Comments on the Notion of 'Strong and Weak Resultatives' in Washio (1997)*

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0. Introduction

Classification is often done to attain certain generalizations about linguistic phenomena, offering the impression that a specific analysis has successfully singled out its results. Resultatives, as one instance of such phenomena, are classified according to various proposals in different ways. The examples in (1) all represent the resultative construction in some way, but, as Washio (1997a) points out, they actually show differences.[1]

(1)   a.   The horses dragged the logs smooth.   (Jackendoff 1990: 226)
        b.   The waiter wiped the table dry.   (Levin/Rappaport Hovav 1995: 58)
        c.   He tied his shoelaces tight.   (Washio 1997a: 50)

Washio's insight is based on (i) a strict interpretation of the Lexical Subordination analysis and (ii) comparative views of languages such as Japanese, Korean and French. Washio (1997a: 7) explains the basic structure of resultative constructions as follows:

(2)   a.   S V O AP
        b.   x 'verb' y
        c.   [x CAUSE [y BECOME z] BY [x 'verb' y]]   (Washio 1997a: 7)

The basic sense of a verb shown in (2b) is "related to its extended sense shown in (2c)", whereas "the value of the variable 'z' is set by AP", which is "independent of the semantic value of the 'verb'." (Washio 1997a: 7) This is exactly the case with (1a), but not with (1b) and (1c). Washio (1997a) calls resultatives of this type STRONG, while those of the type in (1b), which does not fulfill the condition of this definition, are called WEAK. On the other hand, the AP in (1c) can be regarded as describing the way the person denoted by the subject tied his shoelaces. This interpretation is supported by the Adjective-Adverb alternation, as in (1d).

(1)   d.   He tied his shoelaces tight/tightly.

Since expressions of this sort do not fall into the class of regular resultatives, he calls them SPURIOUS resultatives. The observation in Washio (1997a) and (1997b) is further supported by evidence from Japanese and Korean, where only WEAK resultatives are allowed, as shown in (3) and (4).

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* This paper can be traced back to discussions of the linguistic research group at the University of Tsukuba, where Ryuichi Washio presented his ideas about resultative constructions in 1996. In the course of gathering parallel linguistic data from German which may or may not support his idea, I came up with writing this paper, in order to clarify some of the points in his argumentation.

[1] In fact, there are various sorts of data gathered together under the name of resultatives.

(3) a. * karera-wa kutu-no soko-o boroboro-ni hasit-ta.
they-TOP shoe-GEN sole-ACC threadbare run-PAST

'They ran the soles of their shoes threadbare.' (Washio 1997a:20)

b. John-ga kabe-o akaku nut-ta.
J.-TOP wall-ACC red paint-PAST

'John painted the wall red.' (Washio 1997b:230)

(4) a. * kutul-un kwutwu-patak-ul yalp-key tallyessta.
they-NOM shoe-soles-ACC thin run-PAST-DCL.

'They ran the soles of their shoes thin.' (Washio 1997b:245)

b. ku yeca-nun pol-ul ppalkah-key chilha-yess-ta.
she-NOM cheek-ACC red paint-PAST-DCL.

'She painted her cheek red.' (Washio 1997b:239)

The notion of the WEAK resultatives is at first complementary defined, that is, "not completely independent of the meaning of the verb". In Washio (1997a:16) the notion is further specified as "having a disposition toward a certain result without lexically implying such a result".

This paper consists of three parts. In Section 1, I will examine STRONG resultatives and their Lexical Conceptual Structure (henceforth: LCS) representations as in (2c) above, which not only Washio (1997a), but also Levin/Rappaport Hovav (1995:59) utilize in explaining the basic conceptual structures of resultatives. It will be shown in Section 2 that some of Washio's WEAK resultatives cannot be explained in the same way. Through the discussion in Section 1 and 2, I will compare his analysis with that of Kageyama's (1996), which proposes different criteria for the classification of resultatives. Finally in Section 3, I will present some evidence from German and Dutch, which are languages that are not treated in Washio (1997a).

It should be borne in mind that his classification of STRONG and WEAK resultatives tries to capture cross-linguistic differences based on universal principles, which lead to his empirical claim that languages are divided into two types; one type (like English) permits STRONG resultatives, while the other does not; though WEAK resultatives are possible in both cases. Yet, some examples from Korean, as well as French, do not behave so uniformly, as expected in a type of language that permits only WEAK resultatives. This point should lead us to investigate a wide variety of other languages.

1. STRONG resultatives

1.1. LCS for STRONG resultatives

The predicate CAUSE can be traced back to the generative semantic tradition. It has been used as a tool of decomposing verb meaning, particularly of decomposing causative predicates. The predicate KILL, for example, was often decomposed as [CAUSE x [BECOME [NOT [ALIVE y]]]]. The decomposition of KILL enabled us to generalize primitives of verbal meaning and to represent their structure. As analyses using the predicate CAUSE are

getting more widespread, it is more often observed that the predicate is used with various "connotations". Pinker (1989:211) notices a difference concerning the status of 'y' in the representation 'x CAUSE y' and proposes, instead, two predicates, 'effect' and 'cause-focus'.[2]

Washio (1997a) presupposes that STRONG resultatives have such a Lexical Conceptual Structure as (1c). (5a) is thus one of his STRONG resultatives, which can be represented something like (5b), as a paraphrase of (5a) based on (5b) is (5c).

(5)   a. John hammered the metal flat.

      b. [x CAUSE [y BECOME z] BY [x 'hammer' y]]

      c. John caused the metal to become flat by hammering it.

Following Washio's argumentation, the value of the variable z is set by AP, in this case *flat*, which is independent of the semantic value of the verb *hammer*. The representation in (5b) is surely appropriate for the purpose of describing this explanation. However, it isn't clear how the verb meaning contributes the whole LCS in (5b). The only explicit relevance of the verb is the last part following BY and the verbal contribution of the meaning preceding BY is just to change states of something. The only visible contribution is the last part of (5c), namely the manner specification [BY [x 'hammer' y]].

The question is: is (5c) not a representation of (5a), but (5d)?

(5)   d. John made the metal flat by hammering it.

One may well argue that (5d) is conceptually parallel to (5a) and the representation in (5b) is a kind of abstraction linguists often make. But the point I would like to make clear is the way in which the abstraction is done. As I have pointed out above, (5b) contains roughly the meaning of change-of-state and the manner of 'hammer'. If this kind of abstraction is permitted, verbal contributions to the meaning of the whole sentence will be restrained minimally, so that the distinction between transitive and intransitive resultatives will disappear. And this is what I hold not to be true. (6b) is a LCS representation for (6a) in the same way as in (5a).

(6)   a. The joggers ran the pavement thin.

      b. [x CAUSE [y BECOME z] BY [x 'run']]

      c. The joggers caused the pavement to become thin by running (on) it.

This representation is inadequate, since there is no mention about specific relations between *the joggers* and *the pavement*, or about relations between the activity of *run* and the place where the activity is done. Also, the CAUSER argument x does not usually bring about the change of the state in *the pavement*. I would like to come back to this point shortly. The variable y in (6b) is obviously different syntactically from that in (5b), but this is not at all reflected in this representation.

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[2] The inappropriate usage of the predicate CAUSE and its misleading formulation are also reviewed in Okamoto (1997).

An alternative representation for (5b) may be (7a), which states roughly that the activity of John's hammering the metal brings about the change in the state of the metal. This is only the first approximation of the idea borrowed from Dowty (1979).[3]

(7)   a. John hammered the metal flat.

        b. [CAUSE [x 'hammer' y] , [y BECOME z]]

This type of representation has the merit of overcoming the above mentioned inadequacies to some extent.

1.2. Intransitive resultatives

Compare the following examples which are also regarded as STRONG resultatives in Washio (1997a) and (1997b).

(8)   a. The horses dragged the logs smooth.

        b. The jockeys raced the horses sweaty.

        c. John hammered the metal flat/thin/soft/shiny/...

        d. The lion's roar scared him stiff.

        e. The wind blew the wet laundry stiff.

        f. He pulled his tie tight/loose.

(9)   a. The planes flew the ozone layer thin.

        b. They ran the sole of their shoes threadbare.

        c. I danced myself tired.

        d. The joggers ran the pavement thin.

        e. The tourists ran the pavement thin.

The examples in (8) are transitive resultatives, while those in (9) intransitive resultatives. Since Washio (1997a) and (1997b) does not propose any alternative LCS other than (5b), all of them must be treated at the level of LCS in the same way, under the rubric of STRONG resultatives. Some of them, however, show differences with respect to the 'be forced to V' construction.

(10)   a.   The horses were forced to drag the logs smooth.

         b.   The jockeys were forced to race the horses sweaty.

         c.   John was forced to hammer the metal flat/thin/soft/shiny/...

         d. * The lion's roar was forced to scare him stiff.

         e. * The wind was forced to blow the wet laundry stiff.

         f.   He was forced to pull his tie tight/loose.

(11)   a. * The planes were forced to fly the ozone layer thin.

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[3] In this paper I do not treat this class of resultatives in detail.

b. ? They were forced to run the sole of their shoes threadbare.

c. ? I was forced to dance myself tired.

d. ? The joggers were forced to run the pavement thin.

e. ? The tourists were forced to run the pavement thin.

The 'be forced to V' test is supposed to capture the controllability of the subject with respect to the action performed, as is pointed out by Dowty (1979) and the predicate which pass the test can be assigned DO in the lexical representation.[4] Consider the following pairs.

(12) a.   I was forced to run into the wall.

b.   * I was forced to tremble with fear.

(13) a.   The crash of the car caused me to run into the wall.

b.   The crash of the car caused me to tremble with fear.

The unacceptability of (12b) comes from the fact that the predicate *tremble* has a static property and is not compatible with the 'be forced to V' construction. It is an action that is usually done unwillingly, but still controlled by the subject to some extent. No one likes 'running into the wall' as in (12a), but the predicate *run* is compatible with this construction. Note that the contrast between (12a) and (12b) disappears in the 'cause y to V' construction. The predicate CAUSE in this usage covers a wide range of causation, in which statives can be interpreted as *change of state*.[5]

The result of 'be forced to V' test suggests that the intransitive resultatives in (9) differ obviously from transitive ones in (8) at the level of LCS. 'Volition' is also typically attributed to CAUSER argument, which can be examined by adding an *on purpose* clause.

(14) a.   * I danced myself tired on purpose.

b.   * The joggers ran the pavement thin on purpose.

The argumentation so far suggests that the first argument of CAUSE in LCS is not the subject of the intransitive resultatives. This leaves us with two alternative approaches. One is to adopt the description Kageyama (1996) proposes, as in (15a). The other is to encode directly the predicate DO to represent the activity expressed by the intransitive verb and identify this part of the event as the first argument of the CAUSE, as in (15b).

(15) a. [x CONTROL [y BECOME [y BE AT-STATE]]]

b. [CAUSE[DO(x, RUNNING)], [BECOME(y, RESULT-STATE)]]

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[4] The predicate DO was first introduced in Ross (1972). Zaenen (1993) also notes, citing Pollmann (1975), that the corresponding test in Dutch is sensitive to passive constructions.

[5] There seem to be certain conditions to be met in order to get this change in interpretation. "The present caused me to like my father." is rather odd, where *like* is obviously a stative predicate. This might be related to a sudden change of state that cannot be imagined in a normal context.

Take, for example, the sentence "The joggers ran the pavement thin". The two representations in (15) aren't so different, if the predicate CONTROL can be defined in terms of DO and CAUSE.[6]

Let us turn our eyes to the result-state of intransitive resultatives in (9). As in Simpson (1983:146), Goldberg (1995:184ff) and many others have observed, resultative phrases do not often indicate actual changes of states. For the sake of clarity, I repeat the examples in (9) here.

(9)   a. The planes flew the ozone layer thin.
        b. They ran the sole of their shoes threadbare.
        c. I danced myself tired.
        d. The joggers ran the pavement thin.
        e. The tourists ran the pavement thin.

(9d), for instance, is explained by Goldberg (1995:185) as follows:

> "This statement would not be used to describe an actual change in the thickness of the pavement, let alone to convey the idea that the pavement bore some kind of particular property which caused it to become thin from people running on it."

I think Goldberg's (1995) explanation is quite on target. To put it another way, the result state expressed in AP need not always become realized. In some cases, the state of affairs expressed can only be a kind of "hyperbole to express the idea that the action performed was done to excess." (Goldberg 1995:194) Recall that the "so Adj. that-COMP" construction, which is used to express an extreme degree of something, often leads to an resultative interpretation.

(16)   a. Even though it may be so small that it can not be easily seen, it may cause a great deal of discomfort.
        b. The crowd was so large that it overflowed the auditorium.
        c. She had fallen down so often that she was covered in mud.
        d. The change was so gradual that it escaped the tourists' notice.
           (COBUILD CD-ROM Dictionary)

In the case of (16a), the subordinate clause characterizes only the extent of smallness and does not imply the result of an action. On the other hand, (16b), (16c) and (16d) can be interpreted as a characterizing degree of something or some event, which eventually led to an outcome as result. Exactly the same characterization seems to be possible in intransitive resultatives, i.e. the degree-result coexistence. What counts in intransitive

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[6] Kageyama (1996:86) also tries to avoid unnecessary implication of the predicate CAUSE. In case of "X CAUSE Y" Y is established as a result. On the contrary, X CONTROL Y has a weaker implication, i.e. X controls the state of Y, not directly connected with its resulting state.

resultatives is not the achievement of a result state, but the large degree of some event. Consequently the representation of LCS must reflect this situation somehow. My proposal, still of temporary character, for intransitive resultatives of this sort is given in (17).

(17) [AND[DO(x, RUNNING)], [IN-SUCH-A-DEGREE [BECOME(y, RESULT-STATE)]]]

Note that the predicate CAUSE is eliminated here totally and the simple conjunction is used, so that the ACTIVITY involved is foregrounded. As a result of this analysis, I have departed from Washio's (1997a) analysis on STRONG resultatives, especially in treating intransitive resultatives.[7]

2 WEAK resultatives

2.1 Basic properties

Let us first look at examples that Washio (1997a) and (1997b) consider to be WEAK resultatives.

(18) a. Mary dyed the dress pink.
    b. I froze the ice cream hard/solid.
    c. He wiped the table clean/dry.
    d. Mary froze it hard/solid/stiff.

(19) a. I painted the wall red.
    b. He sharpened the pencil pointy.
    c. She cleaned the porch spotless.

The reason Washio (1997a) considers (18) to be WEAK resultatives is that the meaning of APs in such constructions is NOT completely independent of the semantic value of the verb. Take, for example, (18a). What the adjective *pink* means in this construction is already part of the lexical meaning of the verb *dye*. In quoting the definition of *Longman Dictionary of Contemporary English*, he says:

> "But if the verb *dye* means something like (28),[8] then the adjective *pink* in (27a)[corresponding (18a) in our examples] is not completely independent of the verb: rather, it is further specifying (or even modifying) the notion "color" that is already contained in the verb." (Washio 1997a:10)

Although Washio (1997a) does not suggest any specific modification of the LCS, this claim amounts to insisting that the verb *dye*, as a member of a verb class permitted in WEAK resultatives has an LCS of the following form.

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[7] Washio (1997:20) asserts that "intransitive resultatives be nothing but a special case of strong resultatives".

[8] (28) that Washio refers to is the Longman's definition that says: "dye: to give a (different) color to (something) by means of dye."

(20) [x CAUSE [y BECOME "COLOR"] BY [x 'dye' y]]

(20) is, in fact, quite similar to a proposal made by Kageyama (1996:216ff). Kageyama (1996:217) insists that change-of-state verbs contain lexically specific final states and this property be of characteristic of resultative predicates in general. Kageyama's (1996) proposal to account for resultatives is (21).[9]

(21) [   ]$_x$ CONTROL [[   ]$_y$ BECOME [[   ]$_y$ BE AT- [COLORED]]]

Both LCSs are fundamentally the same, but they provide such resultatives with different status and explanations.

Washio (1997a) cites, as a marginally unacceptable example, "Mary dyed the dress stiff,"[in his example (31b) with the judgment "??"] and argues that "unless the causal relation between "dying x" and "x becoming stiff" is so common in a speech community that it has been conventionalized into the meaning (or use) of the verb *dye*, an example like (31b), even if acceptable, must be regarded as a STRONG resultative."(Washio 1997a:11) His remark is based on the observation that in the real world one can say "Mary caused the dress to become stiff by dying it," but its corresponding resultative using the verb *dye* is not possible. In his view, the distinction between STRONG and WEAK resultatives is then a matter of conventionalization in a speech community.

On the contrary, Kageyama (1996) considers this kind of LCS as representing basic property of resultative constructions. Other resultatives, such as those defined in Washio (1997a) as STRONG, are not typical instances for Kageyama (1996). As mentioned above, Kageyama (1996) maintains that this class of resultatives consist of change-of-state verbs and Japanese is a language that only allows resultatives with this class of verbs. It is, on the other hand, possible in English to construct resultatives using ACT-ON verbs. ACT-ON is, in his term, a 2-place predicate that does not imply any change in the patient NP. Typical examples are verbs of contact and verbs of contact by impact, such as *touch, hit, kick, push*. The examples in (22),(23),(24) and (25), due to Kageyama (1996:242ff), illustrate this contrast between English and Japanese.

(22) a. He painted the kennel white.
      b. kare-wa inugoya-o   siroku nut-ta.
          he.TOP   kennel.ACC white paint.PAST

(23) a. She tore the letter to pieces.
      b. kanojo-wa sono tegami-o   biribiri-ni yabut-ta.
          she.TOP   that letter.ACC to-pieces tear.PAST

(24) a. She pounded the meat flat.
      b. * kanojo-wa niku-wo   taira-ni tatai-ta.
            she.TOP   meat.ACC flat   pound.PAST

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[9] COLORED in (21) as well as "COLOR" in (20) should be lexically encoded as a constant in the verb *dye.*

(25) a. The earthquake shook the building apart.

     b. * jisin-ga   biru-wo   barabara-ni yusabut-ta.
          earthquake.NOM building.ACC to-pieces   shake.PAST

The pairs in (22) and (23) are, in Washio's (1997a) terms, instances of WEAK resultatives, but for Kageyama (1996) they are examples involving change-of-state verbs. Those in (24) and (25) are, according to Washio, STRONG resultatives, while they are, following Kageyama, examples of ACT-ON verbs. Even if their terminologies are different, the two analyses seem to explain the same distribution. These two approaches, however, do not always make the same predictions.

2.2. The case of "boil" and "niru"

(26) a. John polished the metal shiny.

     b. John-wa kinzoku-o pikapika-ni migai-ta
          J.TOP   metal.ACC shiny   polish.PAST

(27) a. John boiled the meat soft.

     b. John-wa niku-o   yawarakaku ni-ta.
          J.TOP   meat.ACC soft   boil.PAST

Following Washio (1997a), (26a) and (26b) are regarded as WEAK resultatives, since the verb *polish* (or *migaku* in Japanese) means "to make something smooth, bright, and shiny by rubbing it"[10] , hence includes the meaning of *shiny*. The same is not true for (27a) and (27b), i.e. the verb *boil* (or *niru* in Japanese) does not lexically imply that the thing boiled becomes *soft*. The examples in (27) should be STRONG resultatives in Washio's terms, but this contradicts his prediction that only WEAK resultatives are permitted in Japanese. In this respect, he defends his analysis by saying that the verbs like *niru* (=boil) and *nobasu* (=roll out) are in fact not necessarily change-of-state verbs, yet "strongly imply that the activities they name are done for certain specific purposes, such as to make an object thin, shiny, or soft."(Washio 1998a:9ff) On the contrary, Kageyama (1996) argues that all those verbs belong to the same change- of-state verbs. Where does this difference in point of view come from?

Let us concentrate, for a moment, on the Japanese verb *niru* (=boil) and see how the contradictory statements arise.[11] The first question is: Do the verb *boil* and its corresponding Japanese verb *niru* imply any change in a state of the object NP?

The basic character of the verb *boil* in English is illustrated by (28). (28a) can be combined with the time adverbial prepositional phrase headed by *for*, but not one headed by *in*. This is evidence that it is an activity type. The resultative counterpart in (28b) only allows a PP headed by *in*, which is indication of an accomplishment type.

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[10] The definition is quoted from *Longman Dictionary of Contemporary English*, 2nd edition.

[11] There are, like *niru*(=boil), other cooking verbs which are primarily concerned with the manner of action, e.g. *itameru* (=fry), *musu* (=steam), *taku*($\simeq$cook).

(28) a. John boiled the meat {for two hours/*in two hours}.

      b. John boiled the meat soft {*for two hours/in two hours.}

Any equivalent test seems to be impossible in Japanese, but a good candidate for distinguishing between an activity and an accomplishment may be to use a time-adverbial with *-kakete*. The adjunct phrase *nijikan-kakete* literally means '2 hours spent'. It is originally derived from the verb *kakeru*(=spend) whose object is either a 'duration of time' or an 'amount of money'.[12] Time adverbial phrases with *-kakete*, which often behaves like a postposition, gives the sentence a semantic structure where the reference time precedes the speech time, and induce perfective meaning. With this in mind, let us compare the examples in (29).

(29) a. John-wa niku-o   {nijikan/nijikan-kakete}   ni-ta.
           J.TOP   meat.ACC {(for) 2 hours/2 hours-spent} boil.PAST

      b. John-wa niku-o   {*nijikan/nijikan-kakete}   yawarakaku ni-ta.
           J.TOP   meat.ACC {(for) 2 hours/2 hours-spent} soft   boil.PAST

(29a) with *nijikan*(=for two hours) is perfectly acceptable as an ACTIVITY. (29a) with *nijikan-kakete* (=two hours spent), implies something different from that with *nijikan*. It means that the action was performed with change of state, namely the meat is boiled up. In this case, the patient NP is normally interpreted as a specific object, even if there is no marker for definiteness attached to the NP. In other words, the action becomes telic by introducing this adverbial phrase. The *-kakete* phrase plays a role of an aspectual shifter. This state of events can be confirmed by looking at (29b), where the time adverbial *nijikan*(=for 2 hours) possible, but *nijikan-kakete* is not.[13] In this regard, (29b) can be considered to be parallel to (28b). Both *boil* and *niru* are in themselves activity verbs and don't imply any change-of-state of the object. Only with resultative phrases, they show a specific change in the state of the patient NP. Then, why is it that Kageyama (1996) claims that there are change-of-state verbs even without resultative phrases? His claim is that there is a BECOME predicate at the level of LCS in this kind of verbs. To put it another way, the LCS representation is not directly connected to the aspectual character of the sentence. Let us check whether this is true.

(30) a. John boiled the egg ({for two minutes/*in two minutes}).

      b. John boiled the egg hard/soft.

(31) a. [ ]$_x$ CONTROL [[ ]$_y$ BECOME [[ ]$_y$ BE AT- [BOILED]]]

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[12] The form "V$_1$+'te'+V$_2$" is used to make a complex predicate, where V$_1$ usually specifies MANNER OF MOTION. 'Hasit-te iku' means literally 'go by running'.

[13] This test with *-kakete* must be conceptually parallel to such pairs:
(i) It took an hour for John to eat the bag of popcorn.
(ii) * It took an hour for John to eat popcorn.
These examples illustrate the incompatibility of mass nouns and certain aspectual properties pointed out by Dowty (1979:62).

b. [ ]$_x$ CONTROL [[ ]$_y$ BECOME [[ ]$_y$ BE AT- [HARD/SOFT]]]

Following Kageyama's representation, (31a) corresponds to (30b) and (31b) to (30b). How has the state of affairs been changed after the action? Both (30a) and (30b) imply that the egg was boiled. In addition, (31b) says, the egg became hard/soft. Intuitively we could say that if X is hardboiled/softboiled, X is already boiled and not vice versa. This contrast suggests that changes will be classified in a sequential order.

initial state	result-state (1)	result-state (2)
X is not boiled.	X is boiled.	X is hardboiled/soft-boiled.

As the adverbial phrases in (30a) show, (30a) is conceived of an activity. For any time during that 2-minute interval it was true that John boiled the egg. After completion of his activity, however short it may be, the state of the egg has been changed, i.e. the egg was boiled. This is a very weak implication, even if the result-state has been accomplished. You may cancel the result-state by saying, "The egg was not quite boiled." Taking this situation into consideration, the verb *boil* does not fall into the category 'change-of-state'. The implication is pragmatic in nature[14] and can be best treated as an empty slot in the LCS representation, as in (32).

(32)   [ ]$_x$ CONTROL [[ ]$_y$ BECOME [[ ]$_y$ BE AT- [ϕ]]]

The representation in (32) is apparently different from that in (21), to which the sentence (18a) "Mary dyed the dress pink." corresponds. In (18a) the result-state is already filled in by the constant "COLORED" that the verb *dye* lexically implies.

2.3. The case of "wipe" and "fuku"

Let us take one more problematic case of the verb *wipe*, which is treated differently in Washio (1997a) and in Kageyama (1996).

(33)   a.   He wiped the table clean/dry.
         b.   * He wiped the table dirty/wet.   (Washio 1997a:13)

Washio (1997a) admits, following an observation by Levin/Rappaport Hovav (1991), that *wipe* has one basic sense; surface contact through motion. This sense can be extended in two different ways: "removal by means of surface contact through motion", and "putting by means of surface contact through motion". These extended senses, however, cannot be directly applied to resultative constructions, as suggested by Green(1972), as shown in (33b). The *removal* sense can be reflected in resultatives using adjectives like *clean* and *dry*. Why? It is possible to wipe the table "with a cloth which happens to be very dirty or wet" and that " the activity of wiping the table may cause it to become dirty or wet" in the real world. Admitting the fact that the verb *wipe* is not in itself a verb of removal, Washio explains:

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[14] Even if the implication can be cancelable, it is usually assumed that the result-state in such verbs is different from the initial one, so that it may be a conventional implicature in the sense of P. Grice.

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"..., it still seems to be the case, in general, that it describes an activity which potentially affects an object in such a way that, if the object is caused at all to change its state, then it changes in a certain fixed direction to reach the final state — a state in which the object is free of dirt, liquid, or other foreign substances. This is what we meant when we said above that *wipe* 'has a disposition toward removal.' "   (Washio 1997a:14)

What he intends to defend here is that the two derived senses are not equally weighted, even if they are regarded as derived through "lexical extension", as proposed by Levin/ Rappaport Hovav (1988). If this "removal sense" should be considered primary, then it is easy to treat *wipe*-resultatives just like ones with *dye* above (cf. (18a)). Thus (33a) is a proper example of his WEAK resultatives.[15] He failed to prove, however, why the removal-sense is primary. Take a look at the basic examples in (34), borrowed from Levin/Rappaport Hovav (1995:58).

(34)   a. The waiter wiped the table(in/for two minutes).
       b. The waiter wiped the table dry (in/*for two minutes).

As illustrated in (34a), the sentence "The waiter wiped the table." has both the delimited and non-delimited interpretations. With the *for* phrase, (34a) has a normal activity interpretation. But it also means that the action can be delimited with the help of the *in* phrase, i.e. an accomplishment interpretation is also available. At first glance it seems to be a bit confusing. If you take a good look at (34a), the object NP is definite and the action is performed against the table. This condition leads to a telic interpretation principally. Now think what states of affairs hold, if the waiter wiped the table in two minutes. It is probable that the table is at the moment clean or dry, but not that it is dirty or wet. This suggests that the syntactic frame [NP V NP] is primarily associated either with an activity or with an accomplishment with the removal-sense.

Let us turn to Kageyama's (1996) approach. He points out that since (35a) is not acceptable, *wipe* is only an example of ACT-ON verbs, as already mentioned earlier. (35b) becomes acceptable, if *dry* is added as a resultative AP. What he demonstrated is that *wipe* in a construction such as (35a) implies the aspectual type of activity, but no change of state.

(35)   a.   * This counter wipes quickly.
       b.   This counter wipes dry quickly.   (Kageyama 1996:265)

He suggests that it is possible to construct resultatives by using ACT-ON verbs in English, but not in Japanese. Then his analysis predicts that the corresponding Japanese sentence be unacceptable, but it doesn't seem to be the case.

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[15] The explanation of *wipe* in Washio (1997a:13) is confusing, since at one point he says that "She wiped the table clean/dry" is a STRONG resultative, although his argumentation suggests its status as a WEAK resultative.

(36) John-wa teeburu-o kirei-ni hui-ta.
      J.TOP   table.ACC clean(?) wipe.PAST

(36) is perfectly acceptable but, as pointed out by Kageyama (1996:244), not structurally equivalent to (34a). *kirei-ni* in (36) should be looked upon as an adverb, meaning "without any trace". This observation is supported by the following examples.

(37) a. John-wa potto-no yogore-o kireini fui-ta.
          J.TOP   pot.GEN dirt.ACC clean wipe.PAST

      b. John-wa yuka-no gomi-o   kireini fui-ta.
          J.TOP   floor.GEN dirt.ACC clean wipe.PAST

Unlike *wipe* the Japanese verb *fuku* takes not only a location as an object, but also a thing removed in the syntactic frame [NP V NP].[16]

If (37) should be interpreted as resultatives, then the result-states would mean "the dirt of the pot/floor is clean", or to put it somewhat exaggeratedly, "the clean dirt is produced as a result of the action." This is actually not the case. The result-state is that the pot or the floor is now free of dirt, "without any trace of it." There are, in fact, examples that show this adverbial usage of *kirei-ni* as follows.

(38) a. Hanako-wa posutaa-o kireini   hagasi-ta.
          Hanako.TOP poster.ACC without any trace rip-off.PAST
          'Hanako ripped the poster off completely.'

      b. Hanako-wa gomi-o   kireini   sute-ta.
          Hanako.TOP dirt.ACC without any trace throw-away.PAST
          'Hanako threw away the dirt completely.'

Then why didn't Washio (1997a) come up with the right interpretation of *kirei-ni*? It is partly because the adverb is derived from its nominal adjective *kirei* with the particle *ni*. This form corresponds often to an adjective phrase in English. *kirei-ni* can be interpreted as such, contrary to its adverbial usage. Thus *kirei-ni* in (39) is ambiguous between the adjectival and adverbial readings.

(39) a. Hanako-wa doresu-o kirei-ni some-ta.
          H.TOP   dress.ACC (?)   dye.PAST
          'H. dyed the dress beautiful-colored. or H. dyed the dress completely.'

      b. Hanako-wa kabe-o   kirei-ni nut-ta.
          H.TOP   wall.ACC (?)   paint.PAST
          'H. painted the wall beautiful-colored. or H. painted the wall completely.'

      c. Hanako-wa sore-wo kirei-ni wasure-ta.
          H.TOP   it.ACC (?)   forget.PAST

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[16] Note that *wipe* can take a "thing removed" as an object in the syntactic frame [NP V NP PP], as in "John wiped the dirt { from/off } the table. The parallel construction is also possible in Japanese.

This adverb is used to describe the manner of an action, which often affects result-states of affairs. (40a) is an unacceptable example with an onomatopoeic nominal adjective that describes a stative property. *pikapika* is connected with shiny things, while *karakara* has something to do with dryness. On the other hand, *tetteiteki* (=thoroughly) and *iikagen* (=carelessly) in (40) are concerned with manners of actions which often result in a specific result-state.

(40)   a. * John-wa potto-o pikapika-ni/karakara-ni hui-ta.
             J.TOP   pot.ACC shiny/dry   wipe.PAST

        b. John-wa teeburu-o tetteiteki-ni/iikagen-ni hui-ta.
             J.TOP   table.ACC thoroughly/carelessly   wipe.PAST

Along with the examples above, Kageyama's (1996) analysis has no difficulty in handling the facts, i.e. *fuku* belongs to his ACT-ON verbs, and it is not possible to construct resultatives with it. This is because, in his view, it is only possible to construct resultatives in Japanese with *change-of-state* verbs.

To conclude the discussion so far, let us briefly summarize the points. Washio's STRONG resultatives include both transitive and intransitive resultatives. It was demonstrated that the class of transitive resultatives is apparently different from that of intransitive ones, which lead to excessive actions or events. There are such verbs as *boil*, *niru*,*wipe* and *fuku* that are all activity verbs and implicate occasionally slight changes of result-states. This class of verbs differ from the class of *dye*, *paint* and *polish* in that the latter includes lexically a fixed change of states as a constant. Thus the classification of STRONG and WEAK resultatives is not so well-founded and seems to include various instances of different nature. In this respect, the class of ACT-ON verbs proposed by Kageyama is more convincing, yet his change-of-state verbs are not well-defined.

3. Some data from German and Dutch

In this section, I will present some data from German and Dutch. A class of verbs which is more narrowly defined than Washio's WEAK resultatives (i.e. that includes a constant as an lexical entailment) seem to exist in many languages, including German and Dutch:

(41)   a. Peter hat sein Haus blau gestrichen.
            Peter has his   house blue painted.PAST.PART.

        b. Jan verfde   de deur groen.
            Jan painted.PAST the door green

Remember an instrumental verb *hammer* can be used to make a resultative construction in English. The corresponding German example is also acceptable, but the verb *hämmern* is an intransitive verb, so (42b) is unacceptable.

(42)   a. Peter hat den Nagel platt gehämmert.
            Peter has the nail   flat   hammer.PAST.PART.

        b. ?? Peter hat den Nagel gehämmert.   (Staudinger 1997:74)
              Peter has the nail   hammer.PAST.PART.

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The situation in (42) is, therefore, quite similar to unergative resultatives in (43) and (44). Just like English intransitive resultatives, they focus on the excessiveness to which the action denoted by the verbs is performed.

(43)   a. Die Jogger haben den Rasen platt gelaufen.   (Kaufmann 1997:161)
          the joggers have   the grass   flat   run.PAST.PART.

       b. * Die Jogger haben den Rasen gelaufen.
            the joggers have   the grass   flat   run.PAST.PART.

(44)   a. Jan liep   het trottoir   stuk.   (Koch/Rosengren 1995:19)
          Jan run.PAST the pavement broken

       b. * Jan liep   het trottoir.
            Jan run.PAST the pavement

Unlike English, German and Dutch resultatives show more connectedness between resultative APs/PPs and verbs: i.e. they are combined to make a single complex predicate. Some of the evidence for complex predicates is (i) resultative nominal formation is widely possible (cf. (45b)), (ii) adjectives/prepositions in resultative phrases can be topicalized only with main verbs in the sentence (cf. (45c), (45d)), (iii) adverbs cannot be placed between adjectives/prepositions in resultative phrases and the verb (cf. (45e)).

(45)   a. Peter hat das Haus eiß getüncht.
          Peter has the house whitewashed.PAST.PART

       b. das weißgetünchtes Haus/das Weißtünchen des Hauses

       c. Weiß getüncht hat Peter das Haus.

       d. *Weiß hat Peter das Haus getüncht.

       e. *Peter hat das Haus weiß nicht getüncht.

The verb *tünchen* includes lexical information which specifies the object NP having *(white)-colored*. In this sense, it is an instance of WEAK resultatives that are defined narrowly. But there are intransitive resultatives which can be nominalized, as in (46).

(46)   a. Peter hat den Teller leer   gegessen.
          Peter has the plate empty eaten.PAST.PART

       b. leergegessener   Teller
          empty-eaten.PAST.PART plate

       c. Peter hat seine Schuhe kaputtgelaufen.
          Peter has his   shoes   broken-run.PAST.PART

       d. kaputtgelaufene   Schuhe
          broken-run.PAST.PART shoes   (Rosen 1995:101)

       e. de dungedanste   zolen
          the thin-danced.PAST.PART soles (den Dikken/Hoekstra 1994)

Since the position just in front of the main verb is also occupied by so-called separable prefixes in Dutch as well as in German, it is predicted that morphological derivations should be taken at this stage. And in fact there are such verbs which can be identified as resultatives.

(47)   a.   Peter hat den Teller aufgegessen.
          Peter has the plate up-eaten.PAST.PART

       b.   Maria hat ihre Absätze schon wieder abgelaufen.
          Maria has her heels   once   again   away-run.PAST.PART

The prefixes *auf* and *ab* correspond to "up" and "away" in English, respectively and they add to the verbal meaning that something has "gone away" as a result of an action.

4 Concluding remarks

As is often pointed out, e.g. by Simpson (1983), Levin/Rappaport Hovav (1995), Goldberg (1995), Kageyama (1996) and others, in order for resultatives to be constructed, there are some conditions that must be met, some of which include features of verbs, such as [+ motion], [+ contact]. The patient NP must be affected by the result of the action performed. But there seem to be more restrictions in particular languages. In order to capture these differences, we must examine much more evidence from various languages. Washio's (1997a) proposal is, in this respect, quite enlightening, but as we have seen so far, only some part of WEAK resultatives is well defined.

Following is an example of a resultative in German, debatable because of its varying acceptability.

(48)   Es regnet den Eimer voll. (Kaufmann 1995:159)
      It rains   the bucket full

Most native speakers argue that it is strange on the ground that they never heard it spoken, followed by the reaction that the causal connection between the rain and the bucket was highly unlikely. Some speakers agree, albeit reluctantly, that "Es regnet den Boden naß." (It rains the ground wet.) sounds better. This state of affairs probably shows causal link between the action denoted by the verbs and result phrases in order to make resultatives possible.

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