



At -ing and on -ing: Comparing two sentential complements of the verb *work*

Mark Kaunisto & Juhani Rudanko
University of Tampere

Abstract

This paper examines the variation between two sentential complement patterns selected by the matrix verb *work*. In present-day English it is possible to find instances where the verb is followed either by an *at -ing* complement or an *on -ing* complement. A feature common to these patterns is that the subject of the matrix verb is also the understood subject of the gerund of the lower-level complement clause. The syntactic similarity of the patterns gives rise to a closer study of them in large electronic corpora. In addition to a survey of the diachronic developments in the occurrence of the patterns from the nineteenth century onwards, semantic characteristics of the patterns are examined in order to detect notable tendencies in their use. The paper proposes that in certain circumstances one pattern may be favoured over the other, with the difference occasionally having to do with the prospect of achieving the goal expressed in the gerundial complement. Another finding indicating a difference in meaning between the patterns is the different usage

of the simple and progressive forms of the matrix verb *work*, as the *at -ing* pattern has the matrix verb more frequently in the simple forms. It is suggested that ultimately the differences between the two patterns reflect the fundamental meanings of the prepositions *at* and *on*.

1. Introduction

One interesting characteristic of the use of the verb *work* is the variety of complement patterns that the verb takes. This paper examines two types of sentential complements of the verb, exemplified in sentences in (1a-b):

- (1) a. We're supposed to *work at getting* the angle exactly, perfectly right. (COHA, 1989, FIC)
- b. ... Clive Watson, who owns his own public relations company and *works on organizing* some big events. (COHA, 2000, NEWS)

In both (1a) and (1b) the matrix verb *work* selects a preposition, *at* in (1a) and *on* in (1b), and an immediately following *-ing* clause as its complement, with the *-ing* clause being a gerund. In (1a) the complement clause is what is here termed an *at -ing* complement and in (1b) it is an *on -ing* complement. It is assumed here that the gerundial complements are sentential, with their own understood subjects. Such understood subjects make it possible to represent the argument structures of the lower predicates in (1a-b) in a straightforward fashion.

The syntactic structures of (1a) and (1b) are similar in another important way. In both types of sentence, the matrix verb *work* assigns a semantic role to its subject, and the prepositional *-ing* complements of *work* therefore involve control. More specifically, they involve subject control in both (1a) and (1b). Eschewing elaborate projections, of the type of AgrS and AgrO, the structures may be represented as in (2), with the symbol PRO (see Chomsky 1985: 119–131) representing the understood subject:

- (2) NP₁ *work* [*at/on*]_{Prep} [[[PRO]_{NP2} Verb_{2ing} ...]_{S2}]_{NP}

The representation in (2) makes use of the traditional notion of a nominal clause, which is simply a clause dominated by an NP node.

In addition to the two gerundial patterns, the verb *work* also selects other patterns

in English. Among them are *to* infinitives, as in “Corporate management often *works* to keep the resolution off the annual meeting agenda” (COHA, 2000, MAG), and nonsentential patterns with the prepositions *at* and *on*, as in *She worked at the tax office* and *They worked on the plan*. Such additional patterns deserve attention, but for practical reasons the present investigation focuses on the two gerundial patterns. The two patterns are similar syntactically in that they consist of a preposition and a gerund, and they are also fairly similar in meaning (see Section 3). In view of the similarities of the two patterns, it is of interest to compare them in more detail with data from large electronic corpora. This article offers such a comparison. Section 2 of the paper first offers a general survey of the use of the two constructions by observing the numbers of tokens in two large electronic corpora. Section 3 provides a discussion on the semantic aspects of the constructions, also paying attention to the earlier work on the use of the patterns. Finally, Section 4 looks into other possibly distinguishing characteristics of the two patterns that can be investigated by quantitative methods.

2. Survey of data from British and American English

The Corpus of Historical American English, [COHA](#), is here used as the source of data for investigating the history of the *at -ing* and *on -ing* patterns selected by the matrix verb *work*. The choice of this database was made because of the large size of this corpus and because of its balanced nature. To collect relevant tokens the following basic search strings were used: `[work].[v*] at [v?g*]` and `[work].[v*] on [v?g*]`, which derived tokens of different inflected forms of the verb *work* followed by the prepositions *at* and *on* and a gerundial form of any verb. In order to ensure that relevant tokens could be retrieved which had intervening words between either the matrix verb and the preposition or between the preposition and the lower-level gerund, separate searches were conducted with wildcard asterisks between the elements. Eventually searches were made of tokens with up to six intervening words between the matrix verb and the preposition, and zero, one or two intervening words between the preposition and the gerund (relevant tokens were not found with more than one word between the preposition and the gerund). Irrelevant tokens observed by manual inspection were excluded from further analysis.

Table 1 gives information about the frequencies of the two types of gerundial

complements of *work* in each decade of the corpus. Information is also included on the size of the subcorpus for each decade, given in millions of words. Normalized frequencies per million words are given in parentheses.

Decade	Size (million words)	<i>at -ing</i> tokens (pmw)	<i>on -ing</i> tokens (pmw)
1810s	1.2	0 (0.0)	0 (0.0)
1820s	6.9	0 (0.0)	0 (0.0)
1830s	13.8	1 (0.1)	0 (0.0)
1840s	16.0	0 (0.0)	0 (0.0)
1850s	16.5	4 (0.2)	0 (0.0)
1860s	17.1	5 (0.3)	0 (0.0)
1870s	18.6	5 (0.3)	0 (0.0)
1880s	20.9	3 (0.1)	0 (0.0)
1890s	21.2	6 (0.3)	0 (0.0)
1900s	22.5	4 (0.2)	1 (0.0)
1910s	22.7	11 (0.5)	2 (0.1)
1920s	25.7	11 (0.4)	0 (0.0)
1930s	24.4	7 (0.3)	2 (0.1)
1940s	24.1	17 (0.7)	6 (0.2)
1950s	24.4	31 (1.3)	6 (0.2)
1960s	24.0	26 (1.1)	6 (0.3)
1970s	23.8	35 (1.5)	18 (0.8)
1980s	25.2	43 (1.7)	27 (1.1)
1990s	27.9	33 (1.2)	51 (1.8)
2000s	29.5	50 (1.7)	72 (2.4)

Table 1. The incidence of *at -ing* and *on -ing* complements of the verb *work* in each decade of COHA.

This historical survey yields a number of noteworthy descriptive results. It shows that both patterns were very rare in the first few decades of COHA, and that it was

the *at -ing* pattern that was the first to emerge in noticeable numbers. For its part, the *on -ing* pattern was conspicuous by its absence during the entire nineteenth century. In the early decades of the twentieth century the *on -ing* pattern continued to be very rare, and much less frequent than the *at -ing* construction. However, from the 1940s onwards it began to show an upward trend, with the trend being in keeping with the general spread of gerundial complements in fairly recent English (see e.g. Rohdenburg 2006, Vosberg 2009). Both patterns have become more frequent in the last few decades, but even more spectacularly, the *on -ing* pattern has surpassed the *at -ing* pattern in frequency by a fairly clear margin in the two most recent decades of the corpus. The changes over time are visualized in Figure 1 below, with the normalized frequencies of the tokens from periods of thirty years collapsed together. The figure illustrates the increase of both patterns, as well as recent surge in the number of tokens of the *on -ing* pattern.

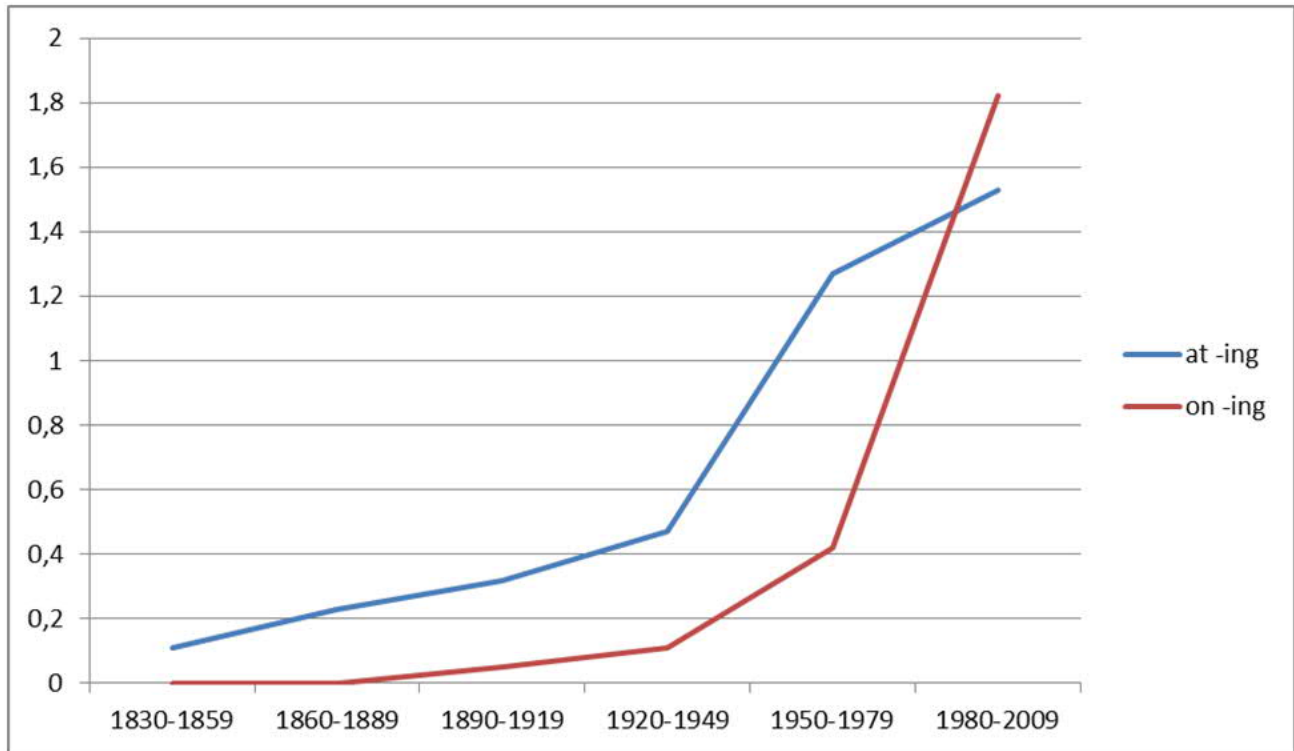


Figure 1. The normalized frequencies of *work at -ing* and *work on -ing* patterns in thirty-year periods in COHA.

In view of the rather dramatic rise of the *on -ing* pattern in very recent English, it is of interest here also to consult a second corpus, with data from recent American English. The 100-million-word [Corpus of American Soap Operas](#) was selected here, in order to consider data that may approximate current spoken American English, at least to some extent. Both variants are found in this corpus in plentiful numbers. Here is an illustration of each:

- (3) a. It's just, you know, I *work at forgetting* her. (Soap Opera Corpus, 2002 All My Children)
 b. We need to start *working on getting* over the loss we've suffered. (Soap Opera Corpus, 2002, Days of Our Lives)

Overall, there are as many as 389 relevant tokens of *work on -ing* in the Soap Opera Corpus, which is 3.9 per million. On the other hand, the number of *at -ing* complements of *work* is 85, which is 0.8 per million. The difference in frequency between the two patterns is therefore even more lopsided in favor of the *on -ing* pattern in this corpus than in the most recent decades of COHA.

There is no corpus of British English currently available that would precisely match the last two decades of COHA or the Soap Opera corpus with respect to its structure

or the dates of its contents. The British National Corpus (BNC) is probably the best one can do here, even admitting that a portion of the data in it comes from slightly earlier. Be that as it may, both variants are certainly found in the BNC. Here is an illustration of each:

- (4) a. ... you must *work at being* generous to your partner. (BNC, CGE, Religion)
- b. We are just going to have to *work on cutting* off their supply. (BNC, CBG, Newspapers)

Overall, there are 90 relevant tokens of the *at -ing* pattern and 119 tokens of the *on -ing* pattern in the BNC. Comparing these figures with the findings based on the last two decades of COHA and taking into account that a major segment of the BNC predates the 1990s, it appears that British English shows a distribution of the two types of complement that is fairly similar to the American English data. There does not appear to be a colonial lead in the frequency in the spread of the *on -ing* pattern with *work*.

3. Comparing the meanings of the two constructions

It was stated in the introduction that the meanings of the two gerundial patterns are fairly similar. This section offers a discussion of the issue. We might begin by considering these two pairs of recent examples:

- (5) a. ... one of the two who is tempted to quit, while the other wants to *work at making* a success of the marriage. (COHA, 2004, MAG)
- b. We are *working at rebuilding* our relationship. (Soap Opera Corpus, 2006, *As the World Turns*)
- (6) a. You need to *work on making* your relationship with Chad rock solid. (Soap Opera Corpus, 2002, *Passions*)
- b. ... right now, she's *working on sharpening* her own intuitive skills. (COHA, 2004, FIC)

Even when the investigator is armed with real data, it is not easy to discern a

difference in meaning between the two patterns. The task is compounded when it is noticed that the two patterns can be found under the same sense in some major dictionaries. Some dictionary entries may be considered here. In the online edition of the *Oxford English Dictionary* (OED), the third major meaning category of the verb *work* is given as “To labor, toil,” and under this major sense there is sense 12, which is phrased as follows:

12. To perform physical or mental labour; to exert oneself for a definite purpose, esp. in order to produce something or to earn a living; to perform a task or tasks; toil, labour.

Among the illustrations of sense 12 there is one token of what is here called the *at* *-ing* complement:

- (7) Young people who *work at cleaning* slag, helping meth-drinkers or clearing canals to make them navigable. (1968, *The Daily Telegraph*)

There is no example of an *on* *-ing* complement given under the sense, but there is an example of an *on* NP complement of the verb, and, more importantly, the preposition *on* is listed alongside of *at* in the types of complements selected by the verb when it has sense 12.

As for the *Collins COBUILD* dictionary, the following subentry of *work* from the 1987 edition is helpful and may be quoted in full:

20 If you work on something or at something, **20.1** you spend time and effort trying to improve it. EG *He has been working all season on his game...* *She works hard at keeping herself fit.* **20.2** you try to move it or open it by using your physical strength. EG *Someone must have worked at it with a crowbar...* *He worked on the lock with a nail file and finally managed to get the door open.*

In the *Collins COBUILD* entry there is again an emphasis on *at/on* NP complements, instead of the sentential patterns, but one of the examples illustrates a gerundial pattern, and the sense definitions in *Collins COBUILD*, especially the first of them, are worth bearing in mind. Similar paraphrases for *work at* and *work on* can be found in other present-day English dictionaries, for example *Macmillan English Dictionary*

(2002) and *Longman Dictionary of Contemporary English* (2003). In the *Macmillan English Dictionary* (2002), separate entries are provided for both *work at* and *work on* as phrasal verbs taking gerundial complements. *Work at* (s.v.) is paraphrased as ‘try hard to develop or improve something’, with the example *If she works at improving her game, she could be a champion*, and the definition for *work on* (s.v.) reads ‘spend time producing or improving something’, with the example *He’ll have to work on getting fit before the game*.

The failure of major dictionaries to make out a distinction between the two patterns in terms of meaning is a reflection of the degree to which the meanings are similar. Even so, it is appropriate to consider the task of teasing the two patterns apart, even on general theoretical grounds. Here we may recall Bolinger’s famous dictum: “a difference in syntactic form always spells a difference in meaning” (Bolinger 1968: 124). It is recalled that in light of the data from COHA the *at -ing* pattern is the older of the two, and it would be a strange situation if the *on -ing* pattern had arisen alongside of the *at -ing* pattern with precisely the same meaning. It is the purpose of this section to make a start on the task of comparing the two patterns, with an emphasis on a qualitative comparison, and on the task of differentiating their meanings in the system of English predicate complementation.

Any attempt to tease the meanings of the two patterns apart must be grounded in comparing the concrete difference between them, that is, in the fact that in one case the gerund is introduced by the preposition *at* and that in the other case it is introduced by the preposition *on*. It should of course be recognized that in both constructions the sentential constituent consisting of *at* or *on* and the following gerund is a complement of the verb *work*, and therefore it cannot be expected that the meaning of the preposition in the construction would have a meaning that directly reflects the prototypical meaning of the preposition. However, it is still possible that some kind of link can be established tying the meaning of the preposition in the complement construction to an aspect, or a figurative extension, of the prototypical or ideal meaning of the preposition.

As a preliminary to introducing later work, it is worth noting a remark on *at* and *on* by Knud Schibsbye. In his grammar he compares *at* and *on* and also discusses *work at* and *work on* as follows:

The value of point attached to *at* against that of ‘expanse’, ‘extent’ attached to *on*,

which latter used figuratively leads to associations such as duration and/or accompanying circumstances is to be seen in cases such as: *he would stay a few days at the farm / he works on the farm / / I looked at the hand / It was a new and fierce pain to look on all this* (: ‘the well-loved room, pictures, rugs ...’) – *Work at* simply expresses the direction of the activity: *he is working at a new invention / Alban worked at Chinese; work on* includes duration: *he is working on a poem // She was darning on a sock.* (Schibsbye 1970: 327)

Schibsbye’s comments are a useful start, but they still leave room for a more fully worked out account.

To survey the ideal meanings of the two prepositions, Herskovits (1986) and Tyler and Evans (2003) are referred to here. Their accounts are limited to constructions of the type “*at/on* NP” and they do not discuss sentential complements. Here is Herskovits’s account of the ideal meaning of *at*:

The use types of *at* center around one ideal meaning:

at: for a point to coincide with another.

Because the first point corresponds to the Figure and the second to the Ground, the first is typically mapped onto an object and the second onto a fixed earth location. Most commonly, an expression with *at* asserts that those two points, each specified by a different description, overlap in space, and the various use types, listed below, can be seen as variations on this theme. (Herskovits 1986: 128)

Her use types include “Spatial entity at location,” as in *Paul is at Yosemite*, “Person at Institution,” as in *Professor Jones is at Berkeley*, “Person using artifact,” as in *There is a student at the blackboard*, and “Spatial entity at landmark in highlighted medium,” as in *The bus is at the 3rd stop* (Herskovits 1986: 128–136; the illustrations from the same source).

Tyler and Evans offer the brief comment that “*at* indicates co-location between a TR and a LM, in which the location is conceptualized as a point” (2003: 178) (For present purposes, “TR,” for “Trajector,” may be taken to correspond to “Figure” and “LM,” for “Landmark,” to “Ground.”)

Here is Herskovits's analysis of the ideal meaning of *on*:

on: for a geometrical construct X to be contiguous with a line or surface Y; if Y is the surface of an object OY, and X is the space occupied by another object OX, for OY to support OX. (Herskovits 1986: 140)

Her use types include “Spatial entity supported by physical object,” as in *the man on the chair*, “Accident/object part of physical object,” as in *the crack on the wall*, “Physical object contiguous with another,” as in *the lock on his forehead*, “Spatial entity located on geographical location,” as in *the players on the football field*, and “Physical object contiguous with edge of geographical area,” as in *a room on the patio* (Herskovits 1986: 140–148; the illustrations from the same source). As for Tyler and Evans, they make the brief comment that “*on* mediates a relation of contact between a TR and a LM, which is a two-dimensional planar surface” (2003: 179).

The ideal meaning of *at* thus involves one point coinciding with another. In the case of the *at -ing* pattern, the Ground, using Herskovits's terminology, corresponds to the gerundial complement, and the location denoted by the complement is then conceptualized as a point in the case of the *at + NP* construction. The action or activity named by the lower clause thus denotes a circumscribed task or point of activity in which the referent of the subject engages. To consider the example of *at -ing* cited above from Collins COBUILD, *She works hard at keeping herself fit*, a paraphrase for the construction *work at Verb-ing* might be ‘engage in (the task of) Verb-ing’.

By contrast, in the case of the *on -ing* pattern, the Ground is conceptualized as a “two-dimensional planar surface.” This allows for a broader interpretation of the gerundial clause, with the gerundial clause conceptualized as a broader range of actions or a broader field of activity, and as a goal to be accomplished. There is therefore less focus on engaging in the circumscribed and specific action or activity expressed by the lower clause, and instead there is a suggestion or a possibility of ancillary activity that may lead to the goal named by the predicate of the lower clause. The example from Collins COBUILD also allows the preposition *at* to be replaced with the preposition *on*, as in *She works hard on keeping herself fit*, and a paraphrase for the construction *work on Verb-ing* might be ‘work towards (the goal of) Verb-ing’.

The predicate *keep oneself fit* is atelic, without a natural culmination or end point. It is worth considering sentences with other atelic lower predicates and with different types of higher subjects, involving different scenarios. The sentences in (8a-b) are authentic, those in (9a-b) are invented, with the preposition changed:

- (8) a. Males do not construct further nests as polygynous weavers of more productive lands do. Instead they assist females in rearing young, *working extremely hard at collecting* insect food. (BNC, AMG, Social sciences)
- b. All day long the enemy guns *worked at levelling* the holes laboriously scraped out of the previous night. (BNC, K91, Arts)
- (9) a. Males do not construct further nests as polygenous weavers of more productive lands do. Instead they assist females in rearing young, *working extremely hard on collecting* insect food.
- b. All day long the enemy guns *worked on levelling* the holes laboriously scraped out the previous night.

The idea of improvement, associated with the *on* pattern in Collins COBUILD (see [above](#)), seems less salient with the predicates *collecting insect food* and *levelling the holes* in (8a-b) than in the case of the predicate *keep oneself fit*. By contrast, the authentic *at -ing* complements in (8a-b) are in line with the specific and circumscribed nature of the scenarios denoted by the lower predicates.

Next, consider (10a-b) and (11a-b):

- (10) a. Cass was *working on getting* him released on bail today. (Soap Opera Corpus, 2001, *As the World Turns*)
- b. We are *working on getting* the ceremony started. (Soap Opera Corpus, 2001, *Passions*)
- (11) a. Cass was *working at getting* him released on bail today.
- b. We were *working at getting* the ceremony started.

The lower predicates in the authentic examples (10a-b) – *getting him released on bail* and *getting the ceremony started* – are telic, with natural end points. Both variants are possible in these cases, but in (10a-b) there is again, in accordance with the broader interpretation of the *on -ing* pattern, more focus on the goals and on the

notion of working towards those goals, while in the invented counterparts (11a-b) the focus is on the specific engagement that the referents are involving themselves in. The emphasis on goals in (10a-b) then also suggests that there is a more realistic prospect of accomplishing the goals in the case of (10a-b) than in the case of (11a-b).

Next consider the authentic sentence in (12) and its invented counterpart in (13):

(12) Mom, I've been *working on finding* you an apartment for when you get out of here tomorrow. (Soap Opera Corpus, 2005, *Young and Restless*)

(13) Mom, I've been *working at finding* you an apartment for when you get out of here tomorrow.

In (12) *on* again conveys the idea of working towards a goal or taking steps with the objective of finding someone an apartment. For its part, *at*, with its point-like associations, suggests more circumscribed engagement in the task of finding someone an apartment.

There are also examples where one of the variants is considerably more likely than the other. Consider example (14):

(14) He *worked at practicing* law.

Sentence (14) highlights engagement in the circumscribed task of practicing law, and an *on* variant, with its suggestion of working toward a goal, would seem unlikely here.

Consider also these examples with *on -ing*, which consist of pieces of dialogue:

(15) "You don't need a job."
"No? I'm feeling kind of bored right now."
"Yeah. Want to go upstairs and *work on being* bored?" (Soap Opera Corpus, 2008, *As the World Turns*)

(16) "You were cold and wanted to get warm."
"Well, me and you need to *work on being* cold a little more often." "Maybe we do." (Soap Opera Corpus, 2008, *Days of Our Lives*)

The examples in (15) and (16) suggest that the *on -ing* construction is more flexible semantically than the *at -ing* construction. The lower predicates here are *be bored*

and *be cold*, and *work at being bored* and *work at being cold* would convey the idea of ‘engage in the task of being bored/cold’ (or ‘engage in the task of becoming more bored/colder’). However, the *on -ing* complements found in the sentences do not convey the “normal” meaning of ‘work towards a goal’ either. Instead the meaning seems to be ‘take action in reaction to being bored/cold’ or ‘make an effort to remedy (the state of) being bored/cold’. This might be called a reactive meaning, with this meaning playfully suggesting sexual activity (as a remedy) in these examples. A reactive meaning does not seem conceivable with the *at -ing* pattern. It may be speculated that the possibility of a reactive meaning for *on -ing* may be related to the broader construal of the action or activity denoted by the gerundial complement in this case. A reactive meaning is rare in the data, but the flexibility of the *on -ing* pattern may still play some role in the rising frequency of this variant.

4. Quantifying the differences between the two constructions

As was observed in the previous section, based on authentic corpus data one can suggest differences between the *work at -ing* and *work on -ing* patterns. Sometimes such differences may be fairly slight, and it is by no means uncommon to find instances where the uses of the two patterns are very similar, as in the earlier cited examples (5a-b) and (6a-b). In these examples, the lower-level verbs expressing the actions engaged in by the subjects (*making a success of the marriage*, *rebuilding our relationship*, *sharpening her intuitive skills*, *making your relationship rock solid*) are very much the same, suggesting that the choice of the preposition makes no great difference as regards the meaning of the patterns. Indeed, attempting to examine some of the qualitative observations made in the previous section in quantitative terms is a challenging task, but some general points can nevertheless be made.

It was already observed in Section 2 that the *work at -ing* construction was found earlier in the COHA data. It may be worth noting that usually the 19th century tokens described a specific, concrete task that was being engaged in, as in examples (17a-b):

- (17) a. Lily was very tired, but she *worked* steadily *at marking* Eleanor’s pocket-handkerchiefs, until her sister, seeing how weary she was, made her lie down on the sofa. (COHA, 1855, FIC)

b. After getting through the wall he *worked* more easily at *making* a hole in the roof, for the keepers on their rounds could look in his cell and see him apparently asleep in his bunk. (COHA, 1897, NEWS)

Instances where the lower-level verb could be regarded as more broadly involving the notion of improvement or development, and where the activity is rather a long-term process towards a more or less clearly defined goal, only begin to appear in the 20th century data. It does not appear from the COHA data that earliest references to efforts with a goal to improve something would have been made exclusively with the *on -ing* rather than the *at -ing* pattern. Instead, the broader sense was used with both patterns. It is nevertheless possible to see some differences between the two patterns as regards the occurrences of different verbs in the complements. While tokens of lower-level verbs such as *building*, *developing*, *improving*, and *planning* can be found with both the *at -ing* and *on -ing* constructions in the COHA data, it is interesting to observe that the data contains only one instance of *work at developing* but altogether 15 instances of *work on developing*, which perhaps reflects some preference for the use of the *work on -ing* pattern in cases expressing long-term development or improvement.

As for other lower-level verbs, the most prominent difference in terms of frequencies of occurrence that can be noted is the verb *being*. The verb is found in the data with both complementation patterns, as seen in (18a-b):

- (18) a. Butler and Sayle *work* as hard *at being* friendly and informative as they do *at growing* fine produce; [...] (COHA, 2005, MAG)
b. Do you *work on being* annoying, or does it just come au naturel? (Soap Opera Corpus, 2002, *Days of Our Lives*)

Some instances of *work at/on being* may not necessarily imply effort with a particular goal of improving or getting better at e.g. being friendly or annoying. Instead, it is possible that the people referred to in the examples already have these qualities, and that maintaining and adhering to these characteristics requires effort. With no long-term process being implied, it is perhaps indicative of the different general shades of meanings of the *at -ing* and *on -ing* patterns here that *being* follows *work at* considerably more often than it follows *work on*: the COHA data contains altogether 32 instances of *work at being*, while *work on being* is found only four

times. This would support the observation made earlier of the *at -ing* pattern being associated with more specific, circumscribed, and momentary actions and processes. Although one might then assume that the verb *becoming* might, in contrast, be more common with *work on -ing*, *work at becoming* and *work on becoming* are about equally common in COHA (with only five and four tokens, respectively). Here it is likely that the preference for the *on -ing* pattern as a reflection of its closer association with broader, long-term efforts is not very prominent because the same idea is more idiomatically expressed with the *to*-infinitive (i.e. *work to become*).

Many tokens in the data also include the adverb *hard* modifying the matrix verb, and occurrences of elements of this type could be examined to see whether they are at all indicative of underlying semantic differences between the two constructions. In COHA, different types of adverbials (e.g. of duration or manner) are found with both *work at -ing* and *work on -ing*, and it is mainly the adverb *hard* that shows notable differences between its use with the two constructions. In the data from the period of 1990–2009 in COHA, *hard* was used 40 times with *work at -ing*, whereas it was found only five times with *work on -ing*. Considering that the total numbers of tokens of the two patterns in this period were 83 and 123, respectively, the more frequent use of *hard* with *work at -ing* may indeed be reflective of how the meanings of the two constructions are perceived. While the use of the adverb *hard* is by no means impossible with *work on -ing*, it is perhaps logical to assume that observations on the intensity of efforts are generally more likely made on single actions than on actions or projects that take more time.

In addition to examining the lower-level verbs and adverbs used with the *work at -ing* and *work on -ing* patterns, manual inspection of the corpus data prompted a look into whether the tenses and aspects of the matrix verb *work* themselves show differences between the two complement patterns. Tables 2 and 3 below include the numbers of instances of different forms of *work* when followed by *at -ing* and *on -ing* in the BNC and the 2000–09 data of COHA, respectively:

	<i>work at -ing</i>		<i>work on -ing</i>	
	Simple	Progressive	Simple	Progressive
Finite				
present	17	3	11	17
past	15	2	18	1

present perfect	5	3	9	9
past perfect	3	1	-	-
auxiliary+base	9	-	7	1
total	49	9	45	28
Non-finite				
<i>to</i> -infinitive		31		31
gerund		6		11

Table 2. The different forms of the matrix verb *work* when followed by *at/on -ing* in the British National Corpus.

	<i>work at -ing</i>		<i>work on -ing</i>	
	Simple	Progressive	Simple	Progressive
Finite				
present	13	1	8	19
past	20	-	9	5
present perfect	1	-	3	2
past perfect	1	-	1	1
auxiliary+base	3	-	7	1
total	38	1	28	28
Non-finite				
<i>to</i> -infinitive		8		13
gerund		3		2

Table 3. The different forms of the matrix verb *work* when followed by *at/on -ing* in the 2000–2009 section of COHA.

Based on the findings in Tables 2 and 3, it appears that the aspectual uses of the matrix verb *work* can be regarded as distinguishing between the *work at -ing* and *work on -ing* constructions, at least to some extent. While both constructions are found with simple (or non-progressive) forms, tokens of *work on -ing* have the matrix verb occurring proportionally more often in the progressive. In the COHA data, the

division is clear, with only one instance found of the progressive use of *work* followed by an *at -ing* complement. A simple Chi-Square test of the total numbers of the simple and progressive forms of the matrix verbs shows statistical significance for the division in this respect in both British and American English: with the BNC data, the Chi-Square is 7.23 and the result is very significant ($p < 0.01$), and with the COHA data, the Chi-Square is 22.21 and the result is extremely significant ($p < 0.0001$).

These findings provide further support for the observations made earlier. The use of the progressive forms (such as *is/was working*, *has/have/had been working*, and auxiliary + *be/have been working*), as observed e.g. by Huddleston (1988: 74) is associated with situations in progress, whereas the simple or non-progressive constructions (e.g., *worked*) “can be used for both static and dynamic situations”, but the situation is nevertheless “presented in its totality”. Furthermore, in their analysis of the occurrence of simple and progressive forms of different verbs, Biber et al. (1999: 473) note that “verbs that rarely occur in the progressive fall into two main groups: (a) those that refer to an action that is immediate, and (b) those that refer to a state that is not normally a continuing process.” They also observe a connection between the duration of the action and the low frequency of the use of the verbs in the progressive, saying that with dynamic verbs such as *shut*, *smash*, and *throw*, “[b]ecause these actions have virtually no duration, such verbs rarely occur in the progressive” (Biber et al. 1999: 474). While it is clear that the verb *work* is obviously a dynamic verb when it is followed by either an *at -ing* or *on -ing* complement, one could suggest that the fact that *work* occurs more frequently in the progressive when followed by *on -ing* reflects a semantic difference between the two constructions. Compared to *work at -ing*, *work on -ing* could be seen as being more closely associated with the idea of improvement and with actions that are not momentary, but which require at least some time to complete. This observation in turn is in line with the ideas proposed earlier that the senses of the two constructions are influenced by the fundamental meanings of the two prepositions.

5. Concluding remarks

There are definite challenges in distinguishing between the constructions *work at -ing* and *work on -ing* even with the help of corpus data. It is perhaps not surprising that dictionaries do not clearly differentiate between the two, while some signs suggesting a difference in use are visible. One reason for this may be the fact that the

major changes in the overall frequencies of the two patterns are still relatively recent. In addition, there appears to be some overlap in the uses of the two constructions. However, as has been observed in the qualitative and quantitative analyses of the corpus data, some lines of distinction can be detected as well, and the findings lend support to Bolinger's view of a difference in form coinciding with a difference in meaning. It is worth considering that it is, in fact, the fundamental meanings of the prepositions *at* and *on* which are reflected in the uses of *work at -ing* and *work on -ing*. Overall, *work at -ing* seems to be preferred when referring to actions which are more specific and circumscribed, and the difference between the two constructions in terms of duration of the process is reflected in the occurrences of simple and progressive forms of the matrix verbs. Further, more in-depth examination is nevertheless warranted on the matter, which serves as a case study on the nuances that ultimately can be observed in the use of alternative constructions. Some possibilities of examining the issue in more detail could be found, for example, in the study of the two constructions in different text types as well as in diachronic study of the aspectual uses of the matrix verbs.

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