Body partitioning and real-space blends

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Abstract

This article examines the partitionable zones of the body available to ASL signers. These zones are the body subparts that can participate in mappings that create blends (Fauconnier and Turner 1996) that have as one input real space, a mental space built by perceptual processes (Liddell 1995). One type of real-space blend produced in ASL discourse is used to demonstrate actions, and such blends contain at least one visible element when mappings involve the signer's body (Liddell 1998). When the signer is part of such a blend, a visible |actor| results. Information accessible from these blends is increased when the signer produces other visible elements in addition to the |actor|. This increase depends, among other things, on the partitionability of the manual articulators and the face. Without these partitionable zones, conventional ways of building real-space blends are not possible.

Keywords: *ASL; conceptual integration; real-space blends; partitioning; nonmanual signals.*

1. Introduction

Investigators applying the theory of conceptual blending (Fauconnier and Turner 1996) to American Sign Language (ASL) are interested in real-space blends produced in everyday discourse (Liddell 1998, 2003; Dudis 2002). One type of real-space blend involves the projection of the signer's body into the blend, producing a visible blended element, typically a human |actor|.[1] For example, in describing the act of motorcycling uphill, the signer may create a real-space blend in which much of his body is understood to be a |motorcyclist| (this blending process is detailed in the next section). Unlike the other elements in the blend, such

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Figure 1. *The signer as visible element |motorcyclist|*

as the |motorcycle| and the |hill|, the |motorcyclist| is visible. The source of the difference is whether an input element's counterpart in real space involves a portion of the signer's body or only empty physical space. Figure 1 shows the body configuration of the signer. In the blend, the facial expression, the eye gaze, the position of the torso, the outward arms and the hands are all understood to be those of the |motorcyclist|.

Such real-space blends are a staple of ASL discourse. One of the main purposes of this type of blend is to produce rich and vivid demonstrations. However, this characterization seems to apply only to the actions of the visible |actor| and what can be inferred from such actions. In the blend in Figure 1, the signer's body contributes a great deal of information about the |motorcyclist|—the way he moves, his facial expression, how he responds to events, and so forth. In contrast, information about the |motorcycle| or the |hill| cannot be obtained directly from the blend. Information about these non-visible elements can either be inferred from the actions of the |motorcyclist| (e.g., the slope of the hill can be inferred in part from the |motorcyclist's| eye gaze) or obtained from prior discourse. Thus much of the richness and vividness of this blend is both directly and indirectly accessible from the visible element.

Would the blend be richer if additional visible elements were introduced? Is it possible to create more visible elements without recourse to immediately available physical objects such as pencils or cups that could serve as props to one's discourse? The multiple, simultaneous blends examined in Liddell (2000, 2003) and Dudis (2002) address these questions. As an illustration, consider how the signer can effortlessly produce other visible elements in addition to the |motorcyclist|. While keeping the

Figure 2. *The* |*motorcyclist*|*, the* |*motorcycle*$_2$|*, and* |*part of the hill*|

motorcyclist blend active, the signer produces a two-handed verb that depicts the action of a vehicle on a surface.[2] Production of such verbs establishes a second blend (Liddell 2000), and within this blend the manual articulators map with other input counterparts to result in visible elements. The [flat B] handshape shown in Figure 2 is understood to be a part of the surface of the |hill|, upon which the [3] handshape, which is understood to be the |motorcycle|, is moving.[3]

With this production of multiple real-space blends, addressees have visual access to three distinct elements. In the motorcyclist blend, much of the |motorcyclist| remains accessible despite its decreased visibility with the subsequent production of the depicting verb. In the motorcycle and hill blend, addressees are given direct information from the two visible elements within, such as the slope of the |hill| and the path movement of the |motorcycle|. Thus the two real-space blends create a more explicit description of the act of motorcycling uphill.

The real-space blends described above illustrate two different results of blending involving the signer's body. The first example of the |motorcyclist| has the signer's body projected as a single visible real-space element into the blend. The second example, in which a multiple blend emerges, involves different parts of the signer's body projected as separate visible real-space elements into their respective blends. Body parts demonstrating this ability to be partitioned off are *partitionable zones*. This article examines the use of these zones, illustrating how their existence allows for the creative potential of signers during creation of real-space blends.

2. Real-space blends

This section reviews how real-space blends of the type described above are produced. In Fauconnier and Turner's (1996, 1998) model of the basic conceptual integration network, four interconnected mental spaces are involved in the blending process. Two of these mental spaces serve as inputs to another mental space, the blend. In the blends examined in this article, one of the inputs is real space which, as Liddell (1995: 21–23) describes, is a mental space built via perceptual processes. This is distinct from the other input in that elements in the former are understood by the conceptualizer as being part of his or her immediate environment; Liddell (1995) uses the term "grounded" to label this particular property of real space. In signed discourse, the real space of the addressee would consist of her conceptualization of the signer via visual input. That is, the signer in the addressee's real space is a mental space element. Other objects that are visually accessible are also potentially real-space elements. The empty physical space is also a real-space element.

The other input is a non-grounded mental space. For convenience, in the examples analyzed in this article, I consider this input to be a narrative space, containing elements introduced during a narrative.[4] For instance, prior to the blending examples above, the signer may establish a narrative space by indicating to the addressee that he is going to talk about an incident involving the act of motorcycling uphill. Mental spaces are structured by frames and contain elements and relations between elements (Fauconnier 1994, 1997). This particular narrative space is structured by the "motorcycling" frame and contains the elements *motorcyclist*, *motorcycle* and *ground* (the surface of the hill) as well as relations between them. The fourth mental space of the blend network is a generic space, which serves to enable counterpart connections between the input spaces (Fauconnier and Turner 1998). This generic space itself holds elements and relations abstracted away from each of the inputs, such as a *mover* from both *motorcyclist* and the real-space signer and the [MOVE] relation in which the *mover* has a role.[5]

Table 1 lists elements of the motorcyclist blend. The real-space signer and the base (narrative) space element *motorcyclist* are projected into the blend and a distinct element |motorcyclist| is created. As with the other elements in the blend, the |motorcyclist| is a unique conceptual element, distinct in this way from the signer or the *motorcyclist*. The |motorcyclist| is visible, unlike the other elements of the blend, because it inherits this property from the visible real-space signer. The |motorcycle| and the |hill| are non-visible because of the properties of counterpart empty physical spaces that are projected into the blend (space "m" and space "h" are just

Table 1. *Mappings involved in the motorcyclist blend*

Real space input	Base space input	Blended space	Generic space
signer	*motorcyclist*	|motorcyclist|	mover
space m	*motorcycle*	|motorcycle|	moved
space h	*hill*	|hill|	location

convenient, nonce labels for these areas of physical space). The non-visible blend elements are nevertheless understood to be as conceptually present as the |motorcyclist|.

In short, this real-space blend consists of a visible |actor| and some non-visible |elements| which inherit various properties from their input space counterparts. In the interest of understanding potential qualities and uses of real-space blends, it is worth mentioning that across discourse goals/functions, the degree to which real-space blends are informative can vary, for example regarding the kind of blend, depth of detail, etc. A demonstration for the purposes of instructing may contain less information than a demonstration for narrative purposes. To instruct someone how to open the hood of a car, for example, the signer need not be concerned about the level of detail which includes how the body would need to be positioned in order to reach the lever opening the hood. The narrative version would have more attention to detail, including the body's navigation as the person reaches for the lever as well as the facial expression worn during the act. The blending process underlying the instructive and narrative instances is similar, but the results are different.

One way the amount of information accessible from the real-space blends is increased is related to the ability of the signer to create distinct visible blend elements. As I show below, the creation of these elements depends not only on the blending process but also on the existence of partitionable zones of the body. The following sections address the parts of the body observed to be partitionable and the types of contributions they make to the conceptual integration network within single or multiple real-space blends.

3. Manual articulators as partitionable zones

In the motorcyclist blend discussed in section 1, we have seen one example of a partitionable zone of the body being recruited to create a new visible blend element subsequent to one that had already been created. To frame the discussion, a few additional comments are made here regarding the motorcyclist blend.

Generally, the purpose of the motorcyclist blend, in which the only visible element is the |motorcyclist|, is to demonstrate the act of motorcycling uphill. It is possible to simply run this blend until the |motorcyclist| arrives at the top of the hill without needing to establish another blend. The addressee can infer from the |motorcyclist's| actions that the entire act has been initiated and completed, that is, the |motorcyclist| is understood to have traveled from the bottom of the hill to the top. The cues that allow the addressee to make this interpretation include the movement of the |motorcyclist's| hands and torso. As shown in Figure 1, the position of the signer's upper torso is similar to, and an adequate representation of, a motorcyclist's torso position when ascending an actual hill. To indicate that the top has been reached, the signer could move both the torso and the hands, which are understood to be the |motorcyclist's| hands gripping the handles of the |motorcycle|, slightly forward. This physical change would be understood as the normal way a motorcyclist's physical exertion changes when arriving at the crest of a hill. Other cues include eye gaze behavior and facial expressions. When reaching the top of the |hill|, the |motorcyclist's| eye gaze would no longer be directed upward. The facial expression would change from one of effort during the climb to one of relative relaxation, having completed the somewhat intense act of motorcycling uphill.

In the motorcyclist blend, the movement of the |motorcycle| is not directly shown, but is inferred from the actions of the |motorcyclist|. However, the signer can choose to demonstrate the vehicle's movement explicitly by creating a distinct visible element that is understood to be the |motorcycle|. This choice is available because of the existence of a particular body part that can be partitioned off from its role in the motorcyclist blend, in this instance the dominant hand. Once partitioned off, the body part is free to participate in the creation of a new element. This development does not deactivate the motorcyclist blend, but it does have an impact. The |motorcyclist's| hands are no longer visible, but conceptually, they nevertheless continue to be understood to be on the |handles|. This is due to pattern completion, a blending operation that makes it possible to "fill in the blanks", as it were (Fauconnier and Turner 1998).

Pattern completion is available not only in such cases, but also in single real-space blends as well. When the signer is part of a blend, typically only the relevant portions of his body are projected into the blend. For example, even though the signer may actually be standing, the |motorcyclist| is not supposed to be conceptualized as standing as he moves uphill. Rather, the real-space legs are simply not part of the blend, and through pattern completion the |motorcyclist| is understood to be configured in the appropriate sitting position.

Here it is clear that a distinction can be made between two types of zones of the body in terms of their potential roles in the creation of blend elements. As shown below, the manual articulators and the signer's face can both contribute to the creation of visible blend elements. Thus they have a special status as partitionable zones. Other parts of the body such as the signer's legs, while they can be part of real-space blends, are not conventionally partitioned off to create distinct visible elements. In the case of the motorcyclist blend, in which the signer's legs play no part, the legs are best understood as simply one portion of the signer's body that is not recruited from real space to be part of the blend. One observation regarding the existence of partitionable zones is that it is far from arbitrary that the body has the partitionable zones it has. This suggestion will be discussed in greater detail in section 5.

Returning to the manual articulators of the motorcyclist blend, the partitionable zones inherent in the signer's hands become available to produce a two-handed depicting verb that means 'vehicle moving forward on an unspecified surface.' This type of depicting verb has the dual task of signifying and depicting an action (Liddell 2003). In other words, these articulators, while producing a verb, also produce two distinct visible elements. The form of the handshapes can be seen in Figure 2 (in section 1). The palm of the [flat B] handshape is facing away from the signer, and the ulnar side of the [3] handshape travels forward on the back of the [B] handshape. Schematically, this [3] handshape is understood to be a |vehicle|, and the [B] handshape is understood to be an |unspecified surface|. Within this conceptual integration network, these visible elements are also understood to be respectively the |motorcycle$_2$| and |part of the hill|.[6]

3.1. *Scalar properties of blends*

Generally, the scale of the real-space elements and their blend counterparts coincide. For example, the height of the |motorcyclist| is assumed to be roughly equivalent to the real-space signer. When the signer is talking about a specific motorcyclist who happens to be much taller than the signer, this information would motivate an explicit adjustment (e.g., the |motorcyclist's| eye gaze would be cast lower when he looks at other |individuals| who are shorter. This adjustment would be necessary only if the "tallness" property of an element is important to the description. In this case, however, there is a disparity in the understood scale between the |motorcyclist| on one hand and the |motorcycle$_2$| and the |part of the hill| on the other.

The scale of the |motorcyclist| and the |motorcycle$_2$| in this example do not coincide. If they did, then one possible interpretation would

be that the |motorcycle$_2$| is literally positioned inches away from the |motorcyclist's| chin. Certainly, this is not the intended interpretation. Furthermore, the introduction of the |motorcycle$_2$| makes a total of two grounded blend elements that have the narrative input space element *motorcycle* as their counterpart. Since it is not the intent of the signer to talk about two different motorcycles, how can we account for this?

A number of factors, including the existence of multiple real-space blends, ensure that these "incongruities" do not arise. One such factor is the contrast between *participant viewpoint* and *global viewpoint* associated with the two blends. The |motorcyclist| is the central participant of the motorcyclist blend, its viewpoint inherited from the signer's deictic center. Thus objects and events within this blend are described from the perspective of the |motorcyclist|. The scalar properties of such a blend, as Liddell (1995) shows, are understood to be life-sized elements, following the scale of similar objects in reality. This is a consequence of projecting the scalar properties of real space onto the blend.

The scalar properties in the second real-space blend contrast with those in the motorcyclist blend. Here the scalar properties are determined in part by certain properties of the [3] handshape. The length of the |vehicle| element of the depicting verb, for example, runs from the base of the hand to the fingertip of the middle finger. Thus compared to the life-sized |motorcyclist|, the specifications of this |vehicle| are on a much smaller scale. This scale is small enough to afford a more global viewpoint. For example, to describe the motorcyclist falling from the motorcycle, the signer can produce a verb meaning "fall from straddled position on bike".[7] This involves a [V] handshape understood to be a partially visible |rider|, which straddles the |vehicle| and subsequently falls from it. One reason such an interaction between these elements is possible has to do with the similarity of scale that they have as individual elements. The smaller scale of the global perspective depiction involving the |vehicle| is akin to a wide-angle shot in motion-picture production, while the real-space blend containing the participant |signer as actor| is akin to a close-up shot. It is not possible for the |signer as actor| and the |vehicle| to come into contact, and the difference in scale is one reason why.

When the |vehicle| becomes part of the conceptual integration network analyzed in this section, the |vehicle| is understood to be the |motorcycle$_2$|. As this |motorcycle$_2$| exists within its own mental space, it is distinct from the narrative input space *motorcycle* and the non-visible blended |motorcycle|. This in part explains how it is that the signer is only talking about a single motorcycle despite the existence of two blend elements that are understood to be motorcycles. As it is possible for additional |motorcycles| to exist within either blend (e.g., the narrative may be

about motorcycle racing involving several motorcycles), a discussion of connections between counterparts is necessary for a fuller explanation.

Before discussing the other partitionable zones of the body, I will make two further comments. In the blend discussed above, the use of partitioned manual articulators involved establishing the blend with participant viewpoint, followed by the blend with global viewpoint. However, signers have another conventional option available via the use of partitionable zones. Rather than following the establishment of the initial blend, partitionable zones can be projected into blends the moment the blends are created. It is possible, for instance, to simultaneously create two blends containing the |motorcyclist| and the |motorcycle$_2$|.

Second, body partitioning does not necessarily involve the production of multiple real-space blends. As is shown in the following, a partitioned manual articulator can also be used to create a second visible element of the *same* blend.

3.2. *Partitionable zones in a single blend*

The conceptual integration network that is produced here is made during a description of someone getting punched in the face. The narrative space input contains the two elements *victim* and *assailant* as well as a relation between the two, [PUNCH *assailant*, *victim*]. If the *assailant* is mapped onto the signer, this results in a visible element, |assailant|, and the punch would be thrown towards a non-visible |victim|. Another option is available to the signer via the partitionability of the manual articulator. The punch could be described from the victim's perspective. In this case, *victim* would map onto the signer, creating a visible |victim|. The |assailant| is an entirely non-visible element until the punch materializes.

To demonstrate the punch, the signer maps the *assailant's forearm* onto the partitionable manual articulator, which creates a visible |assailant's forearm|. The fist of this |forearm| moves to the |victim's| jaw, as shown in Figure 3. This interaction suggests that they are both elements of the same blend, in contrast with the |motorcyclist| and the |motorcycle$_2$| above, which cannot contact each other.[8]

4. Nonmanual partitioned zones

Nonmanual signals (NMSs) are a key component of signed languages, and they have multiple functions (Baker and Cokely 1980; Liddell 1980). Certain nonmanual signals function simply as phonological components of a sign. Some nonmanual signals are adverbial items, such as a particular lip configuration (glossed as ''mm'') signifying that an action is being

Figure 3. *The |victim| and the |assailant's forearm|*

done in a regular or relaxed fashion. Varying clause types are marked by particular sets of nonmanual signals. In addition to these functions, nonmanual signals can contribute affective signals to discourse. Finally, as shown in this section, onomatopoeia-like items are produced nonmanually as well.

There are at least two areas of the face that are partitionable zones. The oral articulators can be partitioned to produce an onomatopoeic item, which contributes sensory detail to the blend. A second partitionable zone is the facial expression, in the sense that it can be used as a depiction of someone's facial expression from the perspective of a visible |actor| mapped onto the signer.

4.1. *An onomatopoeic component*

Like hearing people, deaf signers understand that certain motion events contain a sound emission component. That is, signers know that sound may be produced prior to, during, or at the endpoint of a motion event. Resources are available to signers via nonmanual signals that allow the simultaneous description of the motor event and the sound emission associated with it. This simultaneity is reflected lexically. Some verbs have a nonmanual component that is understood to be onomatopoeic, as the following example shows.

One verb that conventionally carries an onomatopoeic component is a depicting verb that means "liquid dropping from some container", shown in Figure 4. The production of this verb begins with a closed handshape similar to the [S] handshape but with the fingernail of the index finger resting on the side of the thumb. The palm of this hand faces downward.

(a) (b)

Figure 4. |*Homeowner*| (a) *and* |*droplet of water*| (b)

Through the movement of the wrist, the hand descends as the index finger simultaneously opens.

The onomatopoeic item that is produced somewhat contiguously with this manual production is, similar to onomatopoeic forms in spoken languages, produced by the oral articulators; however, phonation is not a requisite feature here. The lips are pressed together during the initial segment of the sign. They open when the sign moves, and are pressed together again at the end of the sign production. This oral production resembles the phonation of "bip". Thus "bip" is a meaningful component of the verb. This affinity is reflected in the depicting verb—it is not conventional to produce the citation form of the verb without the onomatopoeic nonmanual component.

The manual component of this depicting verb corresponds to the existence of a drop of liquid and the movement of the articulator corresponds to the path the drop of liquid takes. To describe that someone, say a homeowner, saw a droplet of water fall from a faucet, the signer produces a real-space blend to which the verb contributes. The nongrounded input has the following elements that either have been previously introduced or are available through the frame of "leaking faucet": *homeowner*, *faucet*, *sink*, *drop of water*. As in other real-space blends, the projection of input elements into the blend results in the existence of visible and nonvisible elements. That is, *homeowner* is mapped onto the signer, producing a visible |homeowner|, *faucet* is mapped onto a portion of empty space producing a non-visible |faucet|, and so forth.

The |homeowner| is for the most part visible and is understood to be looking in the direction of the |sink|. The manual articulator is partitioned off to take part in mappings that create the |path of falling water droplet|. This articulator is placed where the |faucet| is conceptualized to be. The oral articulators are partitioned off to add another sensory detail to the blend via the onomatopoeic component of the depicting verb. The onomatopoeic element in the blend is not construed as visible, despite its channel, but rather understood to be the auditory/vibratory result of the |drop of water| hitting the |sink|.

Whether the production of the depicting verb requires a separate blend appears to depend on where the |droplet of water| is conceptualized to be. If the location of the manual articulator corresponds to where the signer's intended location of the |droplet of water| is, no separate blend is needed. The real-space blend in this case would be similar to the "someone receiving a punch" blend: instead of being in separate blends, distinct visible elements co-exist within a single blend. A second blend may be necessary in cases where the perceiver and the water droplet are some distance apart, rendering the former oblivious to both the water droplet and the sound made as it hits the sink. In this case, the |droplet of water| and the |"bip"| would co-exist in the separate blend, resulting in a blend network similar to the "motorcycling uphill" blend network.

There appears to be a large class of onomatopoeic items in ASL, many of which are meaningful components of depicting verbs. These items, along with adverbials and other nonmanual signals, remain understudied. Future studies of nonmanual signals and their contribution to meaning construction would need to consider the status of oral articulators and, as shown below, facial expression as partitionable zones.

4.2. *Partitioned facial expressions*

The signer's facial expression, when partitioned off, can serve to depict the facial expression of an otherwise non-visible |actor$_2$| from the perspective of the visible |actor$_1$|. For example, consider a signer's description of receiving a glare from someone. Figure 5 illustrates the facial expression, body configuration, and a verb meaning "eye gaze being directed at a location". The nongrounded input space contains the elements *self* and *other* as well as the relation [GLARE *other*, *self*]. The element *self* is mapped onto the signer, producing |self|, and *other* is mapped onto a portion of empty physical space, producing a non-visible blend element |other|.

The signer produces the verb of perception with his right hand by positioning a [V] hand up and away from the deictic center, with the fin-

Figure 5. *The |self|, the ''eye gaze being directed'' verb, and the glare*

gertips pointing back towards the signer. This verb is somewhat similar to the depicting verb in the ''water droplet'' blend in that it requires a component additional to the manual articulator to be produced in tandem with it. More specifically, as Liddell (2003: 131) notes, this verb of perception prompts a real-space blend containing a visible |actor|. In the example described here, the |self| has the role of ''object of gaze''. In isolation, without contextual cues, the signer's facial expression could be understood to represent either that of the |self| responding to the glare or that of the otherwise non-visible |other| who is glaring at |self|. If the signer intends the latter interpretation, this would involve the partitioning off of the facial expression. Conversely, had the |self| been understood to inhabit the role of ''gazer'', the glare would be associated with the |self|, and thus no partitioning would occur.

Through prior discourse and contextual cues, the addressee knows that the facial expression is not made by the |self|. Of course, partitioning off the glare does not result in the |self| lacking a facial expression. Through pattern completion the |self| is understood to have some facial expression, albeit a non-visible one. The intended facial expression of the self may be determined from discourse prior to partitioning or when a different facial expression replaces the partitioned glare.

5. Partitionable zones, the nature of signed languages, and gesture

In the above discussion I have demonstrated the existence of four partitionable zones: both manual articulators, the oral articulators, and the facial expression. It appears reasonable to suggest that without these

partitionable zones, certain properties of ASL and other signed languages might not exist. For instance, cases in which a visible |hand| is distinct from the visible |actor|, as in the punching example above, would not be possible. Without the ability to partition the manual articulator, the class of ASL verbs of handling would be constrained in their ability to be directed towards the visible |actor|, which would limit the choice of perspectives as well.

An inability to partition the manual articulators would also have a negative impact on the articulators taking part in mappings that create visible blend elements. Without partitioning, signers would not be able to produce depicting verbs when activating a real-space blend containing a visible |actor|. Moreover, certain types of depicting verbs, such as the "vehicle moving forward" verb, may not even be possible at all. One function these verbs have, as Liddell (2003) claims, lies in their ability to depict various aspects of their meaning. One such aspect involves the correspondence of the hand with an entity associated with the verb, such as |vehicle|. To be able to conceptualize the hand as a vehicle at all appears to involve the partitioning off of the hand from the real-space body. Without such partitionable zones, the inventory of these |hand as entity| elements in the ASL lexicon would be much smaller, and consequently, signed languages would be much different than the languages we know them to be.

Many factors appear to underlie the existence of the partitionable zones discussed in this article, but further discussion of these factors falls outside its scope. However, it is worth mentioning that these zones are not limited only to signers, but are available to nonsigners as well. This can readily be seen in the manual-gestural component that accompanies speech. Sometime during our development as human beings, through experiences involving our hands and the hands of others that act on us, we must have become aware of the functional autonomy of the hand. For example, we learned that the hand can act on other parts of the body, including one's own other hand. Such an ability is not possessed by, say, the shoulders. I would conjecture here that the role of the hand as an instrument of action appears to prime it for partitionability.

6. Conclusions

Real-space blends of the type described in this article are indispensable to ASL discourse in many ways. Their great utility comes from the rich amount of information available from such blends. As discussed, the number of distinct visible blended elements plays a large part in the

amount of information available to addressees. Even though the signer's body, as a single unit, may be projected into a blend to create visible |actors|, other visible elements are possible as well. This is due to the partitionable zones of the body, namely the hands and the face. These zones, when partitioned off from the signer's body, create the additional visible elements that increase the richness of the conceptual integration network of which they become part. In other words, body partitioning plays a large role in providing the signer with a wider range of options in the creation of real-space blends than would otherwise be possible.

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Notes

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1. Following convention, words in vertical line brackets label grounded blend elements. Liddell (1995) calls such blends *surrogate blends* and elements within these blends *surrogates*.
2. See chapter 9 in Liddell (2003) for a discussion of depicting verbs.
3. The [flat B] handshape is a flat hand with the thumb unopposed. The citation form of the "vehicle moving on surface" has the ulnar side of the [3] handshape contacting the back of the [flat B] handshape.
4. It should be kept in mind, however, that real-space blends are also found in other types of discourse as well.
5. In this article, I will not describe the structure of generic spaces in detail, as it is pretty clear what the correspondences between input counterparts are.
6. The subscript numeral in the label |motorcycle$_2$| serves to distinguish this element from its non-visible counterpart |motorcycle| in the motorcyclist blend.
7. Use of this verb appears to require that the |vehicle| be understood to be either a bike or a motorcycle. A different verb that lacks the depiction of straddling would be used to describe falling from other types of vehicles.
8. See Janzen, O'Dea, and Shaffer (2001) for examples of body partitioning in their investigation of passive constructions in ASL.

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