Paths Through Different Domains: A Cognitive Grammar Analysis of Mandarin Đào
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0. Introduction

In Mandarin, the morpheme(s) dào (到) has a broad range of uses. While one of the purposes of this paper is to show that it is not really possible to give a finite list of distinct meanings or senses, certain prototypes can be recognized and described in the semantic space covered by dào. These include the verb dào 'to arrive (at)'

1. Tāmen kuài wǎng dào Niǔyǔ le. They soon will arrive-at New York CRS They'll soon reach New York.

the locative-goal dào 'to', which may be either a preposition or a resultative complement (RC) depending on whether it immediately follows the verb or not:

2. Tā zǒu -dào xuéxiào. (RC) s/he walk-to school S/he walked to school.
3. Tā bā shū diū -dào Zhāngsān-neibian. (RC) s/he BA book toss-to Zhangsan-there S/he tossed the book to where Zhangsan was.
4. Lisi kāi -le nèi bù chē dào L.A. (PREP) Lisi drive-PFV that CL car to L.A. Lisi drove that car to L.A.

the achievement suffix dào, another RC:


and, finally, the extent suffix dào, also an RC:

6. Bābā léi -dào huà dōu shuō -bu-chū-lái le. Dad tired-EXT speech even speak-cannot-out-come CRS Dad is so tired that he can't even talk.

Most linguists who have considered some or all of these various uses of dào have either implicitly or explicitly considered them to be distinct morphemes with little or no semantic relation to each other (for example, Chao (1968), Cartier (1972), Thompson (1973), and Li and Thompson (1981)). Teng (1977) is the only scholar I know of who has ascribed a unified meaning
to the various non-verbal uses of だお and, furthermore, tried to relate them to the meaning of the verb. He suggests that they all have the meaning: "The theme comes into contact with the goal, in a situation of movement" (p. 7). He notes that the motion is not always physical but can be mental, perceptual, emotional, or involve "searching, reaching out". While this comes very close to describing the situation at the most schematic level, many of the uses of だお contribute more to the meanings of the sentences they occur in than this highly schematic description provides. Furthermore, in some of the senses, notably one variant of だお, there is no objective motion or change in the scene portrayed, only subjective motion in the way the speaker-construer accesses part of the scene.

The present analysis will try to provide a unified account of だお, in the sense of Lindner (1982). Neither a single high-level schematic meaning, nor a set of unrelated meanings will do justice to the relationship between the multiple senses of だお. Rather all the senses will be represented by schematic characterizations related in a network, with clusterings of closely related senses producing prototypes, these prototypes related to each other at various higher levels of schematicity, and a number of senses as extensions from these prototypes. Some of these extensions fall close to a borderline between two prototypes so that it would be hard to describe them as examples of one or the other. The four variants named above are the basic prototypes.

The present work makes extensive use of the framework known as Cognitive Grammar as elaborated in Langacker (1982a, 1982b, 1984, 1985, 1986a, 1986b, 1986ms, in press a, in press b) because it provides a set of conceptual and representational tools that allow the detailed semantic description of individual uses, while at the same time permitting their relationships to be explicitly recognized. Because of space limitations, a summary of the framework will not be given and an acquaintance with the framework is presupposed. However, attempts will be made to briefly explain technical terms as they are introduced.

1. だお

The prototypical sense of the verb だお presupposes the motion of an object through some extent of physical space and profiles the final transition to its destination. As such the domains of space and time figure prominently in the base (the minimal structure presupposed in designating the meaning of a morpheme), which consists of a sequence of locative states of the trajector (the conceptual analog of the gestalt concept of "figure", hereinafter designated TR) each located at some point in time. Since motion of the object along an extended path before its arrival at the destination is saliently presupposed (one cannot have the conclusion of a journey without the journey), it is represented in the base; however, it is merely the last few
locative states that are profiled (i.e. that داول actually designates). Fig. 1 shows the schematic representation of داول.

The double-headed vertical arrow on the left schematically represents a dimension or combination of dimensions in physical space. The arrow at the bottom represents conceived time (time as conceived by the speaker-construer). The small circles represent the mover, or entity in motion, at different points in time. Because motion is one of the major factors in determining whether some substructure within a scene is selected as the figure, it is natural for this entity to be selected as the TR of the relation. The oval at the bottom represents the region at the end of the path, which serves as the landmark of the relation (the "ground" in gestalt terms, referred to as LM for the rest of this paper). The LM of داول must either be an inherent locative, that is, a noun representing a thing which constitutes a sufficiently large region of physical space to contain the TR (e.g. 台北, 学校 'school') or a noun phrase with a locative suffix attached to the head noun, the locative suffix referring to a region of physical space defined relative to the object referred to by the noun it attaches to (e.g. 長三-在 'Long three there', 筷子-在 'table-on'). The oval is intended to suggest this larger, setting-like thing. The dotted lines are correspondence lines which connect different representations of the same entity at different points in space and time. Boldface indicates profiled aspects of the base, or what the morpheme is actually designating. Here, only the last two states are shown in boldface, along with the corresponding portion of the time line, to indicate that only the final, momentary transition into the destination is being designated or profiled by داول.

There are variants of داول that select domains other than physical space:

7. 新年 dào-le.
   New Year's Day arrive-PFV
   New Year's Day has arrived.

8. 体温 yījīng dào -le wǒ bāi dù le.
   Temperature already arrive-PFV one hundred degrees CRS
   His temperature has already reached a hundred degrees.

9. 油价 de jiàqián yījīng dào -le zú děi le.
   Oil PE price already arrive-PFV most low CRS
   The price of oil has already reached its lowest.

10. 病人 de qíngkuàng yījīng dào -le hěn yánzhòng le.
     Patient DE condition already arrive-PFV very serious CRS
     The patient's condition has already gotten very serious.

Here change of some property of the TR is metaphorically represented as movement along some ordered dimension, and داول profiles the transition to the final state, represented as a goal of motion. The schematic representations of the semantic structure of these variants would be identical with Fig. 1, except
that the vertical arrow would be relabeled with the appropriate property name (temperature, price, degree of sickness etc.).

2. Dao.

As noted in the introduction above, dao can occur either as a preposition, as in (4), or as a verb-suffix (in particular, a resultative complement), as in (2) and (3). The base in these cases is the same as the base of the verb dao in its prototypical locative sense. Like dao, dao also profiles the last few stages of a more extended path, but unlike the former, it does not profile time, but rather a complex stative, like the path designating prepositions in English (e.g. 'to'). A complex stative profiles a set of states which cannot consistently be viewed as coexisting at the same time, i.e. an object being in several distinct locations. However, it does not profile time; it does not portray the object as in motion. The distinction between a process and a complex stative is analogous to the distinction between viewing a movie of a bouncing ball and looking at a time-lapse or superimposed photograph of the same bouncing ball. The temporal profile in sentences containing dao comes from the main verb; however, the fact that only the last few states of the path are profiled in dao restricts the extent of the temporal profile of sentences that contain it. The schematic representation of dao is given in Fig. 2.

Dao, and the preposition zai form a contrast set. Both may introduce a locative noun phrase that is construed as the location of a mover-theme at the end of its path. However, zai merely profiles the final state, while dao profiles the final stages of the path.

Zai, but not dao, can occur with certain imperfective verbs with meanings extended from perfective verbs meaning 'assume a position' or 'put something into a location'. The imperfective verbs profile the continuation of an object in the position or location through time. Examples are quà 'to hang, to be hanging (intr.)', tief 'to be fastened, stuck to something', zuò 'to be seated', zhàn 'to be standing', táng 'to be lying down', and tíng 'to be parked'.

   Eight-stallion-painting hang-at /*-to wall-on
   The eight-stallion-painting is hanging on the wall.

If my claim that zai profiles a single state while dao profiles a path is correct, this restriction would be expected, since imperfectives profile a continuation of a single state through time, and therefore do not provide a set of distinct locative states for dao, to map onto.

Dao, but not zai, cannot occur with verbs that either emphasize long paths or continued input of energy or effort along a path, e.g.: ji 'to mail', kai 'to drive (car)' (long path); tuì
'to push', la 'to pull' (effort); zǒu 'to walk', pǎo 'to run', bān 'to move something somewhere'.

With many verbs that profile motion, either dào, or zài may mark the goal; however, there is a clear contrast in meaning depending on whether dào, or zài is used. For example, with the verb dìào 'to drop, to fall', zài implies a short distance, whereas dào, implies a longer distance:

12. Tā ba shū dìào -zài/-dào zhuōzi-shang.
   s/he BA book drop -at/-to table -on
   S/he dropped the book on the table.

13. Tā ba shū dìào ?-zài/-dào dishang.
   s/he BA book drop -at /-to ground
   S/he dropped the book on the ground.

With dìào, dào, can also suggest a fall that is not along the flow of gravity:

   s/he fall -at /-to water-in
   S/he fell into the water.

With dào, (14) can describe either a long fall, e.g. from a helicopter, or emphasize the horizontal component of a fall over the side of a boat or dock into the water.

With verbs of placement (e.g. fāng 'to put') and displacement (e.g. rēng 'to throw') there is an emphasis on effort with dào:

15. Lìsī ba shū fāng -zài/-dào guìzi-shang.
    Lìsi BA book put -at /-to shelf-on
    Lìsi put the book on the shelf.

With dào, the sentence suggests that the shelf was high and hard to reach; with zài there is no such implication.

(16) makes very explicit this correlation of dào, with effort:

16. Lìsī fèi -le hēn dà de lì cāi bā
    Lìsi exert-PFV very great DE effort only-then BA
    Lìsi had to exert himself to get the fan onto the diànshān fāng -zài/-dào zhuōzi-shang.
    electric fan put -at /-to table -on

Both fèi-le hēn dà de lì 'used a great deal of effort' and cāi 'only then, only with that' explicitly refer to the effort needed, and dào, is preferable to zài in these sentences.

What is it that unites the sense of distance, as in examples (12), (13) and one interpretation of (14), the sense of horizontal motion in the other interpretation of (14), and the sense of effort in (15) and (16)? They all seem to involve a sense of
deviation from an expected position. When the deviation is in the
direction of the flow of gravity, movement through a large
distance is required to make it sufficiently salient to warrant
explicit recognition with dào rather than zài. When the
development is horizontal, a smaller deviation is sufficient, and
when the deviation is seen as requiring effort, a very small
distance is sufficient.

3. Dào

The achievement suffix dào profiles the transition of the
theme of a transitive process into the sphere of
interaction/influence of the trajector of that transitive process.
Unlike the previous variants of dào, dào does not saliently
presuppose an extended path; the only remnants of the path-like
notion of dào are a sufficient number of states to portray the
theme as not in the appropriate sphere of interaction at one point
in time and then in it. Fig. 3 gives the semantic representation
of dào. The bold-faced rectangle on the left is similar to the
semantic structure of dào, in that 1) it construes a complex
statical, making reference to time, but not profiling it; 2) it
profiles its trajector as being outside some large setting-like
region at one point in time, and inside it at another. It is
different from dào in that 1) the landmark is not a region in
physical space but rather an abstract region defined relative to
the trajector of the main verb; 2) since an extended path is not
present even in the base, the sense of movement through some
dimension is not salient, hence the lack of a vertical arrow in
the representation of dào; and finally 3) since the domain of the
abstract sphere of interaction that constitutes the landmark of
dào and the entity with respect to which the particular region
within that domain is defined both make reference to another
process, that process must be represented in the base of dào.
The non-boldface rectangle on the right represents that process
and correspondence lines establish the appropriate identifications
of its substructures with those of the profiled states in dào.
(The wavy arrow for conceived time is intended to schematically
represent the perfective nature of the process, i.e. that there is
change in the state over time.)

The behavior of dào with the causative nòng 'to make, cause'provides evidence for my choice of TR (i.e. the direct object of
the main verb). Nòng when followed by a resultative complement
portrays the subject as acting on the object in some unspecified
way so as to bring about a change in the object: nòng-qínchu
'make-clear: to make (something) clear', nòng-zou 'make-away: to
make (something) go away'. Nòng-dào means 'to get, obtain'. If
this is parallel with all the other uses of nòng with a
resultative complement, and there is no reason to believe that it
is not, dào must be profiling the change of state of the object.
Just as clearly the concept of possession of the object by the
subject is being given by the dào. While dào does not always
profile the sphere of physical possession. This seems to be the prototype from which the other senses are extended. My primary informant says that the image most readily associated with this phrase is something coming into the palm of one's outstretched hand. Here we can not only see the relationship of *dao* with the verb sense of 'arrival', but we also have the prototypical case of possession, physical possession. The object also becomes accessible to the senses (because of its proximity) and available for use or manipulation. All of these senses are manifested by *dao* in its use with various verbs.

With the following verbs, *dao* profiles the object entering into the possession of the subject, either physical possession or the more general sense of socially legitimated control of something: *mai* 'to buy', *zú* 'to rent', *jie* 'to borrow', *ling* 'to collect (salary)', *qian* 'to grab, steal', *jian* 'to pick up’, *de* 'to obtain’, *shou* 'to receive', *jie* 'to catch' and *na* 'to grasp'. With these verbs, adding *dao* has the effect of making the successful attainment of the goal seem either difficult, as in:

17. Wo zhao -le hén jiu cai mai-dao-le nei ben
I searched-PFV very long only-then buy-ACH-PFV that CL
I searched for a long time before I managed to buy that
shu book
book.

or surprising or unexpected, as in:

18. Wo iingran jie -dao-le nei bi qian.
I surprisingly borrow-ACH-PFV that CL money
Surprisingly I managed to borrow that money.

Again we have the sense of effort or deviation from the expected in a rather different variant of *dao* from the one considered in the last section.

With the following verbs, *dao* profiles the transition of the object into the sphere of experience (conceptual, perceptual, emotional or some combination of these) of the subject: *kan-dao* 'to look at-ACH: to see', *ting-dao* 'to listen to-ACH: to hear', *danju-dao* 'to try to feel, to feel (agentive)-ACH: to feel (passive experience)', *xiang-dao* 'to think-ACH: to think of something', *cai-dao* 'to guess, try to guess-ACH: to guess correctly', *mei-dao* 'to dream-ACH: to dream of'.

With other verbs, *dao* profiles transition into other spheres which, nevertheless, are related to the spheres of possession or experience: *qiong-dao* 'invite-ACH: to get (e.g. a good speaker, teacher, employee) as a result of inviting', *zu-dao* 'rent-ACH: in addition to being used of a tenant managing to rent an apartment, this can also be used of a landlord to manage to rent to, get (a good tenant)', *jishuan-dao* 'calculate-ACH: to take into consideration in one's calculations', *kao-lu-dao* 'consider, think
over-ACH: to take into consideration. The latter two shade into a more abstract domain still, the domain of accessibility or usability. The following verbs seem to refer to this domain, portraying the transition of the object into a sphere of accessibility with respect to the process portrayed by the main verb: chi-dào ‘eat-ACH: manage to eat (the object becomes available, immediately accessible for eating)’, hè-dào ‘drink-ACH: manage to drink, get the opportunity to drink (and actually drink)’, yòng-dào ‘use-ACH: to get around to using’, wán-dào ‘play-ACH: to get the opportunity to play (and actually play)’. Another abstract domain related to experience is referred to in ti-dào ‘mention, raise a topic-ACH: to suggest for discussion, bring up somewhat unexpectedly’. Here dào profiles the entrance of the topic into the universe of discourse.

4. Daoe

There are certain uses of dào which are basically adverbial, that is, they profile a property of the process designated by the main verb. Figs. 4.a and 4.b give the semantic structures of two variants of dào. The relation profiled by dào is defined on a metric imposed on some dimension: that is, the states of the dimension (usually some abstract property, but sometimes space or time) are ordered and some direction is implied by reference to some norm on that dimension (the dimension is represented by the vertical arrow in each diagram and the calibrations on it are intended to suggest its organization into a metric).

There are two variants on the extent dào. One profiles the progressive positions through time of the relational trajector along the dimension toward some particular point. Fig. 4.a shows the semantic structure of this variant of dào. The vertical arrow on the left represents the dimension, with the marks meant to indicate that it is ordered and oriented into a metric. The TR is some relation, here schematically represented as a circle connected to a square. The relation will be elaborated by the main verb. Only the last few states are profiled, as only the final transition to the final state is asserted. This version occurs primarily if not exclusively with perfective verbs that saliently refer to some quantifiable dimension:

19. Tā pǎo-dào zuì kuài le.
   he run-EXT, most fast CRS
   He reached his highest running speed.

20. Tā zhōngyù shuì-dào hěn shūfù le.
   he finally sleep-EXT, very comfortable CRS
   He finally got into a comfortable sleep.

In these examples, the relation represented by the main verb is portrayed as changing through time, either in the course of a single event (e.g. he is running faster and faster until he reaches his fastest speed, where (19) profiles the final increment
of speed) or over a more extended period of time, for example, a course of training for competition. (20) suggests that the person has turned this way and that until finally getting to a comfortable state of sleep and profiles his final transition into that state. Here the normally imperfective process of sleeping is being viewed as a changing state, changing in the soundness of the state achieved, which is being measured in terms of the comfort of the subject.

There is another version of dào which does not portray any change through conceived time, even in the base. Consider the following examples:

21. Tā lèi -dào huà dōu jiāng-bu -qīngchu le. s/he tired-EXT₁ speech even speak-cannot-clear CRS S/he's so tired that s/he cannot even speak clearly.

22. Tā gāoxǐng-dào yǎnlèi dōu liú -xià -lái le. s/he happy -EXT₁ tears even flow-down-come CRS S/he's so happy that s/he's crying.

This variant is represented in Fig. 4.b. In these examples, dào merely asserts that the relation profiled by the main verb, typically an imperfective relation expressed by what are traditionally called "stative verbs", is located at a certain point on a metric dimension. There is no implication that the relation traversed the dimension in order to get there. On the other hand, there is a sense of surprise at or emphasis on the degree or extent conveyed by the use of dào, as we can see by comparing these with sentences with the de extent marker:

23. Tā lèi de huà dōu jiāng-bu -qīngchu le. s/he tired-EXT₂ speech even speak-cannot-clear CRS S/he's so tired that she cannot even speak clearly.

24. Tā gāoxǐng-de yǎnlèi dōu liú -xià -lái le. s/he happy -EXT₂ tears even flow-down-come CRS S/he's so happy that she's crying.

The English translations do not this bring out, but my informant felt a clear contrast between the two sets of sentences with the former putting more emphasis on the extent or suggesting the unlikelihood of the imperfective process having this property. We can make sense of this subtle contrast in terms of the concept of subjective motion.

The point on the scale at which the trajector is located is portrayed as being the endpoint of subjective motion. Stated at the most intuitive level, the speaker-construer traces mentally along some abstract dimension (e.g. happiness) from some norm toward some positive extreme until it reaches the point which represents the actual degree of happiness being asserted by the sentence. Put more analytically, so that we can see the relationship between this version of dào and the other versions of dào, the speaker-construer successively activates the
conception of points on that metric from the direction of the norm toward the profiled point on that dimension, the actual degree or extent at which the main verb is asserted to be. The extension of the concept of motion from the verb dao to the extent dao is thus an extension from objective motion through physical space, to subjectively construed motion along a (typically abstract) dimension with a metric imposed on it. What corresponds to the locative states in the dao are a sequence of construal relations between points along the dimension where the trajector relation might be located and the speaker-construer. Each state portrays some point on the metric that the property referred to by the main verb could be occupying, and locates it within the awareness of the speaker-construer. There are thus parallels with dao when the sphere of experience is referred to (e.g. kán-dào ‘to look at’-ACH: to see’). The fact that the process is profiled as being located at the final point on the metric accessed gives a sense of deviation from the expected location on the metric and, hence, the sense of emphasis on extent or surprise noted above. This motion is not conceived of as occurring in real time objectively construed, but rather processing time subjectively construed (the capital T labeling the horizontal arrow represents processing time). The speaker also does not construe himself objectively but rather off-stage, in the background. The points on the metric are portrayed as being progressively presented to his mind’s eye, but he is viewing them through these eyes, and he himself is therefore not objectively portrayed. This constitutes the base and what is profiled is the location of the relation profiled by the main verb (again represented schematically by the configuration of a circle connected to a square) at the point on the dimension designated by the landmark of dao.

5. Conclusion

As can be seen from the many examples in this paper, the morpheme dao has a vast variety of senses, some quite distinct, but all united by a family resemblance. They differ in number of dimensions, though sometimes similarities cross-cut major differences (effort and unexpectedness are themes running through the different variants). All involve transition of something to a “location” of sorts. Typically this transition takes place in conceived time, although the non-verbal variants do not profile this change in time and therefore cannot be a clausal heads. In the case of the second variant of dao, the transition is not even construed as occurring in conceived time, but rather reflects backgrounded awareness of the time course of the mental process of “finding” the degree of some property where a certain relation “is”. The prototypical sphere or dimension of change is physical space, although even the verb tolerates some variation from this, while the relevant spheres for dao and dao are rarely physical space. Yet even for these two variants, the spheres or dimensions share properties with the locative prototype. The sphere of
interaction of $\text{dào}_a$, defined relative to the subject, is very much like a region of space defined relative to some person or object and physical proximity often involves interaction. The various dimensions of $\text{dào}_a$ are analogous to single dimensions in physical space. The effort portrayed in many of the examples of the first version of $\text{dào}_a$ and the mental "effort" of the second version are very much like the energy or effort required to move oneself or something else from one location to another in space.

There are a couple of lessons to be learned from this analysis with respect to the nature of semantic representation. First, while there is a schematic representation that covers all of the variants, it clearly does not include all the meaning that the various lower level variants are contributing to the sentences they occur in. The most schematic characterization (not diagrammed) would represent in its base some entity not at some abstract location at one point in time and at that location at another, and would furthermore profile the latter state. It would not specify (be schematic with respect to) whether that entity was a thing, as with most variants of $\text{dào}$, or a relation, as with $\text{dào}_x$ and some versions of $\text{dào}_y$. It would also be schematic with respect to whether the location was fixed at a point on an ordered dimension or simply construed as somewhere within an extended region, whether that region was in physical space or in a more abstract space, whether an extended path through some ordered dimension was specified in the base, whether this path was profiled or not, and if not, whether the states that comprise it are construed as being in conceived time or in processing time. Because the most schematic version is non-commital with respect to so many of the specific characteristics of the lower level prototypes, it cannot account for the details of the semantics of sentences containing them, nor for the sense of native speakers that, for example, two different examples of $\text{dào}_a$ with different abstract spheres are intuited as being more alike than either is to $\text{dào}_y$ or $\text{dào}_x$, although all are felt to be related. The network characterization of their relationship captures these facts.

The other lesson is not really new: it has been made over and over again in the literature on cognitive grammar. The links between the different variants and subvariants, while being grounded in our experience of objective reality, are not a direct reflection of objective reality itself, as truth conditional approaches to semantics would have. The extension of the domain of $\text{dào}_a$ from possession to the visual field is not based on any objective analysis of possession or vision, but rather on human beings' phenomenological perception of these situations and supported by their cooccurrence in basic experiences like receiving something. The remove from objective experience is even greater in the case of the second version of $\text{dào}_a$, where the motion or change referred to in the other senses of $\text{dào}$ is realized as a purely subjective motion. In this case, there is no objective basis for the extension at all. It is not merely the perception of structural analogy between two objectively distinct
situations, but, rather, the explicit if backgrounded reference by the speaker-constructor to his own act of portraying a situation that serves as the basis for the extension.

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Footnotes

1. The class of resultative complements is defined by the ability to occur with the potential infixes -de- 'can' and -bu- 'cannot' inserted between the verb and the complement.

2. The following is a brief translation of the abbreviations used in glossing the Mandarin examples:
   ACH the achievement suffix, dao
   BA the preposed object preposition
   CL nominal classifier
   CRS "currently relevant state", a sentence final particle distinct from but probably related to the perfective suffix -le. It indicates that the event or imperfective process profiled by the sentence is somehow currently relevant and corresponds roughly to the English "as of now"
   DE the nominalizer/modifier particle that typically occurs between nominal modifiers (possessors, adjective phrases and relative clauses) and their heads
   EXT, the extent suffix dao
   EXT2 the extent suffix de
   PFV the perfective suffix -le
   PROG the progressive aspect marker zai

3. Some speakers do not accept, or are highly resistant to, landmarks of dao that are not explicitly nominal. This is true in examples like (9) and (10) above, as well as many of the examples given in the discussion of the extent dao.
**Appendix**

**Fig. 1**

\( \text{Dao}_y \)

**Fig. 2**

\( \text{Dao}_L \)

**Fig. 3**

profile of \( \text{Dao}_A \)

perfective main verb

\( \text{Dao}_A \)

**Fig. 4a**

\( \text{Dao}_Z \) with objective change or motion
Fig. 4b

Dao with subjective change or motion

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