

## CHAPTER THREE

### A CASE STUDY OF *WET*, *DRY* AND RELATED ADJECTIVES

#### 3.1 Introduction

This case study looks at the antonyms *wet* and *dry* and several near-synonyms of these two adjectives: *arid*, *parched*, *damp*, *dank*, *moist*, and *humid*. The main question I will focus on is why, out of this set of eight adjectives, only *wet* and *dry* are considered to be antonyms. This question was raised by Gross, Fischer, and Miller (1988) in their study of the mental representation of adjectival meanings. Gross, Fischer, and Miller say that a single adjectival concept can usually be expressed by many different adjectives. In WordNet, these semantically related adjectives are organized into "synsets" (sets of synonyms); for example, WordNet lists many adjectives which express the concept of wetness, including *damp*, *drenched*, *soggy*, and *wet*, and many others which express the concept of dryness, including *arid*, *dehydrated*, *dry*, and *parched*. A complete list of the synsets of *wet* and *dry* in WordNet are shown in Figure 13 below. Although wetness and dryness are concepts that are opposite in meaning, it is not the case that all of the adjectives in the *wet* synset are antonyms of all of the adjectives in the *dry* synset. That is, although pairs such as *parched/soggy* and *arid/soaked* show some kind of semantic contrast, they are not felt to be antonyms; instead, most people only identify *wet* and *dry* as antonyms. The WordNet model accounts for this with its distinction between "direct" and "indirect" antonyms. As Gross, Fischer, and Miller (1988) explain it (section 1.4.2.1 above), *wet* and *dry* serve as "focal" adjectives around which the synsets cluster, and they are therefore linked

directly as antonyms. The other adjectives in the synsets participate in antonymy indirectly through their associations as synonyms of *wet* or *dry*.

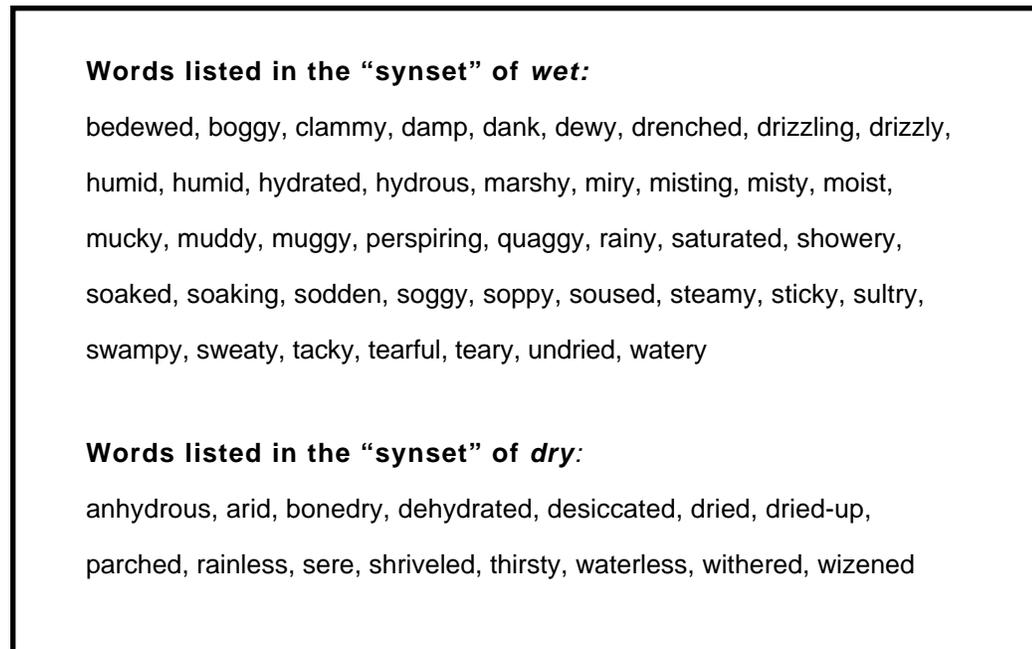


Figure 13. Synonyms of *wet* and *dry* in WordNet

How do *wet* and *dry* come to be chosen from all of these adjectives as the focal points for the antonymic relation? What is special about these two adjectives? As discussed in sections 1.1.4 and 1.1.5, Charles and Miller (1989) and Justeson and Katz (1992) believe that the mental association of the two antonyms can be explained by co-occurrence: in this case, the claim would be that language learners come to associate *wet* and *dry* because they encounter the two adjectives used together in a single sentence more frequently than would be expected by chance. While pairs of near-antonyms such as *wet* and *arid* contrast in meaning, they are not felt to be antonyms because people

rarely hear *arid* and *wet* used together.<sup>1</sup>

As discussed above, this explanation does not seem to be complete, however, because it makes no use of the knowledge people have about the meanings of the adjectives involved. I would argue that people do not use *wet* and *dry* together just because they have often heard them used together before, but because in many different situations in which they want to express the contrasting concepts of wetness and dryness, they find *wet* and *dry* to be the most useful adjectives. In other words, they do not use *wet* and *dry* together as a conditioned reflex; rather, they choose to use *wet* and *dry* based on their mental representations of the meanings of the various adjectives related to the concepts of wetness and dryness. The question thus becomes what is special about the words *wet* and *dry* that makes them the "focal" adjectives of all the adjectives related to these concepts? In this case study, as in the last one, I show that shared semantic range goes a long way toward explaining this--*wet* and *dry* have more shared semantic range than pairs such as *wet/arid* or *parched/soggy*.

In this case study, there are a few new factors which must be considered, factors which did not play a role in the behavior of *big*, *little*, *large* and *small*. The first of these involves the "intensity" of the state described by the adjective; some of the adjectives in this study seem to describe more or less extreme intensities of wetness or dryness than others, e.g., *arid*, which describes

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<sup>1</sup>Oddly enough, I have found no studies which actually measured the co-occurrence rates of near-antonyms. Justeson and Katz, for example, looked at the co-occurrence rates for antonym pairs such as *wet* and *dry*, but they did not look to see whether pairs such as *wet/arid* and *soggy/parched* co-occurred in their corpus; therefore, we cannot be sure that *wet* and *dry* actually co-occur at a higher rate than pairs of near antonyms such as *wet/arid*. I did not have the opportunity to measure these rates in the *New York Times* corpus, and this question remains open for further study.

something that is very dry; and *damp*, which describes something that is slightly wet. Differences in intensity did not play a role in the previous case study because neither *large* or *big* (or likewise *small* or *little*) describes a more or less extreme value of size. The other factor is relative frequency; while *big*, *little*, *large* and *small* are all very commonly used words, the adjectives in this case study vary in familiarity from the very frequently used *wet* and *dry* to the rare *parched* and *dank*. The effect of word frequency on antonymy is discussed in section 3.2. below, and the effect of differences in intensity is considered in the discussion of the semantic ranges of individual adjectives which makes up the remainder of this chapter.

### 3.2 Word frequency and antonymy

Among all the adjectives related to wetness and dryness, *wet* and *dry* are clearly the most familiar. According to *LDOCE*, the adjective *wet* is among the 2000 most frequent words in spoken English and among the 3000 most frequent words of written English, while *CCED* lists the word *wet* (the verbal and adjectival uses combined) as being among the 1500 most frequently occurring words. As for *dry*, *LDOCE* lists the adjective *dry* among the 2000 most frequent words of both spoken and written English (the verb *dry* is also very common--among the 2000 most frequent words in spoken English and the 3000 most frequent of written English) while *CCED* lists *dry* (the adjective and verb forms together) as among the 1200 most common words.

The other synonyms of *wet* and *dry* listed in Figure 13 are not nearly as common as *wet* and *dry*. *LDOCE* does not list any of them as being among the most frequent 3000 words. As for the other adjectives examined in this case

study--*moist, damp, humid, dank, arid, and parched*--CCED does not list any of them among the 1500 most common words, although it does list *damp* among the 3200 most common words and *arid, humid, and moist* among the 8100 most common words. *Dank* and *parched* are quite uncommon and do not occur within the most common 8100 words. In the *New York Times* corpus, too, *wet* and *dry* occurred more frequently than the other adjectives. The adjective *dry* occurred 2147 times, compared to 111 occurrences of *arid* and 47 of *parched*; the adjective *wet* occurred 685 times, compared to 402 times for *moist*, 145 for *humid*, 48 for *dank*, and 43 for *damp*.

These numbers show us that the antonyms *wet* and *dry* are more familiar than the other adjectives related to wetness and dryness, but just what is the link between antonymy and frequency? Justeson and Katz (1992) note that a word's frequency appears to affect the likelihood that the word will have an antonym:

Among the most frequent 1,000 adjectives in the Brown Corpus, the proportion of adjectives that have solid antonyms decreases from about 50% for the 100 most frequent adjectives to about 4% for the 200 least frequent adjectives among the top 1000. (Justeson and Katz 1992, 182)

They give two possible explanations for this. The one which they prefer, because it fits in better with their theory that antonyms are learned through co-occurrence, is that frequency directly affects the learning of antonyms by affecting the chances of encountering co-occurrences of antonyms--if an adjective is not used very often, language learners rarely have a chance to hear it used, let alone to hear it used together with a potential antonym; thus they do not encounter enough co-occurrences of rare adjectives to form antonymic associations.

However, Justeson and Katz acknowledge that another explanation is possible: A word's frequency and its ability to have an antonym might both result from its basic meaning. As they put it:

[S]imple, one-dimensional constructs tend to be more widely applicable and thus higher frequency than more complex adjectives for which no clear conceptual opposite may exist. (Justeson and Katz 1992,182)

It is not clear what Justeson and Katz mean by "simple" as opposed to "complex" constructs,<sup>2</sup> but it may be that *wet* and *dry* are simpler than the other adjectives in this case study in that they lack aspects of meaning which are specified for the other adjectives. As will be shown in the following sections, the other adjectives all have either positive or negative connotations, some of them specify temperature as well as wetness, some of them specify a particular degree of wetness, and some include information about the manner in which something becomes dry. Since the meanings of *wet* and *dry* lack such specifications, they can be used in a wider range of situations, and this in turn may lead to their increased frequency.

### 3.3 Data for examining the meanings of the adjectives

From the large set of adjectives related to *wet* and *dry* listed in WordNet,

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<sup>2</sup>Elsewhere in the same paper, they explain "simple" and "complex" in this way:

On a semantic level, adjectives with the simplest semantic structure, definable by a region along a single semantic dimension, have clear conceptual opposites along the same dimension, so that the existence of an antonym is fairly straightforward. Other adjectives have much more complex or inexact meanings that entail or invoke a variety of dimensions, so that conceptually opposed meanings are more intricate or even difficult to isolate. (Justeson and Katz, 1992, 182.

Unfortunately, they do not give any examples. Presumably, the pairs of antonyms they discuss in their study, including all pairs of antonyms identified by Deese (1965) listed in section 1.4.1 above, are examples of "simple" adjectives, but it is not clear which kinds of adjectives are "complex."

I selected several fairly common ones to examine in this case study: *wet* and *dry*, of course, and also *damp*, *moist*, *dank*, *humid*, *arid*, and *parched*. I only chose adjectives that occurred frequently enough that I could get data about their use, so very uncommonly used adjectives such as *sere* and *hydrous* were not considered. I also eliminated many adjectives that were synonymous to *wet* or *dry* only when used in a limited context, e.g., *rainy*, which could only be considered synonymous with *wet* when talking about *weather*.<sup>3</sup> As in the previous case study, my analysis of the meanings of the eight adjectives is based on the definitions and usage information from the learners' dictionaries as well as on adjective-noun co-occurrence data from the *New York Times* corpus. This was supplemented by examples of the adjectives in context taken from books available in electronic form. I used these additional sources to find further examples of the rarer adjectives and also examples of the predicative uses of the adjectives.<sup>4</sup> In general, the predicative uses of the adjectives are the same as the attributive uses; the few exceptions are mentioned below.

### 3.4 The meanings of adjectives related to wetness

#### 3.4.1 Wet

As mentioned above, *wet* is the most common of the adjectives which describe *wetness*; it is not surprising, then, that the learners' dictionaries list

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<sup>3</sup>Most of the adjectives which seemed obviously limited in meaning were derived adjectives. For example, *boggy*, derived from *bog*, can only be used to describe *wet land* (not *weather* or *clothes*, for instance); *rainy*, derived from *rain*, can only be used to describe *weather*.

<sup>4</sup>As explained in section 1.7, the program which was used to gather data from the *New York Times* could not pick out predicative uses of these nouns. At the time my analysis was carried out, I did not have access to the corpus to find and examine examples of the adjectives used predicatively, so I used other sources which were available, mainly novels in electronic form available on the Internet through Project Gutenberg.

several distinct senses for it, as well as giving many compound words and idiomatic phrases such as *wet blanket* and *wet suit*. *LDOCE*, for example, lists the following senses under its entry for *wet*:

- (1) **1 >WATER/LIQUID<** covered in liquid or full of liquid: *wet grass; My shirt's all wet!* [+ **with**] *His face was wet with sweat.*; **get (sth) wet** *Try not to get your feet wet*; **wet through** (=extremely wet) | **soaking/sopping/dripping wet** (=extremely wet) *soaking wet socks*  
**2 >WEATHER<** rainy: *wet weather; It's very wet outside.*  
**3 the wet** **a)** rainy weather *come in out if the wet.* **b)** wet ground *Don't trail your coat in the wet.*  
**4 >PAINT/INK ETC<** not yet dry: *Careful, the paint's still wet.*  
**5 >PERSON<** **a)** *BrE infml* unable to make decisions or take firm actions: *Don't be so wet! Just tell them that you don't want to go.* **b)** **be all wet** *AmE Infml* to be completely wrong  
**6 wet behind the ears** *informal* very young and without much experience of life

The definitions in *OALD* and *CCED* are similar, listing senses equivalent to all of those in 1-6 above; however, they add a few more specific senses. Both *OALD* and *CCED* say that *wet* is used in British English in a political context to refer to politicians, usually Conservatives, who support moderate policies but not extreme ones; this meaning is clearly related to the one in sense 5a in (1). *CCED* also lists an additional sense, a more specific meaning derived from *wet* in sense 1: "If a child or its nappy or clothing is *wet*, its nappy or clothing is soaked in urine."

While dictionary definitions like these contain a lot of information, interpreting them is not always as straightforward as it may seem at first. Consider sense 1 of the *LDOCE* definition, "covered in or full of liquid." What kinds of things does this actually apply to? After all, the ocean floor is covered in liquid but it is not usually called *wet*; likewise, a bottle of orange juice is full of

a liquid but it would not be called a *wet bottle* unless there was also some liquid on the outside of the bottle.

This is where the corpus data can help; the mutual information statistic used on the *New York Times* corpus picks out nouns which are typically modified by an adjective, and these nouns help in interpreting the dictionary definition. Consider, for example, the 43 nouns that occurred significantly often with *wet* in the *New York Times* corpus, listed alphabetically in Figure 14 below.<sup>5</sup>

bag, bar(s), boots, bottom, clay, climate, cloth, concrete, conditions, eyes, feet, field, finger, fly(-ies), footing, grass, ground, hair, handkerchief, harvesting, land, leaves, look, May, meadow, moss, nurse, paint, patterns, plaster, road, sand, season, snow, soil, sponge, spot(s), spring, suit(s), summer, Sunday, towel(s), track(s), weather

Figure 14. Nouns occurring significantly often with *wet*

With most of these nouns, the meaning of *wet* falls under senses 1, 2 or 4 of the *LDOCE* definition. Most of the remaining examples (e.g., *wet suit* and *wet look*) are idiomatic or special uses of *wet*. There are no nouns illustrating senses 3 or 6 of the *LDOCE* definition because sense 3 is itself a nominal use (the wet), and because sense 6 is a phrase (*wet behind the ears*) that is used

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<sup>5</sup>This list contains all the words that had a mutual information value with *wet* of 3 or higher. As in the previous chapter, singular and plural forms are combined unless there is a reason to distinguish them.

predicatively <sup>6</sup> *Wet* in the senses described in 5 of the *LDOCE* definition does not seem to occur in this corpus--*wet* does not occur significantly often with any nouns describing people--but that is not surprising given that these senses are informal. The *New York Times* corpus is relatively formal in style, and since it is American English, sense 5a should be seen rarely, if at all.

The nouns are useful for better understanding what *wet* means. To begin with, "full of a liquid" seems to mean 'having a liquid absorbed inside it'; this is the meaning of *wet* with several nouns from the *New York Times* corpus: *bag*,<sup>7</sup> *cloth*, *handkerchief*, *sponge*, and *towel(s)*. These nouns all describe kinds of cloth, and cloth absorbs water.<sup>8</sup>

With nouns that name parts of the body (*bottom*, *eyes*, *feet*, *finger*, and *hair*), *wet* does not mean 'full of liquid'. The body naturally contains a large amount of water, but this water is not what is being referred to by *wet*, perhaps because this naturally occurring moisture has not been absorbed as it is in the case of wet cloth. (Compare this with the use of *moist* in *moist skin*, described in section 3.4.2 below). Instead, *wet* with body part nouns indicates that there is more liquid on the surface of the body part than is normally found; eyes are naturally somewhat wet, but *wet eyes* are eyes filled with tears; the skin of the feet also naturally contain some moisture, but *wet feet* are feet that are wet on the surface from being immersed in water or having water poured or splashed on them. *Wet* seems to work the same way with nouns that name plant

<sup>6</sup>Sense 3 shows the adjective being used as a noun, and sense 6 is an entire phrase; these uses of an adjective were not picked out by the program.

<sup>7</sup>*Wet* occurred twice with *bag*, each time with another modifier that helps us to see what kind of *bag* is being described: a *wet burlap bag* and a *wet canvas bag*

<sup>8</sup>This is probably why a bottle full of orange juice is not called *wet*--the water is not absorbed into the glass.

materials such as *grass*, *leaves*, and *moss*; when plants are alive, they naturally contain some water, but this water is not referred to by *wet*. Instead, *wet grass* is grass that has drops of water on the surfaces of its blades. However, if the *moss* or *leaves* are already dead and dried out before becoming *wet*, then they may be described as 'having a liquid absorbed inside' when they are *wet*. In other words, *wet leaves* on the ground in autumn are probably dead leaves that are soaked through with water, but *wet leaves* on trees in the summer are leaves that have a layer or drops of water on their surface from rain or dew.

<b>Cloth-like Materials</b> burlap bag cloth handkerchief sponge towel	<b>Plant Materials</b> grass leaves moss	<b>Parts of the Body</b> bottom eyes feet finger hair	<b>Materials Which Dry Out</b> clay concrete paint plaster
<b>Soil and Areas of Land</b> field ground land meadows roads soil tracks	<b>Heads of Idioms</b> bar fly harvesting look nurse suit	<b>Weather/ Periods of Time</b> climate May season spring summer Sunday weather	<b>Predicative Uses</b> <i>with pronouns:</i> I, he, you,  <i>with other types of nouns:</i> eyes, hair grass, leaves pillow

Figure 15. The semantic range of *wet*

As shown in Figure 15 above, several nouns which occur with *wet* in the *New York Times* corpus describe land: *field*, *ground*, *land*, *meadows*, *soil(s)*; *roads* and *track(s)* can describe paths over areas of land. With these nouns, *wet* could mean either 'covered with liquid' or 'having absorbed liquid'; that is, a

field can be described as *wet* if it is actually under a layer of water, as during a flood, or if the soil of the field is saturated with water but does not have any water on its surface. (Compare with *moist soil* or *damp ground*, in which water is absorbed into the ground but does not form a layer on the surface). However, if the land is a kind of land that is usually always under water, e.g., a lake bed or ocean floor, it is not usually called *wet*. Perhaps this is because it would be redundant--a river or ocean is necessarily *wet*, so there is ordinarily no reason to describe it as *wet*.<sup>9</sup> *Wet boots* is another combination in which *wet* could mean either 'covered with liquid' (as with rubber rain boots, in which water does not soak into the surface) or 'having absorbed water' (as with untreated leather boots, after having walked through water or snow).

With other nouns, such as *clay*, *concrete*, *paint*, and *plaster*, *wet* is describing materials which contain liquid when they are in one state, but which naturally dry out to reach their final dry state; this is the meaning described in sense 4 of the *LDOCE* definition of *wet* as "not yet dry." This sense of *wet* is similar to sense 1 in that *wet towels* also contain moisture which evaporates. The difference between *wet paint* and *wet towels*, though, seems to be that in the case of *wet paint* or *wet plaster*, the liquid is an integral part of the material of the paint or plaster, and the change of state is generally only in one direction, from *wet* to *dry*--paint or plaster that has dried (especially after being applied to a surface) cannot be made again into *wet paint* or *wet plaster*.

The *New York Times* corpus also contains many nouns with which *wet* has the second sense, 'rainy'. In addition to *climate* and *weather*, *wet* occurs

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<sup>9</sup> However, I did find an interesting example of *wet* being used in this way, in the poem 'The Carpenter and the Walrus' in Lewis Carroll's *Through the Looking Glass*: "The sea was wet as wet could be, The sands were dry as dry..."

with several nouns which name periods of time: *May*, *season*, *spring*, *summer*, and *Sunday*; in other words, it is typical to speak both about *wet seasons* and *wet days*.

There are also several nouns in the *New York Times* corpus with which *wet* has a special or idiomatic meaning. These are *wet bar(s)*, *wet fly(-ies)*, *wet harvesting*, *wet look*, *wet nurse*, and *wet suit(s)*. Although these phrases describe things that are not wet in the usual ways, they all involve some kind of liquid. For example, a *wet bar* is a bar (in someone's home) that has a sink with running water, a *wet nurse* provides a particular kind of liquid, namely breast milk, and a *wet suit*, used for diving, has a layer of water between the suit and the wearer's skin. Although there is no such thing as a *dry nurse*, *wet* in the sense of *wet nurse* has an opposite in *dry* in the sense of a *dry cow*, a cow which no longer provides milk. In contrast to *wet suit*, there is a *dry suit*, a kind of suit used for diving in extremely cold water.<sup>10</sup> Both *wet fly* and *wet harvesting* have contrasting terms (*dry fly* and *dry harvesting*) which occur in the *New York Times*. A *wet fly* is a fishing fly which goes under the surface of the water (in contrast to a *dry fly* which floats on top); it occurs by itself and in the phrase *wet fly fishing*. *Wet harvesting* and *dry harvesting* describe two contrasting ways of harvesting crops such as cranberries. In wet harvesting of cranberries, the fields are flooded so that the berries float up and can be skimmed off the surface of the water, while in dry harvesting, the berries are picked from fields that are not flooded.

Finally, there are a few *wet* words from the *New York Times* corpus that

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<sup>10</sup>I saw this term for the first time recently in the February 1996 issue of *National Geographic*, page 78. It explains that a wet suit, which uses a thin layer of water to form an insulating layer to keep the wearer warm, is not suitable for extremely cold temperatures, so a dry suit, which does not rely on water as an insulator, is used instead.

are hard to categorize. *Conditions*, *spots*, and *patterns* are very vague; *conditions* might refer to weather conditions or the condition of ground, and *patterns* and *spots* could refer to patterns of wetness in soil or in material such as cloth or grass. One very interesting phrase is *wet snow*. Since *snow* is in fact entirely composed of water, it seems strange to call snow either *wet* or *dry*, but in fact, both adjectives can be used to describe snow (although *dry snow* did not appear in this corpus).<sup>11</sup> In this case, *wet* and *dry* probably are being used to describe the way the snow feels when you touch it--*wet snow* feels much wetter than *dry snow*. However, *damp snow*, *moist snow*, *arid snow*, etc. sound quite strange.

When *wet* occurs as a predicative adjective, its meaning is generally the same as its attributive use. Examples from the Gutenberg sources show *wet* modifying nouns such as *bodies*, *grass*, *leaves*, *hand*, *hair*, and *pillow*, in sentences such as *There was one lovely mass of blue forget-me-nots growing so close to the stream that its leaves were wet...*<sup>12</sup> However, there is one predicative use of *wet* which does not have a corresponding attributive use--it is the use of *wet* to describe people who have become wet from rain or from being splashed with or immersed in water. This use is seen in sentences such as *I was so dreadfully wet and tired and vexed.*<sup>13</sup> In the examples from the Gutenberg sources, *wet* was often used this way with pronouns such as *I*, *you* and *he*.

As will be seen in the sections below, some of the other adjectives

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<sup>11</sup>This is probably because *dry snow* is the usual, "unmarked" case. I think that the term *dry powder* (which describes a particular kind of snow) is often used by skiers.

<sup>12</sup>This is from *The Secret Garden* by Frances Hogson Burnett.

<sup>13</sup>This is from "Anne of Avonlea" by Lucy Maud Montgomery.

related to *wet* and *dry* have a similar range (although none are exactly the same), while some are much more limited.

### 3.4.2 Moist and damp

The definitions of *moist* and *damp* in the learners' dictionaries suggest these two adjectives can be distinguished from *wet* both in terms of the intensity of wetness they describe and in the connotations associated with them. For example, *LDOCE* gives the following definition for *damp*:

- (2) **1** slightly wet, often in an unpleasant way: *wipe the leather with a damp cloth.*  
**2 damp squib** *BrE informal* something that is intended to be exciting, effective etc., but which is disappointing

The idiomatic meaning of *damp* in *damp squib* is not directly related to wetness, so it will not be discussed here. The more common meaning of *damp* in sense 1, however, is related to wetness. Specifically, *damp* describes a low intensity of wetness; that is, it describes something which contains a relatively low, but still perceptible, amount of moisture. *Wet*, in contrast, does not necessarily imply a specific intensity of wetness, as can be seen from the fact that in some contexts, a *damp* thing might equally felicitously be referred to as *wet*, while in other contexts, *wet* contrasts with *damp*.<sup>14</sup> This will be discussed further in section 3.6.

*Damp* differs from *wet* not only in describing a specific intensity of wetness, but also in having a negative connotation. In itself, *wet* does seem to

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<sup>14</sup>For example, imagine you are going to take a shower and you say to your roommate "These towels are all wet! Aren't there any dry ones?" In such a case, the adjective *wet* might be used to describe towels which are *damp*, since the relative degree of wetness is less important than the presence or absence of moisture. However, when you are planting seeds in your garden, you might need to distinguish soil that is wet from soil that is just damp.

have either positive or negative connotations (although with certain nouns, the meaning is an unpleasant one, e.g., *wet bottom*, *wet feet*). But as the *LDOCE* definition says, *damp* is often used when the wetness is unpleasant; this is also one of the things that differentiates *damp* from *moist*, which like *damp* describes a relatively low intensity of wetness. *LDOCE* defines *moist* in this way:

- (3) **moist:** slightly wet but not too wet, especially in a way that seems pleasant or suitable: *Make sure the soil is moist before planting the seeds; a moist chocolate cake*

Thus it appears that the main difference between *damp* and *moist* lies in connotations; *moist* is used to describe things that people want to be slightly wet, while *damp* is used to describe things that people do not want to be wet or which feel bad when they are wet. An *LDOCE* usage note distinguishes *damp* from *moist* and *humid* (which will be described in the next section) in this way:

- (4) Word choice: **damp**, **humid**, and **moist**. **Damp** is often used about something you would prefer to be dry: *damp clothes/weather; a damp bed/wall/room; in the rainy season everything gets damp I'm afraid*. **Moist** is used especially when something is not too wet and not too dry: *a moist ginger cake; Keep the houseplant soil moist--don't let it dry out*. **Humid** is a more technical word used mainly to describe the climate or weather, or air that feels wet: *It gets very humid here in the summer*. (=the air is hot and damp). You do not usually use these words to talk about people who get wet (*LDOCE*, s.v. "damp").

The nouns which occurred with *damp* and *moist* in the *New York Times* corpus and the Gutenberg sources support this characterization, as shown in Figures 16 and 17 below. First of all, *moist* occurred significantly often in the *New York Times* with many nouns naming kinds of food, including *bluefish*, *bread*, *cake(s)*, and 14 others.<sup>15</sup> With these nouns, *moist* has a pleasant connotation,

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<sup>15</sup>The other food nouns which occurred with *moist* are: *catfish*, *cheesecake*, *chunks [of chicken]*, *dumplings*, *lamb*, *layers [of meat]*, *mousse*, *muffins*, *prosciutto*, *quail*, *salmon*, *sole*, *steak*, and *swordfish*.

indicating that the food is good to eat, not so dry as to be unappetizing. This impression is strengthened by two more examples from the corpus which show very positive connotations: *moist beauties* referring to lobster tails and *moist perfection* describing some mustard.

<p><b>Cloth-like Materials</b> cotton sponge</p>	<p><b>Plant Materials</b> forests seeds</p>	<p><b>Soil</b> earth ground sand</p>	<p><b>Parts of the Body</b> arm eyes lips</p>
<p><b>Food</b> bread cheesecake dumplings (many more)</p>	<p><b>Weather</b> climate weather</p>	<p><b>Air</b> air heat</p>	
<p><i>Note: <b>Moist</b> indicates a relatively low intensity of wetness which is perceived as pleasant and appropriate .</i></p>			

Figure 16. The semantic range of *moist*

Since people expect (and prefer) most food to contain a certain amount of moisture, it is not surprising that *damp* is not usually used to refer to food.<sup>16</sup> *Wet* is not usually used to refer to food either; with these nouns, as with nouns that name parts of the body, such as *eyes* and *feet* and with nouns that name natural materials, such as *leaves* and *grass*, *wet* cannot be used to refer to the water which forms a natural part of the material. It can be used to describe the case of a liquid coating the surface, but since most foods are not served in this state, *wet* does not occur with any nouns naming food in the *New York Times*

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<sup>16</sup>I can, however imagine using *damp* to describe a kind of food that is not supposed to be wet, e.g., "Oh, these crackers are all damp. Throw them out!"

corpus.<sup>17</sup>

<b>Cloth-like Materials</b>	<b>Soil</b>	<b>Periods of Time</b>	<b>Indoor Areas</b>	<b>Other Nouns</b>
cloth	earth	dusk	cell	book
dress	ground	morning	dungeon	
sponge	sand	night	floor	
towel	slope	Tuesday	room	
			walls	
<b>Parts of the Body</b>	<b>Plant Materials</b>	<b>Weather</b>	<b>Air</b>	
brow	grass	climate	air	
curls	greenery	weather	breezes	
	straw		fog	

*Note: **Damp** indicates a relatively low intensity of wetness, especially wetness that is unpleasant.*

Figure 17. The semantic range of *damp*

In the *New York Times* corpus, both *moist* and *damp* occur with nouns that name cloth-like things: *moist* occurs with *cotton balls*, *cotton*, and *sponge*; while *damp* occurs with *cloth*, *sponge*, and *towel*. They also both occur with nouns that name outdoor areas and plant materials: *moist* occurs with *earth*, *forests*, *ground*, *hills*, *sand*, *seeds*, *soil*, and *woodlands*, while *damp* occurs with *greenery*, *sand*, *soil*, and *slope*.<sup>18</sup> With these nouns the connotative difference between *damp* and *moist* is hard to see, although perhaps the sense of *moist* as 'suitable' can be seen with *moist seeds* and *moist soil* (seeds and soil which are

<sup>17</sup>However, *LDOCE* has a special listing for *wet fish* which it defines as British English for "fresh uncooked fish that is on sale in a shop." In this case, the fish is probably on ice and may well be wet in the sense of being covered with a layer of liquid.

<sup>18</sup> Further examples of this type of noun occurring with *damp* in the Gutenberg novels include *earth*, *grass*, *grave*, *ground*, *sod*, and *straw*.

suitably wet for agricultural purposes). With other nouns, though, *damp* more clearly shows its negative connotations: in the *New York Times* corpus, *damp* occurs with *book* and *room*, things which people don't usually want to be wet, and there are several more examples from the Gutenberg sources of *damp* being used with nouns that name indoor places and articles of clothing, things that are unpleasant when wet: [prison] *cells*, *dress*, *dungeon(s)*, *floor*, *skirt*, *woolens*, and *walls*.

In the *New York Times* corpus, *moist* occurs with a few nouns that describe body parts: *arm*, *eyes*, *lips*, and *neck*; *damp* does not occur with any nouns of this type in this corpus, although it seems possible to describe body parts as *damp*, especially in cases where the wetness is undesirable. In the Gutenberg sources, I found a few examples of this type, namely *damp brow*, *damp curls*, and *damp body*.

Both *damp* and *moist* can be used to describe *air* that contains moisture; *moist* occurred with both *air* and *heat*<sup>19</sup> in the *New York Times* corpus, and in the Gutenberg sources, *damp* occurred with nouns such as *air*, *fog*, and *sea-breezes*. The two other adjectives related to *wet* which are examined in this study, *humid* and *dank*, can also be used to describe air (as will be seen in the next section), but curiously enough, *wet* itself is usually not used this way. This is probably because when air becomes completely saturated with moisture, the moisture precipitates out as rain (and thus *wet weather* = *rainy weather*). *Moist air* and *damp air* describe air that has some moisture in it, but not enough for the moisture to precipitate out as rain. *Moist* and *damp* can be distinguished by their connotations with this type of noun too: *moist air* is air that contains a

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<sup>19</sup>I am categorizing *heat* as a form of *air* because *moist heat* is heat that is transmitted through *moist air*.

desirable amount moisture, while *damp air* is air that contains an unpleasant amount of moisture.

Both *damp* and *moist* can also be used to describe weather. *Damp* occurs in the *New York Times* corpus with the nouns *weather* and *climate* as well as with nouns which describe periods of time, e.g., *dusk*, *morning*, *night*, and *Tuesday*. In these combinations, *damp* seems to be describing dampness either in the air or in the ground; that is, a *damp morning* is one in which the air is damp and the ground might also be covered with dew. *Damp weather* is not as wet as *wet weather*--foggy weather could be called *damp* but not *wet*---but strangely enough, *moist weather* seems to have the same meaning as *wet weather*. In the *New York Times* corpus, *moist* occurs with the nouns *weather* and *climate*. The learners' dictionaries do not mention this kind of usage, but the *Concise Oxford Dictionary* includes the phrase *moist weather*, defined as 'rainy weather,' in its definition of *moist*.<sup>20</sup> This is unusual because with all other types of nouns, *moist* either describes a more specific intensity of wetness than *wet* does, or else it describes a qualitatively different kind of wetness, as with food nouns and body parts nouns, where *moist* describes an amount of moisture usually found naturally inside these things but *wet* describes excess liquid on the surface. However, even though *moist* occurs with *weather* and *climate*, it does not occur in the corpus with any nouns that name periods of time, so there are no examples such as *a moist morning* or *a moist summer*.

In the *New York Times* corpus, *damp* did not occur with any nouns like *paint* and *clay*; *moist* occurred with only one noun of this type, *plaster* (referring

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<sup>20</sup>The definitions I have found do not give enough information to distinguish *wet weather* from *moist weather*, and I have no linguistic intuitions about this usage of *moist*. It sounds strange to me and I doubt that I would ever use the phrases *moist weather* or *moist climate*.

to *plaster of Paris*). I think it is possible for *moist* and *damp* to occur with nouns of this type in sentences such as *The paint is still damp*, probably because in most situations, it is not necessary to describe the intensity of the wetness; instead, speakers are more likely to describe *paint* and *concrete*, etc. as *dry* or as *(still) wet*. I will have a little more to say about this in section 3.6 below.

The remaining words which occurred with *damp* and *moist* are somewhat difficult to classify. *Damp* occurred with two general nouns that describe places: *interiors* and *places*. With these nouns, *damp* might be describing either the air in these places or the surfaces of the places themselves (e.g., floors or walls). *Moist* also occurred with several vague words that describe places, including: *areas*, *environment(s)*, *inside*, *interior*, *region(s)*, *shade* [probably a shady place], *site(s)*, and *spot*. One interesting example is *moist farewell*, in which *moist* means something like 'tearful'.

To summarize, although *damp* and *moist* might be near synonyms of *wet*, it has been shown here that their meanings are not exactly the same. Although all three adjectives are used to describe cloth-like materials as well as plant materials and ground or soil, *damp* and *moist* are more specific in describing a low intensity of wetness. This fact also leads to *moist* and *damp* being used to describe wetness in air, while *wet* usually is not. *Wet*, on the other hand, is used to describe materials such as *clay* or *paint*, while *damp* and *moist* usually are not; apparently, when talking about these materials, the specific degree of wetness usually is not relevant--any amount of moisture is enough to make something 'not yet dry'.

There are also differences in connotation which lead to differences in the semantic ranges of *moist*, *damp*, and *wet*. In particular, *moist* (but not *damp* or

*wet*) is often used to describe food that is supposed to contain moisture, while *damp* (but not *wet* or *moist*) is used to describe air or surfaces in indoor places which we would rather keep dry, in combinations such as *damp walls* and *damp room*.

### 3.4.3 *Humid and dank*

The meanings of *humid* and *dank* are much more restricted than the meanings of *wet*, *damp*, or *moist* in that these words are basically used to describe wetness in air but not in other things. As mentioned in the usage note in (4), *humid* is used mainly to describe *climate*, *weather*, or *air* that contains a lot of moisture. The entries under *humid* in the learners' dictionaries are even more specific, saying that *humid* also implies that the weather or air is *hot*, as in the following definition from *LDOCE*.

- (5) **humid:** weather that is humid makes you feel uncomfortable because the air feels very hot and wet: *Tokyo is extremely humid in mid-summer.*

Almost all the nouns that occur with *humid* in the *New York Times* corpus show *humid* describing *air* and/or *weather*.<sup>21</sup> These include: *air*, *atmosphere*, *climate*, *heat*, *sunshine*, and *weather*. *Humid* also occurs with nouns describing periods of time (such as *afternoon*, *August*, *day(s)*, *evening*, *Friday*, *July*, *months*, *mornings*, *night(s)*, *Saturday*, and *summer(s)*) and places (such as *area(s)*, *deck*, *environment*, *marshes*, *port*, and *tropics*), and in these combinations, too, it is air or the weather of the time or place that is being described as humid.

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<sup>21</sup>There are two exceptions. One is *conditions*, which is vague, but which is probably describing weather or air. The other is *part* which occurs in the phrase *humid part of the body*. I was not able to get enough context to know which part of the body is being referred to; *humid* may be used instead of *moist* here because of the added implication of heat or uncomfortableness due to the wetness.

Several of the nouns which occur with *humid* reinforce the idea that *humid air* or *humid weather* is hot as well as wet: *heat, sunshine, afternoon, August, July, summer, and tropics*. Figure 18 below shows the semantic range of *humid*.

<b>Air/Weather</b>	<b>Places (where the weather or air is <i>humid</i>)</b>	<b>Times (when the weather is <i>humid</i>)</b>
air		afternoon
atmosphere		August
climate	area(s)	day(s)
weather	containers	evening
	deck	Friday
	environments	July
	marshes	months
	port	mornings
	tropics	night(s)
		Saturday
		summer(s)

*Note: **Humid** describes moisture in the air, especially air that is warm or hot*

Figure 18. The semantic range of *humid*

*Dank*, like *humid*, is used to describe air that contains a lot of moisture, but while *humid air* is warm and wet, *dank air* is cold and wet. *CCED*, for example, gives this definition for *dank*: "A *dank* place, especially an underground place such as a cave or cellar, is unpleasantly damp and cold." This definition does not specify that it is the air in these places that is damp, but *LLA* is more specific, listing *dank* under the category of "words for describing air that feels wet," along with *humid, damp, sticky, and muggy*. The definition says:

- (6) air that is **dank**, especially in an enclosed room or space, is unpleasantly wet and cold so that it smells bad: *Sophia showed me the dank cellar where the family kept all their wine bottles.* (*LLA*, s.v. "wet")

The words which occurred with *dank* in the *New York Times* corpus support this

characterization. *Dank* occurred with both *air* and *cold*, and it also occurred with many nouns that name places, including many enclosed and underground places: *[prison] cell, cellar, cityscapes, classrooms, club, cottage, depths, fringes, interior(s), lanes, passages, place, room, spaces, subways, and trunks*. Since *dank* is usually used to describe air in enclosed places, there are only a few nouns with which *dank* is describing weather, namely *climate* and *Monday*.<sup>22</sup>

As was shown above, *damp* and *moist* also are used to describe air, but they can be distinguished from *dank* and *humid* by their associated connotations. In contrast to *dank*, *humid* and *damp*, *moist* has implications of pleasantness or suitability. *Dank* is distinguished from *humid* in that the former implies coldness as well as wetness, while the latter implies warmth. *Dank* and *damp* are quite similar in meaning--both have negative connotations and can be used to describe the air in cold, indoor areas--but the semantic range of *damp* is broader, as can be seen by comparing Figure 19 below, which shows the semantic range of *dank*, with Figure 17 above.

<b>Air/Weather</b>	<b>Times (when the weather is <i>dank</i>)</b>	<b>Places (where the air is <i>dank</i>)</b>	
air		cell	interiors
climate		cellar	lanes
cold		cityscape	passages
light	Monday	classrooms	place
		club	room
		cottage	spaces
		depths	subways
		fringes	trunks
<p><i>Note: <b>Dank</b> describes air that is damp, cold, and unpleasant, especially in enclosed places</i></p>			

Figure 19. The semantic range of *dank*

<sup>22</sup>A *dank Monday* would be a Monday on which the weather was dank.

In general, *humid* and *dank* seem to be limited to describing air and places and time periods in which the air is humid or dank, so it is not surprising that *humid* and *dank* did not occur with any of the other types of nouns that are seen with *wet*, *damp*, and *moist*. They are not normally used to describe cloth-like materials, ground or soil, etc., so combinations such as *humid towel*, *humid trees* or *dank skin* sound very strange. It is hard to judge the intensity of wetness described by these two adjectives because they do not readily contrast with *wet* in that *wet* is not usually used to describe *air*. *Dank* and *humid* can be used to describe weather or climates; however, it seems that *wet weather* and *wet climate* are not describing the same phenomenon as *humid weather*, so it is hard to judge the relative intensity of the two. The climate of a particular place might be described as both *wet* and *humid*, with *wet* describing the amount of rainfall and *humid* describing the temperature and amount of moisture in the air; there may be a similar distinction between a *dank climate* and a *wet climate*.

#### 3.4.4 Summary of adjectives related to wetness.

Of the five adjectives I examined, *wet* is the most frequent and occurred in the corpus with a wide range of nouns: *wet* is used to describe cloth-like materials that have absorbed water, plant materials, areas of land, materials such as paint and clay, and weather and climate. The ranges of *moist* and *damp* are also quite wide, but they differ from *wet* in describing a specific (low) intensity of wetness and in having added evaluative connotations, negative connotations in the case of *damp* and positive ones in the case of *moist*. *Humid* and *dank* are much more limited in range than *wet*, *damp*, or *moist*, describing only air which contains moisture and places or times in which the air is humid or

dank. Like *damp*, both *humid* and *dank* are associated with connotations of unpleasantness. They are both also associated with particular temperatures: *humid air* is both wet and warm, while *dank air* is both cold and wet.

Although I have only examined four of the many synonyms of *wet* listed in Figure 13, it seems that the characteristics which distinguish *wet* from *moist*, *damp*, *dank*, and *humid* are also found with other synonyms of *wet*. For example, adjectives such as *saturated*, *soaked* and *waterlogged* are like *moist* and *damp* in that they specify a particular intensity of wetness, although they describe an extremely high intensity of wetness rather than a low intensity of wetness. Other adjectives such as *soggy*, *marshy*, and *rainy* are like *humid* and *dank* in being limited in their range of application, although they are not limited to describing *air*. *Rainy* applies only to weather and climate, *marshy* to types of land, and *soggy* to things that absorb a lot of water (often so much that they begin to lose their original shape). Thus, although a *wet paper towel* could be described as *soggy*, it could not be called *marshy* or *rainy*. *Wet land* could be called *soggy* or *marshy*, but it would not be called *rainy*, and a *wet season* could be described as *rainy*, but it would probably not be described as *soggy* or *marshy*.

### 3.5 The meanings of adjectives related to dryness

#### 3.5.1 Dry

Among the adjectives which describe *dryness*, *dry* was the most frequently occurring and the one with the widest range of application. The semantic range of *dry* is the widest of all the adjectives in this case study because it has many senses which do not involve the *wet-dry* scale; in fact, the

noun which occurred most frequently with *dry* in the *New York Times* corpus, *wine*, is among these other senses. This means that while *dry* is the opposite of *wet* for most of *wet*'s uses, the reverse is not true--the opposites of *dry wine*, *dry tone*, and *dry humor* are not *wet wine*, *wet tone*, and *wet humor*. The fact that *dry* has several senses in addition to those related to wetness probably explains why it occurs so much more frequently than *wet* in this corpus, almost three times as often (2147 times compared to 685 times).

The *LDOCE* entry for *dry* is given below:

- (7) **1 >NOT WET<** without water or liquid inside or on the surface  
**2 >WEATHER<** having very little rain or moisture  
**3 run/go dry** if a lake, river etc runs dry, all the water gradually disappears, especially if there has been no rain  
**4 >HUMOUR<** someone with a dry sense of humour pretends to be serious when they are really joking  
**5 >THIRSTY<** *informal* thirsty: *I'm really dry--do you have any orange juice?*  
**6 dry mouth/skin/lips etc** without enough of the liquid that is normally present in your mouth, etc: *I felt nervous and dizzy and my mouth was dry.*  
**7 dry cough** a cough which does not produce any phlegm  
**8 >SPEECH/WRITING<** boring: *I found the lecture dry and uninspired; dry as dust* (=very boring)  
**9 dry wine/sherry/etc** wine etc that is not sweet: *dry white wine*  
**10 dry bread** bread eaten on its own without butter, jam, etc  
**11 >TOWN/COUNTRY<** not allowing any alcohol to be sold there: *There are still some dry states in the U.S.*  
**12 >VOICE<** showing no emotion  
**13 not a dry eye in the house** *often humorous* used to say that everyone was crying because something was very sad

Several of these senses are not relevant to the discussion of words related to the scale of wetness and dryness; these uses of *dry* accounted for many, but by no means most, of the occurrences of *dry* in the *New York Times* corpus. For example, there were nouns that were modified by the *dry* of sense

4 (*dry humor, wit*), sense 8 (*dry account*), sense 9 (*dry wine, beer, and sherry*), sense 10 (*dry bread*) and sense 12 (*dry voice, tone*). Two phrases, *dry acoustics* and *dry sound*, show a meaning of *dry* not listed in any of the learners' dictionaries; in this use, *dry* describes the way sound waves move and echo. Since none of these uses are directly related to *dry* as an value on the scale of wetness and dryness, I will not discuss them further here.<sup>23</sup>

As shown below in Figure 20, there were several examples of nouns with which *dry* had the meaning of sense 1 of the *LDOCE* definition, 'not wet', including nouns that name cloth and plant materials (*cloth, forest, leaves, and wood*) as well as with nouns that name soil or areas of land (*ground, land, soil, and track*). With these nouns, *dry* contrasts not only with *wet*, but also with *damp* and *moist*.

*Dry* in sense 2, in which it describes weather or climate which has 'very little rain or moisture' occurs with many nouns in the *New York Times* corpus, including *climates* and *weather*, as well as several nouns that name periods of time in which the weather is dry: *autumn, fall, periods, seasons(s), spell(s), and summers*. It is interesting that the periods of time which occur with *dry* are fairly long, that is, *seasons* rather than *days*. This may be because it takes time for things to become dry after it stops raining; that is, we would not be likely to talk about the hours or day following *a damp evening* or *a wet Sunday* as *a dry morning* or *a dry Monday* because it usually takes a few hours or days for the wet ground to dry out, and because we cannot be sure whether the rain will start again. It is only after a long stretch of rainlessness that we begin to talk about

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<sup>23</sup>The corpus data included no examples of nouns used with *dry* in sense 7 (e.g., *dry cough*), or sense 11 (e.g., *dry state*). There were also no examples of *dry* in sense 5 (in which *dry* means 'thirsty') because this is a predicative use of *dry* (*I'm dry*), so examples could not be picked out by the program.

*dry weather.*

<p><b>Cloth-like materials</b> cloth</p>	<p><b>Land and areas of land</b> (river) bed ground land soil track</p>	<p><b>Air</b> air heat winds</p>	<p><b>Idiomatic phrases</b> dry cleaning dry cleaner dry fly (fishing) dry dock dry harvesting dry goods dry rot dry run dry storage dry wall</p>
<p><b>Plant materials</b> leaves forest wood</p>	<p><b>Food (that has been dried)</b> beans bread food(s) ingredients lentils milk mustard pasta yeast</p>	<p><b>Weather</b> climate(s) summer weather</p>	<p><b>Uses of dry that do not involve a lack of moisture</b> account beer, sherry, wine humor, wit tone, voice acoustics, sound</p>
<p><b>Parts of the body</b> eye(s) mouth skin</p>		<p><b>Times (in which the weather is dry)</b> autumn fall periods season(s) spell(s) summer(s) winter</p>	

Figure 20. The semantic range of *dry*

Unlike *wet*, *dry* occurs significantly often with the noun *air*; it also occurs with *heat* and *winds*, nouns which could be classified as kinds of air. The opposite of *dry heat* and *dry winds* could not be *wet heat* or *wet winds*, and there is no clear opposite. In some situations, *moist heat* might be the opposite of *dry heat* (for example, in the context of medical treatments), while in other situations, *humid heat* might be a better contrast (for example, if you are comparing the summer weather in Tokyo and Tucson).

*Dry* in sense 3 was found with just one noun in the *New York Times*

corpus, in the phrase *dry river bed*. This sense of *dry* does not have a clear opposite; as was mentioned above, none of the *wet* words is normally used to describe a bed of a river filled with water because this is the "default" case.

*Dry* in sense 6, 'without enough of the liquid that is normally present' occurs with only a few nouns in the corpus: *mouth*, *skin*, and possibly *eyes*. *Moist skin* is the probably best opposite for *dry skin*, but none of the *wet* adjectives sounds very natural with a noun such as *mouth*. *Dry eyes* used in this sense has no clear opposite, but when it means 'not full of tears' as in sense 13 above, it contrasts with both *wet eyes* and *moist eyes*.

One use of *dry* not mentioned in the LDOCE definition in (7) or in any of the other learners' dictionaries is the use of *dry* to describe foods that have been dried or dehydrated. In this corpus, *dry* occurs as a attributive adjective with several nouns which name foods: *beans*, *food(s)*, *ingredients*, *lentils*, *milk*, *mustard*, *pasta*, and *yeast*. With the exception of *ingredients*,<sup>24</sup> the best antonym for *dry* with these nouns is *fresh*. As mentioned above, *wet* does not usually describe food, so we should not expect *wet* to be the opposite of *dry* in these cases. *Moist* is often used to describe food, but its meaning is somewhat different; as was shown in section 3.4.2, *moist* is used to describe foods which are supposed to contain some moisture (e.g., catfish, cheesecake, dumplings), foods which are usually not dehydrated. *Dry* did not occur significantly often in the New York Times corpus with any nouns of this type, but nouns of this type can occur with the predicative adjective *dry* with a meaning something like 'lacking a suitable amount of moisture.' For example, in the sentences in (8)

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<sup>24</sup>The term *dry ingredients* is often used in recipes to refer to a mixture of flour, salt, sugar, etc. Recipes often state that dry ingredients should be mixed together well and then added to *wet ingredients* or to some kind of liquid.

below from a restaurant review, *dry* is used as a predicative adjective modifying *cheesecake*, and contrasts with attributive use of *moist* to modify *cake* in a previous sentence.

- (8) Try the excellent and unusual bread pudding, which looks like a wedge of moist cake...Ricotta cheesecake, though, was a bit dry... (Joanne Starkey. 1993. Dining out; mints, combs, and palette pleasers, too. *New York Times*, 21 February, section 13LI, 13).

With many nouns in the *New York Times* corpus, *dry* has an idiomatic interpretation; these interpretations are generally related to one or more of the sense listed in (7) above, but they are not predictable from these meanings. A *dry hole*, for example, is not just any hole that is dry--it refers specifically to oil wells that do not produce any oil. Similarly, *dry cleaning* refers to a particular process of cleaning clothes using chemicals--if you simply brush dirt off a coat, it is not called *dry cleaning*. In many of these idiomatic phrases, *dry* indirectly contrasts with *wet* in that *dry* seems to be describing the lack of a liquid that one would otherwise expect to be present: e.g., oil in the case of *dry well*, and water in the case of *dry cleaning*.<sup>25</sup> The other nouns with idiomatic meanings from the corpus are: *dry fly(-ies)*, *dry harvesting*, *dry storage*, *dry rot*, *dry run*, and *dry wall*. With two of these nouns, *fly(-ies)* and *harvesting*, the idiomatic use of *dry* corresponds to an idiomatic use of *wet*.

In the *New York Times* corpus, *dry* does not occur significantly often with any nouns which name materials like *concrete* or *paint*. This seems surprising at first because *LDOCE* defined *wet* with these nouns as 'not dry.' If *wet* describes materials which are not yet dry, why doesn't *dry* also typically modify

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<sup>25</sup>According to the definition of *dry clean* in *CCED*, however, dry cleaning does involve the use of some kind of liquid: "When things such as clothes are dry-cleaned, they are cleaned with a liquid chemical rather than with water."

the nouns which name these materials? One reason may be that the dry state is normally the final state of these materials: clay, concrete, and paint naturally dry out unless some special action is taken to keep them wet, so just as a river bed is wet but not usually described with the adjective *wet*, concrete is not usually described as *dry*. Also, it seems that when *dry* is used to describe these materials, it is more often used in the predicate, as in the examples in (9) below.

- (9) a. After covering a few boards, use a wad of cheesecloth to partially wipe some of this wet paint off. When it's dry, apply a coat of low-luster clear varnish...(Bernard Gladstone. 1991. Sliding door derailed en route to wall pocket. Chicago Tribune, 11 January, Your Place section, 19)
- b. Once you're satisfied with the shape of the figure, start painting. If the clay is still wet, use oil color; if it's already dry, you can paint with water or poster colour. (Corinne Kerk. 1996. Handmade beauties. *Business Times*, 14 December, Executive Lifestyles section, 3)

The examples in (9) show the adjective *dry* directly contrasting with the adjective *wet*, but as Fellbaum (1995) found, the verb *dry* often contrasts with the adjective *wet* as well; this makes sense because things that are wet often dry off or dry out. The examples in (10) below show the verb *dry* being used together with the adjective *wet*.

- (10) a. When any leather or suede item gets wet, let it dry naturally, away from a heat source. (Martha Stewart. 1996. Polishing, conditioning make leather last longer. New York Times, 29 December, Home section, 4)
- b. Thoroughly dry or replace wet carpets or water-damaged materials to prevent mold and bacteria from forming. (Edward R. Lipinski. 1997. Home clinic; indoor pollution, nature's and man's. New York Times, 26 January, section 13CN, 16)

It is also interesting that the two common phrasal constructions *dry off* and *dry out* correspond to two types of *wet* things, those which are 'full of liquid' and those which are 'covered in liquid'. Wet things which are full of liquid, e.g., a *wet sponge* or a *wet towel*, can *dry out* but they cannot be *dried off*. Wet things that have liquid on their surface, e.g., a *wet floor* can be *dried off*, but they can only said to *dry out* if they contain absorbed moisture.

### 3.5.2 *Arid and parched*

How do *arid* and *parched* compare with *dry*? As I will show, both *arid* and *parched* specify an extreme intensity of dryness and both imply something about the manner in which something becomes *dry*. These two differences result in *arid* and *parched* having more limited ranges of application than *dry*.

Taking *arid* first, the *OALD* definition in (11) below shows that the main use of this adjective is to describe areas of land or climates that are dry. The second figurative sense is not directly related to the scale of wetness and dryness, but it is similar to one of the figurative uses of *dry*.<sup>26</sup>

- (11) **1** (of a land or climate) having little or no rain; very dry: *the arid deserts of Africa; Nothing grows in these arid conditions.*  
**2** dull; not interesting: *have long, arid discussions*

The data from the *New York Times* corpus support this characterization.

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<sup>26</sup>The LDOCE definition of *dry* shows how the figurative sense is related to the literal one. It says:

- 1** arid land is extremely dry and cannot produce many crops: *Much of Namibia is arid country.*  
**2** an arid discussion, period of time etc, does not produce anything new.

The two senses are related in that they both describe something that is not productive. However, this definition is not as specific as the one in *OALD* since it does not mention that arid lands have little rainfall or that arid discussions are boring as well as unproductive.

Figure 21 below shows the semantic range of *arid* based on the nouns which occurred with it in the corpus. Most of the nouns describe soil or areas of land, e.g., *barrens*, *desert*, and *highlands*. When *arid* is used in this way, it does not have a clear opposite. Since arid soil is so dry that few plants can grow there, we might expect the opposite of *arid* to be *moist* because *moist soil* is soil with an adequate amount of moisture. However, large areas of land such as *plains* or *islands* are not usually described by *moist*. *Wet* can be used to describe large areas of land, but *wet plains* or *wet regions* may not be any more productive than *arid* lands (since too much water can be as bad for agriculture as insufficient water), so *wet* is not a good contrast for this use of *arid* either.

Soil and Areas of Land		Air/Climate
area(s)	mountains	climate
barrens	north	heat
basin	place	wind
countries	plain(s)	
desert	province	<b>Figurative Uses</b>
district	reaches	an arid example of pointillist chromaticism
ground	regions	an arid intellectual exercise
highlands	soil	arid research materials
hills	strip	
island(s)	territory	
land(s)	town	
locations	valleys	

Figure 21. The semantic range of *arid*

There are also a few nouns from the corpus data which show *arid* describing *air* and *climate*, namely *climate*, *heat*, and *wind* (which occurs in the phrase *arid desert wind*). *A wet climate* might be a good opposite for *an arid*

*climate*, but unlike *wet*, *arid* does not occur with any nouns that name periods of time. That is, there are no examples in the corpus of phrases like *arid day*, *arid April* or *arid season*. This is because *arid* describes an extreme state of dryness that can only be reached after a long period of time with no rain; a day or a month is unlikely to be described as *arid* because a lack of rainfall for such a short period of time does not result in aridness. Likewise, *arid* occurs with *climate*, which describes the weather conditions over a period of years, but it does not occur with the noun *weather* which is usually used to describe the conditions over shorter periods of time.

Because *arid* describes dryness which results from a lack of rainfall, *arid* is not normally used to modify nouns which name cloth, plant materials, food, or body parts.

Turning to *parched*, it appears that *parched* is similar to *arid* in that it describes an extreme state of dryness and also specifies the process by which something reaches that state. The process that is involved is clearly evident in the form of the word itself. The adjective *parched* is derived from the verb *parch*, which is defined in *LDOCE* in this way: "If sun or wind parches land, plants, etc. it makes them very dry..." In other words, *parched* is the state something reaches through being dried out by the sun or wind. The *LDOCE* definition of *parched*, given in (12) below, says that hot weather is the usual agent of parching.

- (12) **1** very dry, especially because of hot weather: *the parched African landscape; He raised the water bottle to his parched lips.*  
**2 be parched** *informal* to be very thirsty

The *OALD* definition is similar, defining *parched* as "hot and dry; dried out with heat," but the *CCED* definition is somewhat different, more like the definition of

*arid*: "If something, especially the ground or a plant, is *parched*, it is very dry, because there has been no rain." Still another dictionary, *Merriam Webster's Collegiate Dictionary*, says that something may become parched through cold as well as through heat; one of the senses it lists for *parched* is "to dry or shrivel with cold."

Bringing together all these definitions, it seems that *parched* describes the state something (typically an area of land) reaches after a time of no rain and after exposure to heat or wind which evaporates all moisture from it. This interpretation of *parched* makes sense with most of the nouns which occurred with it in the *New York Times* corpus, in particular, those which are listed under the category Soil and Areas of Land in Figure 22 below. As with *arid*, there is no clear opposite for the meaning of *parched* with nouns such as *field* or *ground*.

<b>Soil and Areas of Land</b>		<b>Weather</b>
areas	hills	weather
city	land	
country	landscape	<b>Other Nouns</b>
dust bowl	precincts	quality, state
desert	region(s)	sound
earth	reservoir	throat
expanse	(river) bed	wheat
fairways	roads	
farmland	surface	
field	terrain	
ground		

Figure 22. The semantic range of *parched*

Although *parched* occurs with *weather*, it does not occur with nouns

which describe air, e.g., *air* or *wind*; this is probably because dry wind or dry air is the agent of parching, so it does not make sense to describe wind or air as *parched*. In the *New York Times* corpus, *parched* does not occur with *climate*; maybe this is because there are not many places which experience parching heat and winds continuously for years. And like *arid*, *parched* does not occur with any nouns that name periods of time, so there are no examples of phrases such as *parched morning* or *parched July*.

In the *New York Times* corpus, *parched* occurs with one noun which names a food, namely wheat. In this phrase, the meaning of *parched* is quite precise: *parched wheat* is *wheat* that has been dried by toasting it in an oven or over a flame. *Wheat* that has dried out in the fields due to wind or hot weather would probably not be called *parched* (although it could be called *dry*). Although I have found no other examples of *parched* with food nouns, I think it can be used with a few other nouns which name grains or seeds with this kind of meaning, e.g., *parched corn*, *parched oats*. However, I do not think *parched* is used in this way to describe non-grains foods such as vegetables or meat which are dried over heat. There is no clear opposite for this sense of *parched*.

*Parched* occurred in this corpus with one noun naming a body part, *parched throat*. This use of *parched* is related to the predicative use listed in sense 2 in (12); when a person has a parched throat, he or she is thirsty. The *LDOCE* definition shows *parched* being used with another part of the body, *parched lips*. The sense of *parched* with this noun is similar to the sense in *parched ground* in that *lips* often become dry when a person is exposed to hot weather and/or dry winds. *Moist* is perhaps the best opposite of this sense of *parched* because the verb *moisten* can readily be used with noun phrases such

as *parched lips*.

There was one figurative use of *parched* in the *New York Times* corpus, in the phrase *parched sound*. This use of *parched* does not seem to involve the meaning of a lack of moisture--instead, it is related to the meaning of *dry* in *dry acoustics*.

In the *New York Times* corpus, *parched* did not occur with any nouns naming cloth-like materials, materials such as *paint* or *concrete*, or natural materials such as *leaves* and *grass*. This last fact may be just an accidental omission due to the low number of occurrences of *parched* in the corpus; to me, at least, phrases such as *parched grass* sound fine, and the *CCED* definition specifically mentions that plants can be parched. But with nouns such as *towel*, *sponge*, *paint* and *concrete*, *parched* sounds very unlikely. These nouns did not occur with *arid* either. The reason may involve the fact that *arid* and *parched* describe extreme states of dryness. Once *towels* or *paint* become dry, it does not make sense to speak of them as "extremely" dry; there is no qualitative, perceptual difference between a towel that has been dry for one day and a towel that has been dry for two years. However, when *land* or *weather* is being described, the distinction between *dry* and *parched* (as well as between *dry* and *arid*) is relevant. Both *parched* and *arid* describe a kind of dryness that goes beyond the simple sensory perception of dryness. *Parched* or *arid land* is not merely dry to the touch or sight; it is dry far beneath the surface and would require a lot of rain in order to become productive land.

The fact that meanings of *parched* and *arid* include information about the process of drying is relevant here too. Land becomes *parched* or *arid* through the processes of weather--through a lack of rain and through exposure to drying

winds and heat. Towels and paint, on the other hand, are artifacts; sometimes they are outdoors exposed to weather, but often they are not, so it does not make sense to say that a towel or some paint has become dry because it has not been rained on.

### 3.5.3 Summary of adjectives related to dryness

Of the three adjectives discussed in this section, *dry* is the most frequent and occurs with the widest range of nouns. It is also the only one of the three which has a commonly used verb form, *dry*. (*Parch* is a rare verb, and there is no verb related to *arid*.) Both *arid* and *parched* describe an intense degree of *dryness*, and both specify something about the way in which something becomes dry. *Dry* itself does not specify any manner information: something can become dry through simple evaporation or it can become dry as a result of a physical or chemical process which speeds up the drying; in contrast, *arid* specifies dryness which results from a lack of rain, while *parched* describes dryness which result from the application of heat or from weather processes involving heat or wind. Manner information restricts the range of nouns which *arid* and *parched* can modify.

Looking at the other *dry* adjectives listed in Figure 13, which shows the synset of *dry* in WordNet, there are a few others that specify the way in which something becomes dry, e.g., *dehydrated* and *rainless*. There are also others which describe extreme dryness, e.g., *bone-dry* and *sere*. Still others describe states which result from dryness, for example, *shriveled* and *withered*. Although I have not examined these, it seems likely that all of them are more limited in range of application than *dry* is. For example, *rainless* could be used to

describe weather or periods of time (e.g., *a rainless summer*) or possibly areas of land (e.g., *rainless plains*), but it would not be used to describe *towels* or *lips*. Similarly, *shriveled* and *withered* can only be used to describe things which change shape as they dry out, so they can modify *lips* or *leaves* but not *towels* or *land*.

### 3.6 Conclusion: Why wet and dry are picked out as antonyms

The detailed look at the meanings and semantic ranges of the adjectives in this case study has shown that the adjectives which are listed in the synsets of *wet* and *dry* in WordNet are not perfect synonyms at all; the adjectives vary in terms of their semantic range and connotations, as well as in frequency of use. The two most frequently occurring adjectives, *wet* and *dry*, have a great deal of shared semantic range, as can be seen in Figures 23 (which compares the ranges of *wet* and *dry* to those of *humid*, *dank*, *arid*, and *parched*) and 24 (which compares *wet*, *dry*, *humid* and *moist*), so for *wet* and *dry*, like the antonym pairs in Chapter 2 (*big/little*, *large/small*, and *big/small*), there are many opportunities to use the two adjectives together to show contrast. Things as varied as soil and fields, weather and seasons, clothes and leaves, hair and eyes, and paint and concrete can all be described using both *wet* and *dry*.

This shared semantic range means that there is a wide range of possible contrast: we can talk about wet hair becoming dry or we can compare wet climates with dry climates. *Arid*, *parched*, *humid* and *dank*, in contrast, are all much more restricted in usage and this means that there are fewer contexts in which they can contrast with *wet* or *dry* or with each other. Take *humid* and *dry* for example. Since *humid* is basically used only to describe air and weather,

the only times we can expect to find a contrast between *dry* and *humid* is when the topic is air or weather. Even in these cases, *dry* and *humid* are not always opposites--in a place and time in which a lack of rain causes the air to be very dry, *dry weather* and *humid weather* may be considered opposites, but there are places and time in which the air is still humid despite a lack of rain, and in such as case, weather might be described as both *humid* and *dry* at the same time, which would indicate that they are not opposites in this context. Of course, if the topic is anything outside the semantic range of *humid*, e.g., soil or clothes, *humid* can not even be considered as an possible opposite of *dry*.

	cloth-like materials	plant materials	soil, land	clay etc.	body parts	air	weather	other aspects of meaning
<b>wet</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	no	<b>yes</b>	
<b>humid</b>	no	no	no	no	no	<b>yes</b>	<b>yes</b>	warm, unpleasant
<b>dank</b>	no	no	no	no	no	<b>yes</b>	<b>yes</b>	cold, smells bad
<b>dry</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	<b>yes</b>	
<b>arid</b>	no	no	<b>yes</b>	no	no	<b>yes</b>	<b>yes</b>	extreme dryness from lack of rain
<b>parched</b>	no	no	<b>yes</b>	no	no	no	<b>yes</b>	extreme dryness due to heat or wind

Figure 23. Comparison of *wet*, *humid*, *dank*, *dry*, *arid*, and *parched*

Positive or negative connotations also may have an effect on whether or not two particular words can be considered opposites. *Dry* and *wet* are similar

in that they are relatively free from connotations, but *damp*, *dank*, *humid* and *moist* all are associated with connotations of pleasantness or unpleasantness.

The intensity of wetness or dryness an adjective describes also has an impact of the choice of an antonym, as is seen in the case of *moist* and *damp*. From what we have seen so far, these two adjectives have relatively wide semantic ranges, roughly as wide as *wet*, as shown in Figure 24 below. Thus, both *moist* and *damp* have a large area of shared (and thus potentially contrasting) range with *dry*. Why, then, aren't *moist* and *damp* usually considered to be opposites of *dry*? Connotations probably have an effect, but even more important is the fact that *moist* and *damp* describe a specific degree of wetness, a fact which limits their semantic range in a way that has not been discussed thus far.

	cloth-like materials	plant materials	soil land	clay etc.	body parts	air	weather	other aspects of meaning
<b>wet</b>	yes	yes	yes	yes	yes	no	yes	
<b>damp</b>	yes	yes	yes	yes	yes	yes	yes	cold, unpleasant
<b>moist</b>	yes	yes	yes	yes	yes	yes	yes	suitable, pleasant
<b>dry</b>	yes	yes	yes	yes	yes	yes	yes	

Figure 24. Comparison of *wet*, *damp*, *moist* and *dry*

In terms of intensity of wetness or dryness, there seem to be four main types of adjectives: 1) words that mean 'slightly wet', e.g., *damp* and *moist*; 2) words that mean 'extremely wet', e.g., *saturated* and *waterlogged*; 3) words that

mean 'extremely dry', e.g., *parched* and *arid*; and 4) words that do not specify any specific degree of wetness, including *wet* and *dry* themselves, as well as others such as *rainy*. What is interesting is that there are no words which mean 'slightly dry'. The reason behinds this reveals something very important about the meanings of *wet*, *dry*, and the other adjectives on the scale of wetness and dryness.

The scale of wetness and dryness has not been discussed much in the literature, but it is similar to the scale of cleanness-dirtiness, whose properties are somewhat better described (e.g., in Lehrer 1985 and Cruse and Togia 1995). Like the scale of cleanness-dirtiness, the scale of wetness-dryness is a scale which evaluates the presence or absence of something, the presence or absence of dirt in the case of *clean* and *dirty* and the presence or absence of moisture in the case of *wet* and *dry*. In the cleanness-dirtiness scale too, there are words for something that is 'somewhat dirty' (*grubby*) or 'very dirty' (*filthy*) and there is a word which means 'very clean' (*spotless*), but there are no words which mean 'slightly clean'. The reason seems to be that once there is even a small amount of moisture or dirt present, a thing is no longer considered *dry* or *clean* at all; instead, it is described as *wet* or *dirty* to some greater or lesser degree.

This property of the *wet/dry* and *clean/dirty* scales is related to the fact that these adjective pairs are sometimes used as complementary adjectives rather than as gradable adjectives (antonyms in the strict sense); that is, sometimes they describe either-or choices: Either the paint is *wet* or it is *dry*; either the dishes are *clean* or they are *dirty*. These two adjective pairs are examples of what Cruse and Togia (1995) call "hybrid anto-complementary

systems," pairs that in some contexts behave as antonyms (that is, gradable adjectives) and in others as complementaries.<sup>27</sup> In the case of *clean/dirty*, they say that since *clean* describes the absence of a property, its "default" reading is as a complementary. They add:

*Clean* can be readily coerced into antonymic readings in appropriate contexts, such as *cleaner*, *How clean is it?*, *very clean*, etc. But it is never a fully fledged antonymic term because its bare use (as in for example, *This one is clean*) does not have a relative reading in the manner of *It's long*. (Cruse and Togia 1995,137)

Like *clean*, *dry* denotes the absence of a property, so it seems reasonable that just as for *clean*, the default reading for *dry* is as a complementary. That is, *dry* means something like 'containing no (extra) moisture', not 'containing less moisture than something else.' Usually, we determine whether or not something is *dry* by simple sense perception: If cloth or soil looks and feels dry to the touch, it is considered *dry*. Once even a little moisture can be felt, however, it is no longer appropriate to describe it as *dry*; instead, the cloth or soil can either be described by the complementary of *dry*, that is, *wet*, or by an adjective that is more specific as to the degree of moisture present, e.g., *moist*, *damp*, *saturated*, etc., based on feel and perhaps sight and smell.

To represent the *wet/dry* scale, we need two diagrams, one which shows their use as complementaries and one which shows their use as gradable adjectives (antonyms in the strict sense). Figure 25 below shows *wet* and *dry* as complementaries, with *wet* vs. *dry* as a binary choice, a use which is common with nouns such as *paint* and *concrete* and is also found with other

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<sup>27</sup> Cruse and Togia give one other example of this type, *safe/dangerous*, and Lehrer (1985) lists a few more pairs that are similar in behavior to *clean/dirty*; they are *sober/drunken*, *pure/impure* and *accurate/inaccurate*.

nouns in certain contexts.

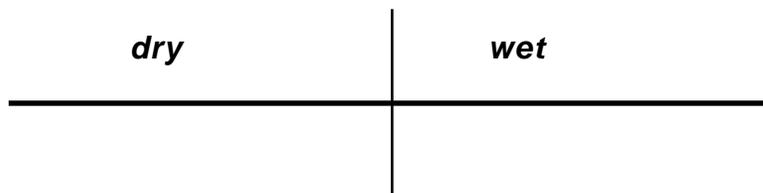


Figure 25. *Wet* and *dry* as complementaries

Figure 26 shows *wet* and *dry* as gradable adjectives. When they are used this way, it is possible for *dry* to contrast with *arid* or *parched* and for *wet* to contrast with *moist*, *damp* etc., for example, in sentences such as *This land is not just dry, it's arid* or *This field is not really wet, it's just a little damp*. Unlike some types of scale which have a neutral area in which neither antonym applies (e.g., *hot/cold*, *good/bad*), the *wet/dry* scale does not seem to have a neutral point.<sup>28</sup> Instead, there is just a dividing point, probably based on sense perception.



Figure 26. *Wet* and *dry* as gradable adjectives

<sup>28</sup>One interesting thing about the *wet/dry* scale is that it does not seem to fit into either of the two main types described in the literature (for example, Mettinger (1994) and Cruse (1986)). The two types are scales that are 'open' (tending toward infinity) in one direction only (e.g., *fast/slow* and *big/little*) and those which are open in both directions (e.g., *good/bad*). The *wet/dry* scale seems to be a scale that is closed at both ends. A thing that is already *dry* to the touch can become drier and drier, beyond the limit of sense perception (and thus described by words such as *parched* or *arid*), but eventually an endpoint will be reached when the thing contains no water molecules at all. Similarly, a thing can become wetter and wetter, but eventually it becomes *saturated* or *waterlogged* so that it can not contain any more moisture.

Although *wet* as a gradable adjective contrasts with *moist*, *damp*, *drenched* and *soaked*, it also makes sense to say that *moist*, *damp*, *drenched* and *soaked* all describe kinds of wetness; similarly, while *dry* contrasts with *arid* and *parched*, *arid* and *parched* also describe kinds of dryness. This indicates that *wet* and *dry* label adjectives at two different levels of a taxonomic hierarchy, occurring both as superordinate and as subordinate labels, as shown in Figure 27 below.

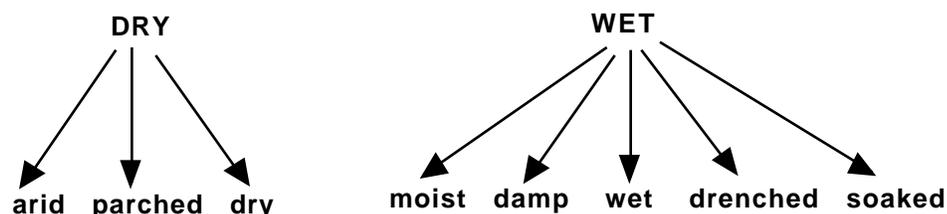


Figure 27. Taxonomic relationships among *wet* and *dry* adjectives

The fact that *wet* and *dry* can be used both as complementary terms and as superordinate terms for the gradable adjectives related to *wetness/dryness* probably has a strong influence on the choice of *wet* and *dry* as antonyms. Because *wet* and *dry* can be used as complementaries, they can be used together in many situations in which a gradable antonym (such as *moist* or *damp*) would not be appropriate. This is how they are being used in corresponding idioms such as *wet fly* and *dry fly*, *wet harvesting* and *dry harvesting*. Even when it is appropriate to use a gradable adjective, there may be many situations in which information about the intensity of wetness or dryness is not very important and so the superordinate terms *wet* or *dry* do just as well as the more specific adjectives. Consider the examples in (13) below.

- (13) a. Is the soil wet or dry; heavy clay, loamy or sandy? (Ingrid Sundstrom. 1996. *Star Tribune*, 1 August, Home & Garden section, 8)
- b. It [a variety of potato] does well in both dry and wet conditions. (Renee Schilhab. 1996. In a bumper crop year, potato farmers moan. *New York Times*, 6 February, section A, 25.

By choosing to use *wet* and *dry* rather than more specific adjectives, the writers of these examples are effectively indicating a range of values. For example, the *wet soil* in (13a) includes soil that is very wet (*waterlogged* or *soggy*) as well as soil that is just slightly wet (*damp* or *moist*).

The fact that *wet* and *dry* are appropriate in more kinds of situations than any of the more specific adjectives means that they have a greater range of semantic range in which to contrast. This range of contrast is further strengthened by the fact that the verb *dry* co-occurs with the adjective *wet*.

The next case study focuses on one adjective with two antonyms, *unhappy* and *sad*. This case study is different from the previous two in that it deals with words that describe emotions rather than physical properties, but it will be shown here too that the notion of shared semantic range is useful, in this case for explaining why *happy* has two different antonyms.