1 Introduction

Often, relative judgements are easier to make than absolute judgements. This is why comparisons are a natural way for people to express opinions. You will be given sentences from product reviews that contain comparisons. Your task is it to make a fine-grained annotation of the parts of all comparisons that are contained in the sentence.

By looking only at the annotation a person should be able to find out

- What word that expresses the comparison (in the examples written as “predicate”)?
- Which entities are compared (in the examples written as “[entity]”)?
- In regard to what are they compared (in the examples written as “[aspect]”)?
- Which entity is better, are both the same or is no ranking introduced?

This section gives a short introduction about the different items to be annotated and refers to the following sections where these items will be explained in more detail. If you are in doubt about anything in a sentence, you can indicate this in the annotation notes at the end (see section 9).

Here are some example comparisons from blog posts that compare cameras (all spelling errors are original):

1. “[350D]E1 is actually even smaller than [300D.]E2”
2. “[It]E1 comes with the same [stabilizer technology]A that [the Nikon D200]E2 has.”
3. “[In every other respect]A_E1 is [better]A_E2 is [good]S or [better] than [the 5D]E2 is [better],”

The word that expresses the comparison is called “comparative predicate”. Often the predicate is a comparative adjective, e.g., “smaller” in example one, but not always. One sentence can contain more than one predicate. All annotations are given per predicate, i.e., each of the following annotation steps is repeated two times in example 3 (see section 2 for details).
Sometimes a predicate is a function word, e.g., “as” and does not carry the information about the scale of the comparison. In this case the content word should be annotated as a scale, e.g., “good” in example 3. In case where the predicate already covers the scale, the scale slot is left empty (see section 3 for details).

A comparison includes usually two entities that are compared. Most of the time these are products like the two cameras referred to by their model name “350D” and “300D”. More detailed annotation guidelines for what we consider to be an entity are given in section 4. Also, the compared entities can be of different types, they can be a specific product, a company, a part of a product or other things (see section 7 for details).

Two entities are rarely compared in their totality; most of the time only some aspect is compared. Aspects are most often parts or attributes of the product, e.g., the zoom, the number of megapixels, the size or the weight of a camera (see section 5 for details).

Comparisons are of different types, e.g., the first example expresses a ranking between the two entities, while the second example puts the two entities on the same level. This comparison type should be annotated as well (see section 6 for details).

2 Annotation of Predicates

A comparative predicate is the word or phrase that actually expresses the comparison. Predicates are often comparative adjectives or adverbs, but may be of any part of speech. Examples:

- “350D is actually even smaller than 300D.”
- “It looks exactly like the 20D.”
- “It comes with the same stabilizer technology that the Nikon D200 has.”
- “Heavy and bulky compared to other two.”
- “The new T-MAX 400 film provides a grain structure that is superior to anything I’ve seen in a 400-speed film.”
- “The G9 exceeds that standard to my eye.”
- “A striking difference between the EOS 350D and the new EOS 400D concerns the image sensor.”

Minimal spans A predicate consists of one or more adjacent words. Annotate the minimal span that is necessary to express the comparison. Specifically, do not annotate prepositions or subordinating conjunctions that belong to a predicate, e.g., annotate “better” instead of “better than” or “compared” instead of “compared to”.

Examples:

- “350D is actually even smaller than 300D.” (not “smaller then”)
- “Heavy and bulky compared to other two.” (not “compared to”)
- “These new models blow it away.” (not “blow away”)

Modifiers The comparative predicate may be modified by other words, e.g., “much better” or “not much bigger”. If these modifiers do not change the fact that it is a
comparison, e.g., they only influence the sentiment strength or direction, they should not be annotated as part of the predicate.

Modifiers that make an expression into a comparison should be annotated. This refers to quantifiers like “more” or “less”, that are used together with the adjective to form the comparative form. In this case, the modifier should be annotated as the predicate and the adjective as the sentiment, e.g., in “more expensive”, “more” should be the predicate and “expensive” should be the sentiment (see section 3). This should even be done if the use of the quantifier is an error, e.g., “more better”.

Another frequent expression that makes something a comparison is “as X as”. Annotate the first “as” as the comparative predicate, e.g., “as small as”. The part of “X” expressing the sentiment, e.g., “small” in the example, should be annotated as the sentiment (see section 3).

Examples:
• “More comfortable to use.” (not “more comfortable”)
• “The E-1’s photos were less noisy.” (not “less noisy”)
• “The G9 is not much bigger physically.” (not “much bigger” or “not much bigger”)
• “Considerably less vulnerable than a sensor that shakes and vibrates.” (not “considerably less vulnerable”, not “less vulnerable”)
• “However most reviews that I read pointed FZ18 to be more superior then the other 2.” (not “more superior”)
• “Battery life not as good as G5.” (not “as good as”, not “good”)
• “Nikon has nearly as large a lens range.” (not “as large”, not “large”)

Multiword predicates Most predicates will be single words (“better”, “same”, …). Still, predicates may consist of a phrase of multiple tokens that occur next to each other. Annotate the whole phrase, if it consists of adjacent words, but still annotate minimal spans (no prepositions, or modifiers, if possible).

For systematic cases of multiword expressions like “more X” or “as X as”, see above.

Examples:
• “It’s almost on a par with the 30D.”
• “The EOS 40D has the edge over the 400D if budget is not a concern.”

Subjective and objective Both subjective and objective comparisons should be annotated. Comparisons should also be annotated inside questions or other contexts where the author is not sure if the comparison is true. What should not be annotated are comparative words used in non-comparative context, e.g., descriptions of some setting or environment like “lower light situations”.

Examples:
• “I liked the Canon better . . . ” (subjective judgement)
• “. . . and the weight was less to carry around.” (objective, measurable)
• “A dSLR is usually a bigger and more expensive camera.” (comparison of general dSLRs to other cameras)
• “if the camera itself is better than the sony, . . . ” (unsure comparison)
• “the Lumix photo examples at higher ISO settings gave a type of noise . . .”
  (“higher” is a setting description, not a comparison)

Several predicates A sentence can contain several comparative predicates. If the predicates express different comparisons, annotate all of them separately:

Examples:
• “I liked the Canon better and the weight was less to carry around.”
  (2 predicates/comparisons: better, less)
• “As a result Canon 40D has larger, clearer, sharper and more detailed photos than Rebel Xti or Canon 30D.”
  (4 predicates/comparisons: larger, clearer, sharper, more detailed)
• “In every other respect, the 40D is as good or better than the 5D.”
  (2 predicates/comparisons: as good, better)

If two predicates are used to express the same comparison, annotate only one of them. Preference should be given to content words, i.e., not prepositions/conjunctions (like “than”) or generic comparisons (like “compared”).

Examples:
• “it employs a larger sensor compared to a point and shoot with the same mega pixels.” (prefer “larger” over “compared”)
• “I’m curious what the limitations are compared to a film SLR.” (prefer “limitations” over “compared”)
• “almost SIXTEEN TIMES the shutter speed compared to a kit lens.” (prefer “compared” over “TIMES”)
• “The difference compared to 8 Megapixels is n’t even that significant.” (prefer “difference” over “compared”)
• “It’s the exact same camera as the 400D/XTi.” (prefer “same” over “as”)
• “These features probably make the D60 worth the $ 200 more than the D40X.” (prefer “more” over “than”)

3 Annotation of Scale

In some cases a comparative predicate is a function word and does not carry any information about the scale. In such cases, the scale should be annotated additionally. In cases where the scale is included in the predicate (which is most of the time), nothing should be annotated for this argument.

Examples:
• “More [comfortable]S to use.”
• “The E-I’s photos were less [noisy]S.”
• “Battery life not as [good]S as G5.”
• “Nikon has nearly as [large]S a lens range.”
• “350D is actually even smaller than 300D.” (no scale annotated)
Minimal spans  The scale must consist of adjacent words, but does not have to be adjacent to the predicate. Annotate the minimal span that is necessary to express the scale.

Examples:
- “While the photos produced by this sensor are not as indulgently detailed as the ones shot by Canon’s high-end models . . .” (not “indulgently detailed”)

Non-multiword predicates  Not all occurrences of function words indicate multiword predicates, they also may occur as predicates on their own without an argument scale. A test may be if reordering or replacing the predicate is possible without affecting the following word. In these cases the word following the predicate should be annotated as the aspect (see section 5).

Examples:
- “The older Digital Elphs had less noise.” (no scale annotated)
- “The older Digital Elphs had higher noise.” (no scale, replacing possible)
- “Noise on the older Digital Elphs was less.” (no scale, reordering possible)
- “The E-1’s photos were less noisy.” (scale annotated)
- “The E-1’s photos were higher noisy.” (replacing not possible)
- “noisy in the E-1’s photos was less.” (reordering not possible)

Set of scale arguments  There can be a set of scale arguments that are referenced by the same predicate. Annotate them all separately, without the connecting “or”, “and”, commas or other intervening words.

Examples:
- “[Heavy] and [bulky] compared to [other two].”

4 Annotation of Entities

A comparison usually compares two entities. In product reviews, most of the times two products are compared, e.g., two different cameras from different companies or different models. Entities can also be a set of products, a company, a part or attribute of a product or a reference to a general standard. For every predicate, the two entities E1 and E2 that are compared should be annotated. E1 is the entity that occurs before the predicate, E2 is the one after. If both entities are before or after the predicate, label them in order of appearance. If one of the entities is implicit, the annotation slot for this entity is left empty.

Examples:
- “[350D] is actually even smaller than [300D].”
- “[It] comes with the same stabilizer technology that [the Nikon D200] has.”
- “A striking difference between [the EOS 350D] and [the new EOS 400D] concerns the image sensor.” (both arguments after predicate)
- “[Samsung] and [Pentax] share the same lens mount.” (both arguments before predicate)
• “Heavy and bulky compared to [other two].” (E1 implicit the reviewed product)
• “Best battery life.” (E1 implicit the reviewed product, E2 implicit standard)
• “[The G9] exceeds [that standard] to my eye.” (explicit general standard)

Minimal spans An entity must consist of adjacent words. Annotate the minimal span that is necessary to express the entity. Always annotate the complete product name including the manufacturer if given, e.g., “Canon EOS 40D Digital SLR”, not only “EOS 40D”. Include determiners and modifiers, e.g., annotate “the new EOS 40D”, not only “EOS 40D” or “new EOS 40D”. Do not annotate prepositional clauses or relative clauses attached to the entity. Try to keep the entities as short as possible, while still retaining the content. As a test, entities should be replaceable by “it” (E1) and “the other” (E2).

Examples:
• “[The G9] exceeds [that standard] to my eye.” (not “G9”, not “standard”)
• “[The Canon EOS 40D Digital SLR] ultimately delivers better photo quality than [it’s competitors].” (not “EOS 40D” or any subsequence, not “competitors”)
• “Yes [a $1000 lens] will be better than [a $330 one].” (not “lens”, not “$1000”)
• “[It] offers a digital-conversion capacity 1,024 times greater than [conventional 12-bit, 4,096-gradation A/D converters].”
• “[The new T-MAX 400 film] provides a grain structure that is superior to [anything] I’ve seen in a 400-speed film.” (not “anything I’ve seen in a 400-speed film”)
• “It’s a virtue that the body is compatible with [Canon’s EF-S lenses], which are more compact than [standard EF lenses] of the same focal range.” (not “standard EF lenses of the same focal range”)
• “In terms of size, [the EOS 40D] is almost identical to [its older sibling], the EOS 30D.” (not “its older sibling, the EOS 30D”, not “the EOS 30D”)

Implicit entities Often the product that is under review is not spelled out in every comparison, but is assumed to be the implicit target. This happens most often to E1 in incomplete sentences. A common reason for E2 to be empty is that an entity is compared to some standard that is not explicitly mentioned. If an entity is implicit, the annotation slot for this entity should be left empty. The distinction if E1 or E2 is implicit (and thereby how the explicit entity should be annotated) can be made by inserting a placeholder like “it” or “this product” for the implicit entity.

Examples:
• “Heavy and bulky compared to [other two].”
  → “[This product] is Heavy and bulky compared to [other two].”
  (E1 implicit the reviewed product)
• “[Nikon] has nearly as [large] a lens range.”
  → “[Nikon] has nearly as [large] a lens range as [this manufacturer].”
  (E2 implicit the manufacturer of the reviewed product)
• “Best battery life.”
  → “[It] has the Best battery life of all cameras.”
  (E1 implicit the reviewed product, E2 implicit standard)
Sets of entities  Both entities E1 and E2 can consist of a set of things (products, aspects or anything else). Annotate them all separately, without the connecting “or”, “and”, commas or other intervening words. Examples:
  • “[The E-400]\_\_E1 is just for beginners as [good]\_\_S as [the Nikon D40x]\_\_E2 or [the Canon EOS 400D]\_\_E2.” (set of two products as E2)
  • “[The D80]\_\_E1, [K10D]\_\_E1 and even little cameras like [the E-500]\_\_E1 or [the D40]\_\_E1 have a more [solid]\_\_S feel.” (set of four products as E1)
  • “In my research I did find out that [the Olympus FL50]\_\_E1 and [FL36 flashes]\_\_E1 are the same as [the Panasonic FL360]\_\_E2 and [FL500 flashes]\_\_E2”. (set of two products as E1, set of two products as E2)

Plural entities  If all compared entities are ranked as the same, sometimes they are referenced together. In this case, the plural reference should be annotated as both entity E1 and entity E2. But not all plural entities are like this, sometimes a (plural) set of entities is compared to something else. Examples:
  • “[All three models]\_\_E1/E2 are extremely close in terms of price and features.”
  • “[Both]\_\_E1/E2 have the same advantages.” (E1 = E2)
  • “Often, [they]\_\_E1 are as [cheap]\_\_S as [anything]\_\_E2 found online.” (E1 and E2 different)

Annotate the closest entity  If several mentions of the compared entity are in the current sentence, choose the mention closest to the predicate you are annotating. This should be done even if the closest mention is a pronoun and a different mention would give more information about the actual product. The only exception is, if a closer mention occurs inside of a nested clause, in parenthesis or in some other way not as part of the main sentence. Examples:
  • “The Canon EOS 400D is still a very compact DSLR camera, and upon first glance it\_\_E1 certainly does resemble the [EOS 350D]\_\_E2.” (not “Canon EOS 400D”)
  • “It’s the exact same camera as the 400D/XTi (English menus, not to worry), but since it has the Japanese warranty, it\_\_E1 was a lot cheaper.” (not a different “it”)
  • “I have been researching both the Nikon D80 and the Canon Rebel Xsi since [they]\_\_E2 are very close in price.” (not “the Nikon D80” as E1 and “the Canon Rebel Xsi” as E2)
  • “[These baby Alphas]\_\_E1, the 200, 300 and 350, are more [similar]\_\_S than [any group of cameras]\_\_E2 in any other manufacturer’s lineup.” (not “the 200” as E1 and “300”, “350” as E2)

5 Annotation of Aspect

Two entities are rarely compared in their totality, most of the time only some aspect is compared. Aspects can be parts of the product (e.g., the lens, the sensor of a camera),
properties or attributes of the product (e.g., the number of megapixels, the size of a camera), results of using the product (e.g., the image quality), or actions performed with it (e.g., shooting pictures, pressing buttons, navigating menus). Some aspects are mentioned explicitly, some are implicit in the predicate, e.g., the aspect size in the predicate “smaller”. Implicit aspects should not be annotated. Aspects are optional, not every comparison contains an aspect.

Examples:
- “Best battery life” (aspect is a part of the product)
- “[The weight] was less to carry around.” (aspect is an attribute)
- “[The new T-MAX 400 film] provides [a grain structure] that is superior to [anything] I’ve seen in a 400-speed film.” (aspect is a result)
- “[The G9] is much easier to shoot with.” (aspect is an action)
- “[It] comes with the same [stabilizer technology] that [the Nikon D200] has.”
- “A striking difference between [the EOS 350D] and [the new EOS 400D] concerns [the image sensor].”
- “However, if we put [the EOS 300D] next to [the EOS 400D], we note a comparably large difference.” (no aspect)
- “[350D] is actually even smaller than [300D].” (aspect implicit, no annotation)
- “The menu system has also been redesigned, making [it] much easier to read and navigate.” (aspect can be a phrase)

Minimal spans An aspect must consist of adjacent words. Annotate the minimal span that is necessary to express the aspect. Include modifiers, but exclude prepositional phrases or relative clauses.

Examples:
- “A striking difference between [the EOS 350D] and [the new EOS 400D] concerns [the image sensor].”
- “[It]’s a compact digital camera, of “only” 6 megapixels, whose [image quality] (specially at low light) blows away pretty much [any other compact camera] I have ever used.” (not “image quality (specially at low light)”)

Implicit entities Sometimes the predicate or the scale contain the aspect implicitly, e.g., the aspect size is expressed by the predicates “smaller” or “larger”. In this case, the predicate or scale should not be annotated as the aspect. However, the same predicates that indicate implicit aspects can also refer to an explicit aspect, e.g., “smaller screen” has “screen” as an explicit aspect. In this case, the explicit aspect should be annotated.

Examples:
- “There are actually [several DSLR’s] smaller than [this one].” (aspect implicit in predicate, no annotation)
- “Many digital SLRs have [sensors] whose [size] is smaller than [that of a 35mm film frame].” (aspect explicit)
- “Not as rugged as [the K10D].” (aspect implicit as scale, no annotation)
- “Not as wide as [the Canon].” (aspect explicit)
**Set of aspects**  There can be a set of aspects that are referenced by the same predicate. Annotate them all separately, without the connecting “or”, “and”, commas or other intervening words.

Examples:

- “All three models $E_1$ and $E_2$ are extremely close in terms of [price] and [features].”

**Aspect or entity**  Entities and aspects are syntactically defined, not as absolutes. The two entities are the things that are compared, the aspect is an optional attribute of this comparison. So what is an aspect in one comparison may be an entity in a different syntactic context. This enables us to model hierarchies of aspects, i.e., when two parts of two products are compared in some aspect.

Examples:

- “More [resolution] than even the 30D.”
  (“resolution” is the aspect, $E_1$ is implicit: “it has . . .”)
- “As ISOs increased, the D40x’s resolution exceeded that of the Rebel.”
  (“resolution” is part of the entity)
- “[the $40D$] uses the same [lenses] as [the $1D$] as well.”
  (“lenses” is the aspect)
- “…the body is compatible with [Canon’s EF-S lenses], which are more [compact] and [affordable] than [standard EF lenses] of the same focal range.”
  (lenses are compared in the implicit aspects size and price)
- “[The Canon EOS 40D Digital SLR] ultimately delivers better [photo quality] than [its competitors].”
  (“photo quality” is the aspect)
- “…[photos] that are just slightly, but pleasantly, saturated with a mildly warmer [tone] than [those from other manufacturers].”
  (photos created by different cameras are compared in the explicit aspect tone)

### 6 Annotation of Comparison Type

Comparisons have two main types, gradable and non-gradable. A gradable comparison expresses an ordering relationship of the entities being compared. This ordering relationship can have three forms, it can set one entity over the other (ranked comparison), one entity above/below all others (superlative comparison), or rate all entities as equal (equative comparison). The first two relations also have a polarity (positive or negative) related to the order the entities have.

Non-gradable comparisons express a difference between two entities, but do not rank the entities. This difference can be in an aspect both entities share (aspect difference), or an aspect that one has and the other doesn’t (existence difference).

Examples:

- “[350D] is actually even smaller than [300D].” (ranked, positive)
- “Best [battery life].” (superlative, positive)
- “[It] comes with the same [stabilizer technology] that [the Nikon D200] has.” (equative)
"However, if we put the EOS 300D|E1 next to the EOS 400D|E2, we note a comparably large difference." (aspect difference)

"Also, there is no live histogram\textsubscript{A} like in the Lumix|E2." (existence difference)

**Ranked comparisons (non-equal gradable)** The most frequent case of comparison is when two entities are compared in one aspect and one of the entities is rated as better. If E1 is rated as better than E2, the sentiment of the comparison should be annotated as positive. Otherwise, if E2 is rated as better than E1, the sentiment of the comparison should be annotated as negative.

Sometimes a predicate is ambiguous, e.g., “smaller” could be good or bad, it should be assumed to be positive unless there is reason to believe otherwise. If no ranking can be determined from the sentence, write this in the annotation notes.

Examples:

- “/350D|E1 is actually even smaller than /300D|E2” (ranked, positive)
- “/Heavy|A and /bulky|A compared to /other two|E2.” (ranked, negative)
- “/The E-1|E1’s /photos|A were less /noisy|S.” (ranked, positive)

**Superlative comparisons** In superlative comparisons, the reviewed entity is set above or below all other comparable entities or some standard. Most superlative comparisons contain an adjective or adverb in the superlative form (“best”, “worst”, “most expensive”, “least expensive”, …). But superlatives can also be expressed by expressions like “wins over all others”. Superlatives can be positive and negative just like ranked comparisons.

Examples:

- “/Best /battery life|A.” (superlative, positive)
- “/Worst /battery life|A of /the three|E2.” (superlative, negative)
- “/The G9|E1 exceeds /that standard|E2 to my eye.” (superlative, positive)
- “/It|E1’s a compact digital camera, of “only” 6 megapixels, whose /image quality|A (specially at low light) blows away pretty much /any other compact camera|E2 I have ever used.” (superlative, positive)
- “The new /T-MAX 400 film|E1 provides /a grain structure|A that is superior to /anything|E2 I’ve seen in a 400-speed film.” (superlative, positive)

**Equative comparisons** In equative comparisons, both entities are rated as equal. No polarity can be assigned. Comparisons should be annotated as equative even if they are only rated as nearly equal, e.g., “about the same” or “nearly equal”.

Examples:

- “/It|E1 comes with the same /stabilizer technology|A that /the Nikon D200|E2 has.”
- “Often, /they|E1 are as /cheap|S as /anything|E2 found online.”
- “/All three models|E1|E2 are extremely close in terms of /price|A and /features|A.”
- “/The new camera|E1 is very similar to the /design|A of /the old fuji GS645|E.”
**Non-graded comparisons / differences** A difference is expressed, but no order between the entities is given. The most simple variety is to state that a difference exists in some aspect that both entities share, but without giving a ranking for this difference (aspect difference). If there is some comparison predicate like “difference”, such a comparison should be annotated with all associated entities and aspects.

Another possibility is a statement that one entity has something the other has not (existence difference). Note that this is only to be annotated as a comparison, if two entities appear in the sentence. A simple statement “camera X has no zoom” should not be annotated. If two entities are compared with some predicate, e.g., “unlike” or “as”, it should be annotated with all associated entities and aspects.

The last variety is an “apple and pears” comparison, i.e., a contrast of some aspects one entity has with some aspects the other one has. Usually the aspects are somewhat related, e.g., “camera X has a 4x zoom while camera Y has a 10x zoom”. Such comparisons should not be annotated as it is not really a comparison, instead a list of individual features of both entities.

Examples:

- “However, if we put [the EOS 300D]$_{E1}$ next to [the EOS 400D]$_{E2}$, we note a comparably large difference.” (aspect difference)
- “A striking difference between the [EOS 350D]$_{E1}$ and the new [EOS 400D]$_{E2}$ concerns the [image sensor]$_A$.” (aspect difference)
- “Also, there is no [live histogram]$_A$ like in [the Lumix]$_{E2}$…” (existence difference)
- “…or [blown highlights indicator]$_A$ as on [my Pentax]$_{E2}$.” (existence difference)
- “The ‘SX1’ is basically an SX10, but adds a CMOS sensor instead of CCD, and a full 1080 HD video mode.” (“apple and pears” difference – no annotation)

**Negation** Negation changes the type of comparison, not only the polarity.

Examples:

- “The G9 is much **bigger** physically.” (ranked comparison, positive)
  
  “The G9 is **not** much **bigger** physically.”
  
  = “The G9 is **as big** physically as X.” (equative comparison)

- “This new Olympus is **as good** as camcorders.” (equative comparison)
  
  “This new Olympus is still **not** as good as camcorders.”
  
  = “This new Olympus is **worse** than camcorders.” (ranked comparison, negative)

- “They are **comparable** to Pany’s amazing specs!” (equative comparison)
  
  “They are **not** even **comparable** to Pany’s amazing specs!”
  
  = “They are **different** from Pany’s amazing specs!” (aspect difference)

- “The E-400 is **different** at Nikon D80/200, Pentax.” (aspect difference)
  
  “The E-400 is **not** so **different** at Nikon D80/200, Pentax.”
  
  = “The E-400 is **similar** at Nikon D80/200, Pentax.” (equative comparison)

### 7 Annotation of Entity Types

Most of the time, two different products will be compared as entities. A specific product will typically be referred to by a product name, e.g., “Canon EOS 40D Digital SLR” or
some abbreviation of it, e.g., “the 40D”. Sometimes, if products from different vendors are compared, the company name is used as the abbreviation. A product can also be compared not to one other product, but to a set of two, three or more products. Often in superlatives, but also sometimes in other types of comparisons, a product is compared to a general standard. As discussed in section 5, entities are syntactically defined, so entities can be a part or attribute of a product, short what could be annotated in different contexts as an aspect. If none of the entity types fit, chose ‘other’. If you cannot decide on an entity type, chose ‘other’ and write a comment in the annotation notes.

Examples:

- “[350D]E1 is actually even smaller than [300D.]E2” (E1: product, E2: product)
- “I liked [the Canon]E1 better…” (E1: product abbreviated by company name)
- **Worst** battery life of [the three]E2. (E2: set of products)
- “IfE1’s a compact digital camera, of “only” 6 megapixels, whose image quality (specially at low light) blows away pretty much [any other compact camera]E2 I have ever used.” (E1: product, E2: standard)
- “As ISOs increased, the [D40x’s resolution]E1 exceeded [that of the Rebel]E2.” (E1: aspect, E2: aspect)
- “Many digital SLRs have [sensors]E1 whose size is smaller than [that of a 35mm film frame]E2.” (E1: aspect, E2: other)

8 When is something a comparison?

Roughly speaking, something is a comparison if we can rephrase it as “E1 is better/worse than E2 with respect to A” for a ranked or superlative comparison, “E1 and E2 are on the same level with respect to A” for an equative comparison or “There is a difference between E1 and E2 with respect to A” for a difference.

Only comparisons that really compare something useful should be annotated. There are sentences that look like comparisons but are not, e.g., some sentences use comparison words in a non-comparative context or in some sentences two products are mentioned, but not compared. Also not comparisons we are interested in are sentences that compare the product to ideas, the past or the future. If you have a very hard time to decide entities are involved, the probability is high that it should not be considered a comparison.

Examples:

- “I am more or less satisfied.” (non-comparative use of “more”)
- “I couldn’t be happier!” (non-comparative use of “happier”)
- “[The finish]A looks more professionalS than on [any other model]E2 I’ve seen.” (comparison of finish of implicit entity 1 with other models)
- “The finish is more mirror than silver.” (non-comparative, color description)
- “[It]E1 is bigger than [the E50]E2.” (comparison of sizes)
- “It is bigger than I expected.” (comparison to idea)
- “I took more pictures with in the first day than I had in the 2 years before.” (comparison to past)
• “This is my first digital camera, and I am very pleased with it.” (non-comparative)
• “I bought this camera as a replacement for the sd700.” (two products)
• “…as well as continued support for all EF and EF-S lenses, EX Speedlites and EOS accessories.” (several products, no comparison)

A guideline question could be “would I tell my friend about this when he wants to buy the product”. If you are in doubt, write a comment in the annotation notes.

9 Annotation Notes

Please note here when there are errors in the low-level processing. For example if a sentence is not correctly split, or tokenization has not correctly separated some tokens. Do not note spelling errors, these are from the original reviews and not the fault of automatic processing. Please note, if the sentence is unclear or incomprehensible. Also note, if you have a doubt about some part of the annotation or left something unannotated because you could not decide what to annotate.