

(Il)legibly

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1 Three views of (il)legibly

The *first view*, expressed by Bartsch (1976, p. 298) in a critique of Parsons (1972):

It must be noted that ‘x schreibt sorgfältig’ (‘x writes carefully’) and ‘x schreibt unleserlich’ (‘x writes illegibly’) do not belong to the same type of adverbial construction. They are different in the sense that the first is a manner adverbial construction, and the second a construction with a predication over the sentence object [...]: ‘x schreibt y so, dass y unleserlich ist’ (‘x writes y in a way that y is illegible’), similarly to the example ‘x schneidet die Haare kurz’ (‘x cuts his hair short’) which is to be analyzed as ‘x schneidet y so, dass y kurz kurz ist’ (‘x cuts y in such a way that y is short’) [...].

A page later (fn. 9, p. 299), she reemphasizes this view in connection with an analysis of ‘x schreibt sorgfältig unleserlich’ (‘x painstakingly writes illegibly’):

It would have been inappropriate to predicate ‘unleserlich’ (‘illegibly’) directly of a process or action *r*, since neither of them can be illegible. This can only be predicated of the result of the process or action [...].

Bartsch’s proposed treatment of ‘ x_1 schreibt unleserlich’ is the following (p. 168), adjusting her notation slightly:

- (1) $\exists X(\text{Caus}(\iota v(X(\iota r(P(x_1, r) \wedge \text{Writing-process}(r))))_t)^*(v)(t_1), \iota v(\text{Illegible}(\iota y(\text{Writes}(x_1, y)))_t)^*(v)(t_2))$

In prose, she analyzes ‘ x_1 schreibt unleserlich’ (‘ x_1 writes illegibly’) as equivalent to ‘ x_1 schreibt so, dass das Geschriebene unleserlich ist’ (‘ x_1 writes in such a way that what x_1 writes is illegible’).¹

At the same time, Bartsch quickly leaves a slight room for doubt when she adds (p. 168) that it may be possible to consider ‘unleserlich’ (‘illegibly’) a manner adverb after all:

As its secondary interpretation[,] ‘unleserlich’ (‘illegibly’) can be considered as a manner adverb.

Unfortunately, as far as I can determine, she says nothing more about this “secondary interpretation” of ‘unleserlich’ (‘illegibly’).

Dik (1975, p. 119) offers a *second view* about how to treat *illegibly*. In connection with *John writes illegibly*, he writes:

¹The clause ‘ $P(x_1, r)$ ’ reads as “ x_1 participates in *r*.” The asterisk stands for the *fact-function* of Reichenbach (1966), which applies to a proposition and yields a predicate of facts/events (Reichenbach does not distinguish the two). Accordingly, the variable *v* denotes a fact/event.

Although *illegibly* can be paraphrased with *in an illegible manner*, it would no doubt be incorrect to conclude from this that it is the manner in which John writes which is said to be illegible. What we want to express, rather, is that the manner in which John writes is such that what he writes is illegible.

His proposed analysis of *John writes illegibly* is the following ((148), p. 119), adjusting his notation slightly:

$$(2) \quad s_1(\text{write}(\text{john}, x))_{s_1} \wedge (\text{illegible}(\iota x(\text{write}(\text{john}, x))))^*(M_{s_1})$$

Dik's comment on this analysis:

Here, x indicates the unspecified object of *write*, and the manner of John's writing is characterized by the proposition that what he writes is illegible. Thus, a whole proposition serves as the predicate of the manner-constituent. This is indicated, after Reichenbach, by means of the asterisk.

Finally, a *third view* is that *illegibly* is simply a manner adverb. Here are two recent event semantic analyses of *Rebecca wrote illegibly* (ignoring tense):

$$(3) \quad \lambda e.\text{agent}(\text{rebecca})(e) \wedge \text{write}(e) \wedge \text{illegible}(\text{form}(\lambda e'.\text{write}(e'))(e)) \quad \triangleright \text{Piñón (2007, (17))}$$

$$(4) \quad \lambda e[\text{SUBJECT}(\text{rebecca}, e) \wedge \text{WRITE}(e) \wedge \exists m(\text{MANNER}(m, x) \wedge \text{ILLEGIBLE}(m))] \quad \triangleright \text{Based on Schäfer (2008, (52))}$$

The analysis shown in (3) can be simplified:

$$(5) \quad \lambda e.\text{agent}(\text{rebecca})(e) \wedge \text{write}(e) \wedge \text{illegible}(\text{form}(e))$$

In this formula, '**illegible(form(e))**' means that the form-manner of e is illegible.

Unfortunately, all three views are problematic. Bartsch's analysis (see (1)) treats *(il)legibly* as a resultative adverb and yet *(il)legibly* does not seem to be a canonical resultative adverb.² Moreover, although Bartsch concedes that *(il)legibly* has a "secondary interpretation" as a manner adverb, she neglects to specify what this interpretation is and how it is related to (what she takes to be) the primary interpretation of *(il)legibly* as a resultative adverb.

Dik's analysis (see (2)) is similar to Bartsch's in that it also takes *(il)legibly* to be primarily a resultative adverb. However, it differs from hers in that the result of the application of the fact-function ($(\text{illegible}(\iota x(\text{write}(\text{john}, x))))^*$) is predicated of the *manner* of the situation s_1 (M_{s_1}). But this use of the fact-function is not quite legitimate, because Dik crucially wants to distinguish manners from facts/situations, and the result of the application of the fact-function should only be predicable of the latter.

Finally, the analyses in (5) and (4) are problematic mainly because they do not validate the following entailment:

$$(6) \quad \text{Rebecca wrote illegibly} \rightarrow \text{What was written (by her) was illegible}$$

In other words, no connection is made between the claim that the form-manner of the event of writing is illegible to the conclusion that what is written in that event is illegible.

2 Is *(il)legibly* a semantic blend?

Quirk, Greenbaum, Leech, and Svartvik (1985, p. 560) point out that some adverbs ("adjuncts" in their terminology) express a "blend" of manner with result (and sometimes inten-

²See Geuder (2000, chap. 3) for a discussion of resultative adverbs.

sification):

- (7) a. She fixed it perfectly. [‘in such a way that it was perfect’—manner and result]
 b. He grows chrysanthemums marvellously. [‘in such a way that the results are good’—manner and result]
 c. The soldiers wounded him badly. [‘in such a way and to such an extent that it resulted in his being in a bad condition’—manner, intensifier, and result]

This class of adverbs seems to include (or to even be coextensive with?) those adverbs that Eckardt (1998, p. 160) calls “adverbs of degree of perfection”:

- (8) a. Olga spielte die Sonate perfekt. (= Eckardt’s (1))
 Olga played the sonata perfectly
 b. Tim baute das Zelt schlampig auf. (= Eckardt’s (7))
 Tim built the tent sloppily up

Schäfer (2005, pp. 51–52) argues explicitly that Eckardt’s adverbs of degree of perfection are manner adverbs, though he later (p. 132) seems to doubt that there is a such a special class of manner adverbs: “I have already argued at length [on pp. 51–52] that there are no reasons to assume that Eckardt’s degree of perfection adverbs form a special class [...]”

I propose that *(il)legibly* is a semantic blend of manner and result (alternatively, an adverb of degree of perfection):

- (9) Rebecca wrote illegibly.

In the manner of Quirk et al., it seems correct to say that Rebecca wrote ‘in such a way that what she wrote was illegible’—manner and result.

3 Analyzing *(il)legibly*

The aim is to show that the following entailment is valid (ignoring tense):

- (10) Rebecca wrote illegibly → What was written (by her) was illegible (Cf. (6))

The antecedent in (10) is analyzed as follows:

- (11) Rebecca wrote illegibly \rightsquigarrow ▷ Cf. (5)
 $\lambda e. \mathbf{agent}(e) = \mathbf{rebecca} \wedge \mathbf{write}(e) \wedge \mathbf{illegible}(\mathbf{form}(e))$

The strategy is to define the adjective *illegible* in terms of the adverb *illegibly*.³ Four crucial axioms are the following:

- (12) $\forall e(\mathbf{write}(e) \rightarrow \exists x(x = \mathbf{created-patient}(e) \wedge \mathbf{writing}(x)))$ ▷ Axiom
 (13) $\forall x(\mathbf{writing}(x) \rightarrow \exists p(p = \mathbf{static-form}(x)))$ ▷ Axiom
 (14) $\forall e \forall m(\mathbf{form}(e) = m \rightarrow \exists p(p = \mathbf{static-projection}(m)))$ ▷ Axiom
 (15) $\forall p \forall p'(\exists e \exists m \exists x(\mathbf{form}(e) = m \wedge \mathbf{created-patient}(e) = x \wedge \mathbf{static-projection}(m) = p \wedge \mathbf{static-form}(x) = p') \rightarrow p = p')$ ▷ Axiom

The definition of **static-illegible**, which formally corresponds to the adjective *illegible*, is given in (16). It is defined as a predicate of particularized properties *p* such that *p* is the static projection of a manner *m* and *m* is illegible.

³An alternative, feasible, and perhaps more natural strategy would be to define *illegibly* in terms of *illegible*.

- (16) $\text{static-illegible} \stackrel{\text{def}}{=} \lambda p. \exists m (\text{static-projection}(m) = p \wedge \text{illegible}(m))$ ▷ Definition of **static-illegible**

The consequent in (10) is analyzed as follows:

- (17) What was written (in e) was illegible \rightsquigarrow
 $\text{static-illegible}(\text{static-form}(\text{created-patient}(e)))$

Putting (11) and (17) together, the entailment in (10), a fact, is formulated as follows:

- (18) $\forall e (\text{write}(e) \wedge \text{illegible}(\text{form}(e)) \rightarrow \text{static-illegible}(\text{static-form}(\text{created-patient}(e))))$ ▷ Fact

Proof. In accordance with the antecedent, assume an event e_1 such that **agent**(e_1) = **rebecca**, **write**(e_1), and **illegible**(**form**(e_1)) all hold. By (12), there is an x_1 such that x_1 is the created patient of e_1 and x_1 is a writing. By (13), there is a particularized property p_1 such that p_1 is the static form of x_1 . By (14), there is a particularized property p_2 such that p_2 is the static projection of the form-manner of e_1 (**form**(e_1)). By (15), p_1 is identical to p_2 . By (16), the consequent in (18) expresses that there is a manner m_1 such that its static projection (a particularized property) is identical to the static form of the created patient of e_1 (also a particularized property) and m_1 is illegible. But observe that this consequence already holds: m_1 is the form-manner of e_1 (**form**(e_1)), the static projection of m_1 is p_2 (= p_1), the static form of the created patient of e_1 is p_1 (= p_2), and m_1 (**form**(e_1)) is illegible.

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