent, reasonable man. He said that,  
intelligent+JJ+men

hidden cameras were used by two intelligent, articulate men - one black and the Himbo is focused on you. intelligent, dynamic men don't have time to The New Criterion was created for intelligent, independent men and women, like while 'many broad-minded, intelligent professional men and laymen " remain friends for ever. Some intelligent young men, like Robin Douglas-

# A Bank of English Corpus Study of *smart* and *intelligent*

Michael IWANE-SALOVAARA

## **Abstract**

This article discusses intuition, collocations, semantic prosody, and lexical priming before examining how “smart” and “intelligent” are used in the Bank of English corpus. Comparisons are made between British and American usages and their R 1 noun collocates as well as a brief look at how “smart” is used in Japan. There is further discussion on gender differences affect how “intelligent” is used in the L 1, L 2 or L 3 position when reference is made to woman, women, man or men. The final discussion is a suggestion on how rare collocations could be used.