

On Visual Paths Associated with *Visible from* and *Visible to*

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1. Introduction

The adjective *visible* allows a prepositional phrase headed by *from* or *to*, as exemplified by (1).¹

- (1) a. The house wasn't visible from where they stood, ...
 b. Charlie had opened his wallet with a flourish, taking care that its contents were visible to all the patrons of the bar.

Given that these prepositions indicate directionality, we might well expect *visible from* and *visible to* to evoke oppositely directed paths of some sort.

In respect to the occurrence of the prepositions *from* and *to* in expressions of static situations like (2) and (3), Radden and Matthis (2002) claim that prepositions denoting source and goal make one see a situation of closeness or distance and a state of similarity or difference as involving some sort of motion.

- (2) a. Fred's house is far away from Grant's house.
 b. Fred's house is close to Gerald's house.
 (3) a. Fred's house is different from Grant's house.
 b. Fred's house is similar to Gerald's house.

(Radden and Matthis (2002:232))

They state that the source and goal prepositions lead one to mentally trace along a path from one entity to the other. Such mental tracing is referred to as subjective motion in studies like Langacker (1991) and Matsumoto (1996) and as fictive motion in Talmy (2003:Ch.2). Matsumoto (1996) points out that prepositions indicating directionality are not compatible with nonmotion verbs like *lie*, as in (4).

- (4) a. *The road lay from Burney to Redding. (Talmy (2003:190))
 b. The road lay between Burney and Redding. (Matsumoto (1996:186))

As regards the conceptualization of visual experiences, Talmy (2003) holds the view that some intangible entity traverses a straight path between a perceiver and

¹ Unless otherwise indicated, the *visible* citations used in this article are taken from the British National Corpus (=BNC) (provided by Shogakukan Corpus Network (<http://scn02.corpora.jp/~sakura04/cgi-bin/login1.cgi>)).

a perceived object in one direction or the other. Thus two types of fictive visual path can be recognized: One path leads from the perceiver to the perceived object and the other path leads from the perceived object to the perceiver.² While Talmy does not mention the case of *visible*, one might take *visible from* as in (1a) to illustrate the former path and *visible to* as in (1b) to illustrate the latter path.

However, as will be seen below, the fictive paths envisioned by *visible from* and *visible to* cannot be characterized in terms of the two types of visual paths introduced by Talmy (2003). The purpose of this paper is to reveal the nature of the visual paths associated with *visible from* and *visible to*. It will be shown that the difference between the two paths postulated for *visible from* and *visible to* does not boil down to the difference in direction of motion; rather they are defined in different domains.

In section 2, we review Talmy's (2003) discussion on fictive visual paths. While Talmy's view seems promising in explaining *visible* expressions, we need to elaborate on his theory to make the most of his insights into fictive motion relating to a visual experience. Section 3 examines the kinds of elements that follow *visible from* and *visible to* respectively. It will be demonstrated that the former refers to the perceiver's location and the latter refers to the type or condition of the perceiver. In section 4 we will characterize the paths envisioned by *visible from* and *visible to* and point out that the difference between *from* and *to* in the type of fictive path is observable outside of *visible* as well. Section 5 makes concluding remarks.

2. Talmy's (2003) Visual Paths

2.1. An Overview

In his extensive study of fictive motion, Talmy (2003) recognizes two kinds of visual path in the conceptualization of visual experiences, setting up a straight line between a perceiver and a perceived object: One is the path from the perceiver to the perceived object; the other is the path from the perceived object to the perceiver. The former is called the Experiencer as Source type of sensory path and the latter is called the Experienced as the Source type of sensory path. According to Talmy, the perceiver is conceptualized as projecting a probe from him/herself to the perceived object and the perceived object is conceptualized as emitting a stimulus which arrives at the perceiver.

Talmy observes that in the case of the senses of hearing and smell, fictive motion in either of the two opposed directions can be easily recognized, as illustrated below.

² In this regards, Matsumoto (2004) examines Japanese expressions for visual perception and distinguishes three kinds of fictive motion.

- (5) a. I can hear/smell him all the way from where I'm standing.
 b. I can hear/smell him all the way from where he's standing.

(Talmy (2003:115))

Here, the path phrase in (5a) represents the Experiencer as Source type of sensory path and that in (5b) the Experienced as Source type of sensory path.

As for the sense of sight, Talmy claims that the Experiencer as Source of sensory path is preferred over the Experienced as Source type of sensory path. He points out three arguments for this claim. Firstly, some speakers find it difficult to accept the use of *see* with the Experienced as Source interpretation in an active construction, thus the contrast in (6).

- (6) a. The enemy can see us from where they're positioned.
 b. ?The enemy can see us from where we're standing.

(Talmy (2003:115))

Since this verb takes the Experiencer as subject, it can be naturally associated with the Experiencer as Source interpretation.

In this connection, Talmy (2003) notes that the difficulty no longer exists when the verb is used in the passive, providing the following passive sentences corresponding to (6).

- (7) a. We can be seen by the enemy from where they're positioned.
 b. We can be seen by the enemy from where we're standing.

(Talmy (2003:115))

Like the verbs *hear* and *smell*, passive *see* can occur both with the Experiencer as Source type of sensory path, as in (7a), and with the Experienced as Source type of sensory path, as in (7b). In (5) and (7), the (a) sentences represent the perceiver's location as the object of *from*; and the (b) sentences represent the perceived entity's location as the object of *from*.

A second point is concerned with the difference in size between the class of verbs which are lexicalized to take the Experiencer as subject and that of verbs which are lexicalized to take the Experienced as subject. As we have seen above, the verb *see*, a nonagentive vision verb, realizes the Experiencer as the subject. The nonagentive vision verbs also include a verb like *show*, which can represent the Experienced as the subject. The difference in the realization of arguments between

see and *show* is illustrated in (8).

- (8) a. Even a casual passerby can see the old wallpaper through the paint.
 b. The old wallpaper shows through the paint even to a casual passerby.

(Talmy (2003:116))

Unlike *see*, the use of *show* in (8b) expresses the Experienced as the subject and the Experiencer as the object of the preposition *to*, which favors the interpretation of the Experienced as Source. Despite the presence of a verb use like (8b), the Experienced is not generally realized as subject and hence the Experienced as Source type of visual path is not commonly found in English.

A third point is that agentive verbs of vision in English exclusively express the Experiencer as subject, which promotes the interpretation of the Experiencer as Source. Thus the verb *look*, which represents the Experiencer as the subject, allows directional phrases which are compatible with the Experiencer as Source interpretation, as exemplified by (9a), but not a directional preposition which is compatible with the Experienced as Source interpretation, as exemplified by (9b).

- (9) a. I looked into/toward/past/away from the valley.
 b. *I looked out of the valley (into my eyes).
 <where I am located outside the valley>

(Talmy (2003:116))

The occurrence of directional phrases involving *into*, *toward*, *past*, *away from* in *look* sentences suggests that in the visual experience encoded by *look*, a perceiver is understood as projecting some probe which travels toward a target to detect it.

2.2. Comments

To recapitulate Talmy's (2003) discussion, in conceptualizing a visual experience one may evoke a fictive path between a perceiver and a perceived entity which can be traversed in either of the two opposed directions; and of the two paths, the path which runs from the perceived entity to the perceiver is not as general as the path which runs in the opposite direction. With regard to the path running from the perceiver, it is evidenced by expressions like (6a) and (7a), where the perceiver's location is marked by the source preposition *from*. A quick glance through vision verbs like *look* and *see* in the BNC gives the impression that the path which leads from the perceiver to the perceived entity is prevalent. In respect of the path running from the perceived entity, it could be proved by an expression like (7b),

where the perceived entity's location is marked by the source preposition *from*. At this point, I cannot tell whether this kind of expression is generally accepted or not. To prove the existence of this path, we need to confirm whether such examples are commonly found in English, but we leave this confirmation as a topic for future research.

In considering whether the fictive paths envisioned by *visible from* and *visible to* can be characterized in terms of the paths introduced by Talmy (2003), I have to delve into details and reduce some of the confusion found in his analysis. As far as the data in (5)-(7) are concerned, the examples rightly illustrate the paths in question, since in these sentences the location of the perceiver or that of the perceived entity is indicated with the source preposition *from*. However, Talmy also includes (8b), which involves the goal preposition *to*, as the linguistic evidence for the path leading from the perceived entity to the perceiver.³ As a first approximation, *from* or *to* in these sentences might be taken to indicate the source or goal of a fictive visual path. However, if we focus on the elements marked by the prepositions, we notice that the object of *from* and that of *to* are not on an equal footing.⁴ In (7a), the object of *from*, *where they're positioned*, refers to the perceiver's position; but in (8b), the object of *to*, *a casual passerby*, does not refer to the perceiver's position. Put differently, while the *from*-phrase in (7a) tells us where the perceiver is, the *to*-phrase in (8b) does not tell us where the perceiver is; rather it gives information about the kind or condition of the perceiver. My claim is that the *to*-phrase introducing the perceiver rather than the perceiver's position should not be counted as evidence for the fictive path leading from the perceived entity to the perceiver.

These considerations lead us to query the impression that the phrases *visible from* and *visible to* involve fictive motion along a path between a perceiver and a perceived object in one direction or the other. In fact, characterizing the paths envisioned by *visible from* and *visible to* in terms of Talmy's (2003) two oppositely

³ As far as I can tell from a quick skim through *show* sentences in the BNC, examples like (8b) seem to be rare. This impression is confirmed by Miller and Johnson-Laird's (1976) observation on the uses of *show*. According to them, usually when a perceiver is explicitly mentioned, a human agent also needs to be mentioned, as in (ia). This implies that a perceiver cannot generally appear in the use exemplified by (ib), where a human agent is not explicitly mentioned.

- (i) a. He showed a picture to us on the screen with the projector.
- b. A picture showed on the screen.

In this connection, Nemoto (to appear) reports that the use of the verb *peep* which takes a perceived entity as subject also does not seem to allow a perceiver to be mentioned.

⁴ Concerning the relation between the source and the goal, Ikegami (1987:135) points out that the goal is dominant compared to the source, providing ample evidence for the dissymmetry.

directed paths oversimplifies matters. As suggested by the examples in (1), *visible from* allows the perceiver's location to follow it; but *visible to* allows the perceiver to follow it. Thus, *visible from* can be regarded as instantiating Talmy's Experiencer as Source type of sensory path; but *visible to* cannot be regarded as instantiating Talmy's Experienced as Source type of sensory path. Then what kind of path is evoked in understanding *visible to* expressions? Before we discuss this question, let us confirm that the fictive path associated with *visible to* is not a reversal of that associated with *visible from* through an examination of the kinds of elements that follow *visible from* and *visible to* respectively.

3. The Kinds of Prepositional Complements

3.1. Visible from

An observation of naturally occurring *visible* examples in the BNC indicates that as with (6a), where a *from*-phrase occurs with the verb *see*, the preposition *from* can introduce the perceiver's location, as exemplified below.

- (10) a. The house wasn't visible from where they stood, ... (= (1a))
 b. Straightening, the Doctor looked around, noticing for the first time that the hill he had asked about earlier when he was with Howard, was also visible from here.
- (11) a. She would have left the door open and the landing light on so that she was clearly visible from the stairs.
 b. The house itself would be visible from the High Street across the open grassland.
 c. Pat pointed out a castle tower visible from the window, with two ruined churches nearby.
- (12) a. In that year, there was a total eclipse of the Sun visible from Britain on 3 May.
 b. Orion is a particularly useful direction-finder. ... it is visible from every inhabited part of the world.
 c. ... calcium and aluminium-rich rocks that make up the bulk of the lunar highlands crust and give it the light colour that is visible from Earth.

In (10), *where they stood* and *here* imply that the persons who play the role of the perceiver are identifiable. By contrast, the identity of the perceiver does not count in (11) and (12), where the prepositional complements are not defined in relation to a particular person. The examples in (12) illustrate that when it comes to the perception of heavenly bodies, visual paths may become extremely long.

The *from*-phrase with *visible* can be followed by an expression which indicates the length of the fictive visual path covered by the perceiver's line of sight, as illustrated below.

- (13) a. ... all we saw of land was the Hvalsbakur or Whale's Back, a single forbidding rock sixteen feet high, visible from ten miles away in clear weather.
- b. One of the advantages of the belt is that the animals are easily visible from afar in the gloom in rough country.
- c. Inverness, a likeable city, is visible from a distance.

In these examples, the perceiver's position is defined in terms of the distance between the perceiver and the perceived entity. The perceiver's position can also be defined in terms of the direction of fictive motion, as shown by the following examples.

- (14) a. Aerial photography is particularly valuable in detecting buried archaeological sites, picking up three main clues visible from the air: marks in growing crops, marks in the soil, and shadows on the ground.
- b. Consequently, the weft strands form the pattern on the face of the rug which, because they have been looped back around the warp strands, is clearly visible from both back and front.
- c. This fall gives no audible warning and is not visible from above !

The examples in (14) specify which way the perceived object is from the perceiver.

To summarize, *visible from* is used to introduce the perceiver's location, which can be defined in several ways. It may be defined in relation to a particular person, as in *visible from where they stood*, or by the name of the place, as in *visible from Earth*. It may also be characterized in terms of the length of the fictive visual path, as in *visible from a distance*, or in terms of the direction of the path, as in *visible from above*.

3.2. Visible to

Let us now turn to *visible to*. A survey of *visible to* examples in the BNC reveals that unlike *visible from*, it is not followed by expressions indicating the perceiver's location. Rather, the object of the preposition *to* refers to the perceiver him/herself, as in (15).

- (15) a. Charlie had opened his wallet with a flourish, taking care that its contents were visible to all the patrons of the bar. (= (1b))
 b. Rose stared ahead, her eyes on something that was not in the room. Or visible to her alone.
 c. I fear the world invisible is more visible to him than to the rest of us.

The perceiver can be characterized in terms of the kinds of activities s/he is engaging in, as instantiated below.

- (16) a. The analogy is now the addition of a thermometer in the water in the kettle with its dial visible to the operator.
 b. All lines on maps, depicting features such as roads, contours and boundaries, are drawn so as to be easily visible to the user.
 c. The puppeteers, dressed as gardeners, are often visible to the audience, ...

In (16), *visible to* is found with an expression encoding a group of people who are participating in a certain activity. For example, *the operator* encodes a person whose job is to operate some equipment and *the audience* encodes a group of people who come together to see some performance.

Perceivers may also be characterized in terms of the place where they are located. Some examples are given below.

- (17) a. The choreographer's problem is how to make subtle or vigorous gesture visible to those on the other side of the footlights.
 b. One individual, however, can never be visible to all fans at the back of the terrace, and for this reason more than one chant leader is required.
 c. But still clearly visible to neighbours was his 20ft garden aerial.
 (18) a. ... the documents were visible to whoever passed by, ...
 b. I was clearly visible to a driver approaching the crossroads ...
 c. The signs had been put up without planning permission and were clearly visible to passing motorists.

In (17a) and (17b), the perceiver's position is represented by a prepositional phrase which modifies the preceding nominal element. In (17c), the noun *neighbours* indicates that the perceiver is in the vicinity of his house. In (18), expressions involving verbal elements like *whoever passed by* or *passing motorists* indicate that the perceiver is traveling through a certain area, thereby specifying his/her location.

I hasten to add that perceivers need not be characterized as being in a particular location, as shown by (19).

- (19) Similarly, the case of displays or visible representations, the offence is committed if the material is visible to the public generally, but not, apparently, if it can be [sic] seen only by persons inside another dwelling.

In (19), while the expression following *visible to* does not specify the particular place where the perceiver is located, it still gives information about the perceiver's location. It appears from the context that *the public* contrasts with *persons inside another dwelling* and hence the perceiver can be understood as referring to people anywhere in the relevant area as opposed to people in a particular location.

In addition, the perceiver can be defined in terms of the category s/he belongs to, as illustrated below.

- (20) a. Edward could see quite clearly behind her shoulder, like the aura visible to spiritualists, the woman she would be in thirty years time.
 b. For example, the hands or even the figures on the dial of a wall-mounted clock may be clearly visible to the child with tunnel vision, but the problem could be that of locating the clock itself.
 c. Firstly, their open habitat makes them extremely visible to human hunters.
- (21) a. The advantage is that there is no line, visible to the fish, coming from the bait, either on the surface or going down to the bottom.
 b. It is the first spit of land visible to incoming birds after a considerable sea crossing.

In (20a), the perceiver refers to a group of people who have a certain belief. It seems to be implied that members of other categories cannot see the entity in question. In (20b), the perceiver refers to a group of people who have a particular physical property. The presence of the adjective *human* in (20c) suggests that the perceiver need not be a human being. This is in fact the case, as demonstrated in (21).

All the examples of *visible to* so far considered have expressed animate beings as the object of the preposition *to*. The preposition *to* can also take an organ for seeing, i.e. eye, as its object. *Eye* is used in a singular form and often with a modifier, as illustrated below.

- (22) a. Most of the other stars that are visible to the naked eye lie within a few hundred light-years of us.
 b. This large and varied group of arthropods includes the giants of the phylum, as well as tiny spiders hardly visible to the unaided eye.
 c. Over time, properties develop minor defects, which are often not visible to the untrained eye, but which, if left unattended, can grow into major problems requiring costly repairs.

When the noun *eye* is modified, the *to*-phrase specifies the condition of the perceiver. Thus in (22a, b), the adjectives *naked* and *unaided* indicate that the target object is perceptible without a piece of equipment for seeing. (22c) indicates that minor defects are perceptible to the extent that the perceiver is properly trained for the task.

The noun *eye* can also be used without modification, as shown below.

- (23) a. What was visible to the eye or to the sensor, however, was a path which had come into existence long after the Simonova had vanished along its trajectory.
 b. Eight moving heavenly bodies were visible to the eye: the sun, moon ...
 (24) a. Then run your hand across the surface in order to detect any bumps or depressions not visible to the eye.
 b. A horse in good condition should have a flat back, ... the rump should be rounded; and the ribs well-covered and not visible to the eye.

In (23), the nature or condition of the perceiver seems to be implicitly expressed. Judging from the context, *the eye* in (23a) can be regarded as encoding the human eye and judging from our knowledge of the world, the *visible* sentence in (23b) is likely to convey that the target can be seen without a telescope. In (24), the sense of sight contrasts with the sense of touch. Thus, the whole phrase *visible to the eye* can be interpreted as meaning “detectable through the sense of sight.”

As shown in (23a), the object of the preposition *to* can be an inanimate entity. Other examples of inanimate entities are given below

- (25) a. So far virtually only those organic materials with structures visible to the microscope (e.g. pollen) have received detailed attention.
 b. It will be demonstrated later that the correlation between the true area and the projected area visible to the camera is good enough to make

this not a prime consideration.

In sum, *visible to* is used to introduce the perceiver. The perceiver includes animate beings like men, fish, and birds. *Visible to* is also found with the body parts for seeing and gives information about the conditions under which the perceiver can see the target entity. A piece of equipment like a sensor and a microscope can also be found with *visible to*.

On a very fine-grained level of description, the elements marked by the preposition *to* do not seem to play the same role in the visual experience encoded by each *visible* sentence. For instance, as with animate beings, an inanimate object like a sensor can react to a visual stimulus by itself. Thus such an object might well be seen as the perceiver. By contrast, a microscope, another inanimate object, strikes me as an instrument which helps a person to detect something but not a device reacting to a stimulus by itself. Moreover, an expression like *visible to the naked eye* is recalcitrant, since the organ is unlikely to fall in either the perceiver or the instrument.

However, such a level of fine detail is not required for the present study. We have surveyed the range of elements which can be introduced in a prepositional phrase with *from* or *to* in order to show that the paths envisioned by *visible from* and *visible to* are not the same kinds of sensory path. Thus a more schematic level of description suffices for our analytical objective. Then it follows from the observation on *visible to* that it gives information about the type or condition of the perceiver.

4. Fictive Paths in Different Domains

4.1. Visual Paths

The examination of the kinds of elements that follow *visible from* and *visible to* in the preceding section shows that *visible from* indicates where the perceiver is, as in (26a), and *visible to* indicates who the perceiver is, as in (26b), and under what conditions the target is visually accessible, as in (26c).

- (26) a. The house wasn't visible from where they stood, ... (= (10a))
 b. Firstly, their open habitat makes them extremely visible to human hunters. (= (20c))
 c. This large and varied group of arthropods includes the giants of the phylum, as well as tiny spiders hardly visible to the unaided eye. (= (22b))

Given that *visible from* introduces the perceiver's location, *visible from* is analyzed as involving an intangible path between a perceiver and a perceived object, along which some probe moves from the perceiver to the perceived object, i.e. what Talmy (2003) calls the Experiencer as Source type of sensory path. By tracing the path from the perceiver to the perceived object one can understand the locative relation between the two entities. Though the visual path is fictive, it is defined in the domain of physical space.

By contrast, *visible to* does not introduce the perceiver's location. *Visible to* indicates who the perceiver is or under what conditions the target is visually accessible. Unlike the case of *visible from*, the path evoked by *visible to* is not defined in the domain of physical space. This path is unlikely to undergo the mental tracing for the purpose of computing the locative relation between the perceiver and the perceived entity. Hence, the visual path associated with *visible to* cannot be taken as instantiating Talmy's Experienced as Source type of sensory path.

Now we proceed to consider the question of what kind of path is evoked in understanding *visible to* expressions. Lindner's (1982) analysis of verb particle constructions gives us a clue. Lindner points out that if one characterizes the relationship between *in* and *out* in such a way that one is the opposite of the other, one cannot account for why oppositeness of meaning does not appear between *turn in* and *turn out*, as in (27).

- (27) a. They turned in their homework papers.
 b. Everything turned out okay.

(Lindner (1982:305))

Claiming that an opposition relation does not hold between all senses of *out* and *in*, Lindner explains that the meanings of *turn in* and *turn out* are unrelated because they are defined in different domains. *Turn in* in (27a) is defined against a domain of social institutions, where the assignments are considered to belong to some central authority. *Turn out* in (27b), by contrast, is defined against the cognitive domain, where something undergoes a transition from unknown to known.

The difference between *visible from* and *visible to* can be dealt with in a similar fashion. As we have stated above, *visible from* is defined relative to the spatial domain. In contrast, *visible to* is defined relative to some abstract domain in which it matters little what locative relation the perceiver is to the perceived entity. Thus in (26b, c), *visible to* does not tell us about the distance between the perceiver and the perceived entity, though it might be inferred from the context or knowledge about the world. In these examples, *visible to* conveys that a visual stimulus can

reach a goal point, i.e. the perceiver, irrespective of the spatial configuration of the participants involved in each visual experience.

The abstract nature of *visible to* manifests itself in the fact that an abstract entity can be expressed as the subject of a *visible to* sentence, as shown below.

- (28) a. The separate phases of education and training should be made visible to those who contribute to the process — teachers, employers, trainers and funders.
- b. It was argued that the political benefits of expenditure are more visible to elected representatives than the political costs of taxation.
- c. At least in Britain, the greatest of the imperial powers, this development was visible to some observers relatively early in the century.

Things like phases of education, political benefits, and some development are not physical phenomena and hence these are not considered to be defined in the physical domain. The abstractness associated with *visible to* contrasts with *visible from*, where such an abstract entity does not seem to be expressed as the subject.

From these considerations we can answer the question about the kind of path associated with *visible to* as follows: As with *visible from*, the path evoked by *visible to* is the one between a perceiver and a perceived entity, but unlike the case of *visible from*, it is defined against some abstract domain. The point of our discussion is that *visible from* evokes fictive motion along the path defined in the domain of physical space but *visible to* evokes fictive motion along the path defined in an abstract domain.

4.2. Other Sensory Paths

The contrast between *from* and *to* found with *visible* shows up in other sensory expressions. For example, the adjective *noticeable* can also occur with either *from* or *to*, as the following examples illustrate.

- (29) a. Oger is a small hamlet, its few houses set well back from the D10 towards the Forêt d'Oger, and barely noticeable from the road.
- b. This is necessary not only to judge the fineness and regularity of the knotting, but also to discover whether there are any repairs or signs of damage which are not noticeable from the front.
- (30) a. It is apparent that any differences must be very small, and may not be noticeable to people from outside London at all.

- b. In a simple instance, such as hunger, the stimulus is particularly noticeable to a hungry animal, which then works hard to obtain the food.
- c. Quality-wise the drum tracks came out very well indeed and any degradation in signal and tone was not noticeable to my ears.

As with *visible from*, *noticeable from* in (29) introduces the perceiver's location and tells us about the locative relation between the perceiver and the perceived entity. The situations described in (29) are taken to evoke a fictive path along which some probing system travels from the perceiver to the target. By mentally tracing such a path, one can calculate the locative relation of the perceiver to the perceived object.

Regarding the goal preposition *to*, *noticeable* is similar to *visible*. The preposition marks perceivers including men, animals, and sensory organs. In (30a), the perceiver is a particular type of person. In (30b), the perceiver is an animal in a particular condition. (30c) indicates that the sensory organs involved here are human ears. All the *to*-phrases in (30) tell us about the type or condition of the perceiver but not his/her position. Thus as in the case of *visible to*, the path envisioned by *noticeable to* can be defined in some abstract domain where the locative relation between the perceiver and the perceived entity does not count.

I am not claiming that *noticeable from* always introduces the perceiver's location and tells us about the locative relation between the perceiver and the perceived entity. It can encode a situation in which a fictive path leading from the perceiver to the perceived entity does not seem to be involved, as illustrated below.

- (31) But perhaps what is most noticeable from this and other research is that the differences seem marginal.

To uncover all the fictive paths associated with *noticeable from* we need to examine the range of elements that follow it, which goes beyond the scope of this paper. However, it seems safe to say that as far as fictive sensory paths are concerned, *noticeable from* can evoke a path from the perceiver to the perceived object in the spatial domain and *noticeable to* can evoke a path from the perceived entity to the perceiver in an abstract domain.

To take another example, the adjective *audible* can also be found with either *from* or *to*. However, unlike *visible*, *audible* allows two types of *from*-phrase. Remember Talmy's (2003) observation that sensory paths for audition is bidirectional and thus the verb *hear* can appear with a *from*-phrase indicating a perceiver's location, as in (5a), or with a *from*-phrase indicating a perceived entity's

location, as in (5b). Similarly, *audible from* can give us information about either where the perceiver is or where the perceived entity is. As for *audible to*, it can give us information about the perceiver. Consider the following examples.

- (32) The doorbell had sounded several times while she was changing and, as she descended the stairs, a hum of voices was audible from the drawing-room.
- (33) It is high-powered and the tape should be audible to the whales from a distance of up to two miles.
- (34) A Tibetan gong sends vibrations which resonate through the temple on strange, subterranean frequencies scarcely audible to the human ear.

The *from*-phrase in (32) indicates the perceived entity's location, which does not seem to be found in *visible* sentences. The situation encoded by (32) can be construed as evoking a fictive path along which an auditory stimulus travels from the perceived entity to the perceiver. This is what Talmy (2003) calls the Experienced as Source type of sensory path. The *from*-phrase in (33), in contrast, introduces the perceiver's location, as in the case of *visible* or *noticeable*. The phrase *from a distance of up to two miles* is taken to evoke a fictive path leading from the perceiver to the perceived entity. Both the paths evoked in (32) and (33) can be considered to help one compute the locative relation between the perceiver and the perceived entity. (33) involves the goal preposition *to*, which introduces the perceiver itself, besides the source preposition *from*, which indicates its position. In (34), *audible to* is found with an organ that one hears with. The path evoked by the *to*-phrase in (33) and (34) can be analyzed as the one that runs from the perceived entity to the perceiver in an abstract domain, which does not tell us about the locative relation between the perceiver and the perceived entity.

5. Conclusion

This paper has been concerned with the fictive visual paths associated with *visible from* and *visible to*, which might as a first approximation be characterized in such a way that one is a reversal of the other, and pointed out that the paths are defined relative to different domains. The source preposition *from* takes an entity's location as its object, thereby evoking a path defined against the domain of physical space. By contrast, the goal preposition *to* takes the entity itself rather than its location as its object, setting up a path defined in some abstract domain. Through the detailed examination of *visible* expressions, I hope to have made a contribution to uncovering the nature of visual paths, which has not been fully explored in the

literature.

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