# Transformational Approach to Psych Verbs:

## Evidence from Turkish<sup>12</sup>

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Abstract

Psychological verbs have two surface mapping structures: experiencer-theme (fear type) and theme-experiencer (frighten type). These verbs are undeniably semantically related and their having different mapping structures poses counterevidence for the Uniformity of Theta Assignment Hypothesis (UTAH). Psych verbs also have idiosyncratic binding behaviors, which are again counterevidence for the Binding Theory. Bulk of this paper deals with the problematic behaviors of psych verbs and tries to merge semantic and syntactic approaches under the rubric of syntactic derivation. In doing so, the paper will also classify the Turkish data in terms of derivability.

#### 1. Introduction

Despite the relative wide range of literature on psych verbs, uncertainities about these verbs remains to be an unsolved issue. The two idiosyncratic properties of these verbs are unexpected mapping and unexpected binding that other verb classes do not have. Psych verbs have two different theta distribution. One of them maps the experiencer to the subject position and theme to the object position (or to the dative or ablative case-marked argument in some languages like Turkish) while the other maps theme to the subject and experiencer to the object position (or an oblique Case-marked argument). If we assume the existence of two different theta distributions, we should also be ready to assume that given two different psych verbs Universal Grammar assigns them two different mapping properties. Thus, we have two times more verbs that have their own idiosyncratic feature in the Lexicon than we actually need. Furthermore, we will have to define an inital array for each of these verbs, as shown in (1), (2).

(1) Ben köpekten kork-tu-m
I-nom. dog. ablative fear-past-1st sing.
Experiencer Theme

<sup>1</sup> This is the slightly modified version of the paper presented at 19th National Conference on Linguistics with some corrections.

<sup>&</sup>lt;sup>2</sup> I wish to thank Engin Uzun, Leyla Uzun, Özgür Aydın and Özlem Dağ for their invaluable contribution. Yet all errors are mine.

(2) Köpek beni kork-ut-tu

dog nom. I-acc. fear-causative-past

Theme Experiencer

If we consider the verbs in (1) and (2) as two different verbs then we need four independent parameters. Parameter 1 and 2 map experiencer to the subject position in (1) and to the object position in (2) while Parameter 3 and 4 map theme to the indirect object position in (1) and to the Subject position in (2). Moreover, (1) and (2) seem to challange The Uniformity of Theta Assignment Hypothesis (UTAH) of Baker (1988).

### (3) Uniformity of Theta Assignment Hypothesis (UTAH)

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of d-structure.

(Baker 1988:46, (30))

In fact, the arguments in (1) and (2) are mapped onto two different positions although they have the same thematic relation to each other. In other words, the arguments and the Theta roles are crossmapped.

The other well-known idiosyncracy of psych verbs is that object experiencer of frighten type verbs can bind the anaphora in subject theme.

(4) Nasty stories about [each other]<sub>i</sub> would annoy the professors<sub>i</sub>

Theme Experiencer

Culicover (1997)

In (4), the R-expression *professors* binds the anaphora *each other* in the subject, which poses a counterevidence to c-command condition on Binding.

If we are to preserve UTAH, we have two ways to solve the mapping problem in (1) and (2). In the first, we may claim that  $K\ddot{o}pek$  (dog) has different theta roles in these minimal pairs, i.e. theme in (1), cause in (2). Then Prominence Hierarchy of Grimshaw (1990) will map the most prominent argument (dog) to subject position, which is the highest syntactic position in (2). However, this does not solve our problem since the argument ben (I, me) still has the same Theta features and relation to the other argument but mapped to different syntactic positions in two different structures, which means UTAH is still violated. In the second, the argument  $K\ddot{o}pek$  (dog) is first merged as the complement and then raised to the subject position via NP movement. Hence, (2) has the same D-structure as (1).

In this paper, I try to merge the two approaches to pscyh verbs and claim that psych verbs are derived from a unique underlying representation, which will lead us to say that the only difference between psych verbs and ordinary transitive verbs is that in the former theta features are crossmapped to the arguments. In this regard, The Minimalist Program and Proto-Thematic Roles of Dowty (1991) will be the theoretical framework of the article.

#### 2. Verb Classification

In Turkish, psych verbs have the following distribuition in derivability.

(5) a. Ben kopek-ten kork-tu-m

I nom. dog-ablative fear-past-1st sing.

b.Köpek ben-i kork-ut-tu dog nom. I-acc. fear-causative-past

(6) a. Ben elbise-yi beğen-di-m
I nom. dress-acc. like-past-1st sing.

b.\*Elbise ben-i beğen-dir-di dress I-acc. like-causative-past

c. Ali ban-a elbise-yi beğen-dir-diAli I-dative dress-acc. like-causative-past

d. Ben Ayşe'den soğu-du-mI Ayşe-abl. dislike-past-1st sing.

e. \*Ayşe ben-i soğu-t-tu

Ayşe nom. I-acc. dislike-causative-past

f. Ali ben-i Ayşe'den soğu-t-tu
Ali nom. I-acc. Ayşe abl. dislike-causative-past

(7) a. Ben Ali'ye güven-di-m I nom. Ali-dat. trust-past-1st sing.

b.\*Ali ben-i güven-dir-di
Ali nom. I-acc. trust-causative-past

c.\*Ayşe ben-i Ali'ye güven-dir-di Ayşe nom I-acc. Ali dat. trust-causative-past

Comparing (5),(6) and (7), we see that there are three types of psych verbs in Turkish. *Köpek* (dog) which we see as the complement of the verb in (5a) raises to subject position in (5b). Yet in (6), this kind of NP movement is disallowed while the introduction of a new argument allows for the causative morpheme (or vice versa), turning the *fear* type psych verb to a *frighten* type psych verb. Finally, (7) shows that some psych verbs never allow causativization, thus never turns to frighten type. Let us suppose, for the sake of convenience, that the NP in (5b) has such a feature as X which licences its movement to the subject position. Following this assumption, the

NP in (6b) should have such a feature as -X, and the NP in (7b) should have absolute -X. In other words, *kork*- (fear) is a +X verb, *beğen*- (like) is a -X verb and *güven*- (trust) is an absolute -X verb.

Having classified the psych verbs of Turkish, we should now show that it is only psych verbs that allow their complements to raise in order to be the subject of the sentence. (8) seems to do this job.

(8) a.Ben Ali'yi gör-dü-m
I nom. Ali-acc. see-past-1st sing.

b.\*Ali ben-i gör-dür-dü

Ali nom. me-acc. see-causative-past

c. Ben Ali'yi döv-dü-mI nom. Ali-acc. hit-past-1st sing.

d. \*Ali ben-i döv-dür-dü<sup>3</sup>

Ali nom. me-acc. hit-causative-past

#### 3. Theta in Psych Verbs

There is only little controversy about the theta role of the experiencer argument.<sup>4</sup> The fierciest dispute of psych verbs is about the theta role and X-bar status of the other argument. For example, Belleti and Rizzi (1988) define this argument as theme while Pesetsky (1995) distinguishes between cause and target.

men me acc. hit-past

Though i. is well-formed, it is apparent to the native ears that this sentence has ii. as the underlying sentence to mean that Ali caused the men to hit me. The expected interpretation in (8d) is the one in which *beni* (me) is the hiter and Ali is the hitee. With this interpretation (8d) is ill-formed.

i.Ali beni *adamlar-a* dövdürdü

Ali me acc. men dat. hit-causative-past

ii. Adamlar beni dövdü

<sup>&</sup>lt;sup>4</sup> See Johnson (1992) for the X-bar position of the Experiencer argument. Johnson claims that the Experiencer argument is at spec-V. This claim parallels mine.

Dowty (1991) calls this stimulus. For the sake of convenience, I will refer this argument as theme or cause depending on its syntactic behaviour.

In some cases, being the subject or the object determines which theta role this argument is attributed. For example, Pesetsky (1995) refers the non-experiencer object argument of fear type verbs as theme, and non-experiencer subject of frighten type verbs as cause. Very well structured, this claim is also verified by the intuition that NP *köpek* (dog) in (5b) is more to blame than its counterpart in (5a) for my feeling afraid.

### 4. What Remedy the Transformational Approach brings?

It is assumed in the literature that there are two types of psych verbs, i.e. *fear* and *frighten* type (see Belleti and Rizzi (1988)). *Fear* type verbs map the experiencer argument to the subject position while *frighten* type verbs map it to the object position. Yet the sentence in (5b) is apparently transformational. It bears a causative morpheme, which may mean that the sentence is obtained via a series transformations. Hence if we prove that (5b) shares the same underlying structure as (5a) then we can both design a unique inital array for these sentences and reduce these two verbs into one single verb in lexicon. Of course, such a transformation cannot be seen independent of the insertion of the causative morpheme. The causative morpheme must be either the instigator or the result of this process. Furthermore, the fact that as a result of this transformation the theta role theme turns out to be cause shows us that this pattern of affairs has semantic origins, i.e. a semantic shift triggers the syntactic movement.

For binding facts, note that binding is only possible for anaphors in such examples as (4). The pronoun in theme/cause argument cannot be bound by an antecedent in the experiencer object.

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<sup>&</sup>lt;sup>5</sup> It can be argued that the other argument is mapped into a different position because it bears Theme in some sentences and Cause in others. However, the problem persists for the Experiencer argument.

(9) \*Stories about her, annoyed Mary,

Johnson (1992)

In brief, binding should take place before S-structure in (4) and it should take place at S-structure or after S-structure in (9) for c-command to predict the binding facts. It seems that Binding Condition A and Binding Condition B require two different syntactic representations for psych verbs. In addition, (10) shows that R-expressions also behave like pronouns as regards binding in psych verbs.

(10)\*John's<sub>i</sub> pictures worry him<sub>i</sub>

Johnson (1992)

The difference in binding is called connectivity. Discussion and proof of connectivity go beyond this paper, yet it could be informally stated as (11).<sup>6</sup>

### (11) CONNECTIVITY

c-command relation can be established at any syntactic representation for an anaphora to be bound by an antecedent.

Considering connectivity, we see in (12) that binding can take place before S-structure. *the professors* c-commands the anaphora before the theme/cause argument raises to become the subject of the sentence.

(12) [Nasty stories about [each other] $_{i}$ ] $_{j}$  would annoy the professors $_{i}$   $t_{j}$  Theme/Cause Experiencer

So, if the subject and the object actually merge as complement and specifier of V (or  $\nu$ ) respectively in (12) then together with connectivity transformational approach explains the binding relation in (12). The anaphora is bound before NP movement to the subject position.

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<sup>&</sup>lt;sup>6</sup> See Beletti and Rizzi (1988) for details.

#### 5. Derivation of Psych Verbs

My suggestion for the derivation of psych verbs assummes that movement of the theme/cause argument has semantic motivation. So, we need well-defined theta features of the arguements in psych verbs. Let us suppose that theme, cause and experiencer theta roles are the accumulation of atomic thematic features. In Dowty's terms (1991) arguments are mapped onto their positions depending on some lists that define what thematic features each position requires. The argument that holds more Agent Proto-Roles is mapped onto subject position. Below is Dowty's list.<sup>7</sup>

### (13) Contributing Properties for the Agent Proto-Role

- a. Volitional involvement in the event or state
- b. Sentence (and/or perception)
- c. Causing an event or change of state in another participant
- d. Movement (relative to the position of another participant)
- e. (exists independently of the event named by the verb)

### (14) Contributing Properties for the Patient Proto-Role

- a. Undergoes change of state
- b. Incremental theme
- c. Causally affected by another participant
- d. Stationary relative to movement of another participant
- e. (does not exist independently of the event named by the verb)

For example, in such a sentence as *John broke the glass* John is the argument that moves relative to glass, causes a change of state in the glass and he probably does this intentionally. That's why it's *John* but no *the glass* that is mapped onto the subject position. For psych verbs, on the other hand, I will reduce these feature to three and rewrite them as parameters.<sup>8</sup>

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<sup>&</sup>lt;sup>7</sup> Parenthesis implies that the feature is optional.

<sup>&</sup>lt;sup>8</sup> Many thanks to Leyla Uzun for this idea.

#### (14) Thematic Features

- a. ± volitional involvement
- b. ± movement (relevant to another participant)
- c. ± activity (relevant to another participant)<sup>9</sup>

In non-psych verbs, the argument that bears more + features should be mapped onto the subject position while the argument that bears more – features is mapped onto the object position. However, we will see shortly that the mechanism operates the other way in psych verbs.

### 5.1 +X Psych Verbs

These verbs may come in two mapping relations: experiencer as subject, theme as object and theme/cause as subject, experiencer as object. For the first option, derivation should proceed as below. Lexical items {ben, köpek, kork-} ({I, dog, fear-} respectively) are selected from numeration. Ben (I) and k"opek (dog), with the formal feature [nominal], have their thematic feature as  $\pm$  from semantic structure, i.e. Ben (I) or k"opek (dog) has feature c. + while the other is left with c. - . Let us suppose also that the verb has both thematic features for each position of VP with an idiosyncratic characteristic that the verb only values the feature a. as a. -. Thus thematic features should be as in (15) for (5a).

(15)

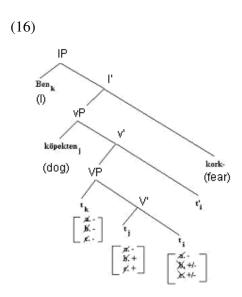
| Ben (I) | Köpek | (dog) Kork- (fear) |
|---------|-------|--------------------|
| a       | -     | -/_                |
| b       | +     | -/+                |
| c       | +     | -/+                |

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<sup>&</sup>lt;sup>9</sup> Being very important for transformational approach, this feature simply points the argument that is more to blame for the psychological state. I suppose Faculty of Language can decide which argument is to blame.

<sup>&</sup>lt;sup>10</sup> See (5a-b).

Generalized Transformation merges the arguments depending solely on the value of feature c. In contrast to non-psych transitive verbs, psych verbs merge the argument that has the feature c. + first, which corresponds to say that  $k\ddot{o}pek$  (dog) is the object. I claim that this is the idiosyncratic property of psych verbs universally. The argument that has c. – is merged second as the specifier of VP to be the subject. The verb checks its thematic features with its arguments. When it comes to feature a., checking is only possible iff both arguments have a. – since the a. feature of psych verbs is a. – only. This both prevents the movement of kopek (dog) to spec,IP for nominative case checking and preserves experiencer status of Ben (I) in (5a). Then  $k\ddot{o}pek$  (dog) moves to spec,VP in order to check case as the verbs head-moves to vP. Finally Ben (I) moves to spec,IP for nominative. In brief, derivation should be as in (16)



As for (5b), thematic features of the four lexical items should be as follows.

### Ben (I) Köpek (dog) Kork- (fear) causative morpheme

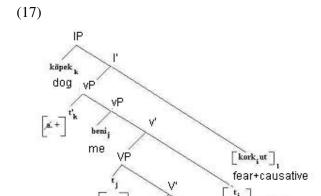
a. - + -/\_ b. - + -/+ c. - + -/+ Generalized Transformation merges the argument that bears feature c. + first and the argument that bears the feature c. - second uniformly. Thus *fear* and *frighten* type verbs have the same mapping properties. Then, thematic features are checked as in (5a). Since V doesn't have the feature a. +, the feature a. + on the argument *köpek* (dog) enables it to be selected with nominative case from the numeration. Accordingly, *köpek* (dog) has to move to spec, vP in order to check the feature a. + with the causative morpheme. This means that +X psych verbs allow for arguments with the feature a. + in complement position both in semantic and syntactic structure.

The feature a. + is the most prominent feature for agentivity. So, we can easily claim that only causative morpheme hosts the counterpart of this feature. In addition; the feature a. + on an argument requires the existence of causative morpheme in the numeration. This is why the causative morpheme merges together with the feature a. +. Derivation should proceed as follows. vP, which hosts the causative morpheme, merges with VP. V incorporates into v, forming a wordlike constituent. The experiencer NP *beni* (me) moves to spec,vP for case-checking, which is followed by the movement of now cause argument *köpek* (dog) to spec,vP in order to check the feature a. +. The only remaining unchecked feature is nominative Case of *köpek* (dog), which is checked as it moves to spec,IP after the incorporation of the syntactic wordlike unit to I-head. We see the derivation in (17).

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<sup>&</sup>lt;sup>11</sup> The same underlying structure as (5a).

<sup>&</sup>lt;sup>12</sup> It seems impossible in MP that semantic features affect formal features. However, Chomsky (1995) states that formal features may reflect some semantic features.



Actually, there is emprical evidence that NP *köpek* (dog) merges at complement position. This position is closely associated with theme and patient theta roles while cause is associated with spec,vP. So, if Hornstein (1999) is right in claiming that there is no upper bound on the number of theta roles an argument can bear then any argument that appears both in complement position and spec,vP in the course of derivation should have such an interpretation that it must be both theme and cause of the psychological state of the experiencer. Intuitions of all Turkish native speakers suggest that the dog in (2) causes the fear on me and the fear is about the dog itself. Thus the dog turns out to be both theme and cause. It sounds the same in English sentences. <sup>13</sup> I believe this is the evidence that *köpek* (dog) first merges at complement, then raising to spec,vP.

### 5.2 -X Verbs

As to the verb *beğen*- (like) in (6), (6a) should have the same derivation as (5a). For (6b) however, we will assume that *beğen*- (like) never allows for an argument that bears the feature a. + to merge at complement position. Then *Elbise* (dress) will never have the feature a. + and move to spec,vP in order to check the

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 $<sup>^{13}</sup>$  This is also verified with interpretations of sentences that include –X type psych verbs. In (6c) for example, Ali is the cause of my liking the dress. But the sentence cannot mean that I like Ali, which shows that Ali is merged at spec,vP.

feature a. + with causative the morpheme or to spec,IP for nominative case checking. Were it to move, it would lead to a mismatch of features thus the derivation would be cancelled.

On the other hand, the verb *beğen*- (like) is different from other verbs since it allows for a third argument as seen in (6c). In (6c), the argument *Ali* bears the feature a. + but lacks b. and c., which makes it a non-theme cause argument. So *Ali* should merge directly at spec,vP in order to avoid theme theta role. Let us assume that lexical items are selected from the numeration as below.

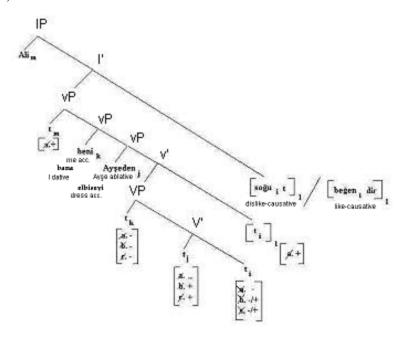
### Ali ben (I) elbise (dress) beğen- (like) causative morpheme

Generalized Transformation has to find the argument to be merged first. c. + pricinple seems to work again. Bearing the feature c. +, *elbise* (dress) is merged first. Two lexical items remain for merge. Following a similar principle, the argument that bears the feature c. - (ben (I)) should be merged second. *Ali* is unvalued for c. and b. <sup>14</sup> The verb checks its Theta features with complement and specifier positions. Then V incorporates into v, which is followed by the movements of *ben* (I) and elbise (dress) in order to check the their appropriate cases. *Ali* merges at the outermost specifier position and checks its feature a. + with the causative morphology. Finally, *Ali* moves up to spec,IP for nominative case checking. The derivation is as in (18).

<sup>14</sup> At first, being unvalued for any feature in a parameterized system may sound awkard since any argument in this system should be this or that way. However, if *Ali* were to bear the features c. and b.

valued + then we would expect it to be both Theme and Cause of the psychological state denoted by the verb just like the argument  $k\ddot{o}pek$  (dog) in (5b). But Ali is only interpreted as Cause. By the same token, if Ali carried the features c. and b. valued –, this would lead the sentence towards an interpretation in which Ali is mentally affected by the event. This is not the right interpretation either. As a result, Ali becomes neither Theme nor Experiencer by not having the features c. and b. valued.

(18)



As seen in (18) and in (6c.,f.) the case of theme and experiencer varies with the verb involved. If it assigns accusative to the theme, the experiencer is assigned dative. If the verb assigns non-accusative to the theme (ablative in (6f)), the experiencer is assigned accusative. Considering (19), we see, however, that this is not an idiosyncratic behavior of psych verbs. Turkish employs such case correlations in causative constructs.

- (19) a. Ben Ayşe'yi vur-du-m I nom. Ayşe-acc. shot-past-1st sing.
  - b. Ali ban-a Ayşe'yi vur-dur-duAli nom. I-dative Ayşe-acc. shot-causative-past
  - c. Ben Ayşe'ye doğru koş-tu-mI nom. Ayşe dative towards run-past-1st sing.

d. Ali ben-i Ayşe'ye doğru koş-tur-du
 Ali nom. I-acc. Ayşe-dat. towards run-causative-past

The system should work as follows. If theme is selected with accusative case (as a requirement of the verb), experiencer is selected with dative. If theme is selected with any non-accusative case, experiencer is selected with accusative. After both arguments move to their respective spec,vP positions, V checks the case of the theme argument while v-head, occupied by the causative morpheme, checks the case of the experiencer argument.

#### 5.3 Absolute –X Verbs

The sentences in (7) have absolute –X verbs. (7a) must have the same derivation as (5a) and (6a). What makes (6b) ungrammatical also renders (7b) ungrammatical. Finally, the ungrammaticality of (7b) with a third argument inserted shows that some psych verbs don't allow any argument of them to have the feature a. +. Thus no argument will raise to spec,vP to check a. + or merge at spec,vP. In fact, (6b.,e.) and (7b.,c.) will never be generated.

#### 6. Evidence and Discussion

#### 6.1 Evidence

First problem with the analysis above is that *beğendir-* and *soğut-* check two cases. This must be impossible since a given verb can only check one single case. But it is apparent in the analysis that there are two independent verbs involved. These verbs incorporate on morpho-syntactic grounds. Despite the incorporation, these verbs can check their case feature with the appropriate argument. But they cannot check the same case (like accusative for both arguments of the sentence). This shows us that these verbs form a syntactic unit to a certain degree.

There are two other independent arguments that show that the incorporation is limited. First is that causative morpheme undeniably entails the third argument or the third argument entails the causative morpheme. This means that causative is an independent verb that has its own argument structure.

The other piece of evidence comes from the adverbials modifying psych verbs. Borer (1991) states that if a complex predicate is a syntactic derivation, each verbal component of the complex predicate must preserve their pre-incorporation behaviours. If, in any given incorporation, the complex predicate redefines its own syntactic behaviours then incorporation must have taken place in morphological component which gives input to the syntactic component. Consider the following examples.

- (19) a. Ali kopek-ten ölesiye kork-tu Ali nom. dog-abl. to death fear-past
  - b. Köpek Ali'yi ölesiye kork-ut-tu
     dog nom. Ali-acc. to death fear-causative-past
  - c. Ali Ayşe'yi Veli'den daha çok kıskan-ıyor Ali nom. Ayşe acc. Veli-abl. more envy-cont. Ali envies Ayşe more than Veli
  - d. Ayşe Ali'yi Veli'den daha çok kıskan-dır-ıyor
    Ayşe nom. Ali-acc. Veli-abl. more envy-causative-cont.

    Ayşe makes Ali envy more than Veli
  - e. Ben bu iş-ten fena halde huylan-dı-m

    I nom. this matter-abl. extremely get iritated-past-1st sing.

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<sup>&</sup>lt;sup>15</sup> Lexicon in MP.

f. Bu iş ben-i fena halde huylan-dır-dı this matter nom. I-acc. extremely get iritated-causative-past

Verbs are closely related to the adverbials in (19a-f). The pairs (19a-b, e-f) show that this relatedness is still possible after V incorporates into v, i.e. the verb still carries the same relationship to the adverb. (19c,d) indirectly contribute to my claim. (19d) is ambiguous between two interpretations. In one of them, there are two enviers (Ali and Veli) and one enviee (Ayşe) while in the other interpretation there is only one envier (Ali) and two enviees (Ayşe and Veli). Since comparison is possible between two arguments, we could say that causativization alters the comparison relations by leading to ambiguity. However, note that (19d) has (19c) as the underlying structure and further, that (19c) is ambiguous the same way as (19b). (19c) may come from (20a) or (20b).

(20) a.Ali Ayşe'yi [Veli'nin Ayşe'yi kıskan-dığından] daha çok kıskan-ır Ali nom. Ayşe-acc. Veli gen. Ayşe-acc. envy-nominalizer more envy-aorist.

Ali envies Ayşe more than Veli envies Ayşe

b.Ali Ayşe'yi [Ali'nin Veli'yi kıskan-dığın-dan] daha çok kıskan-ır Ali nom. Ayşe-acc. Ali-gen. Veli-acc. envy-nominalizer-abl. more envy-aorist

Ali envies Ayşe more than Ali envies Veli

(21)a.Ayşe<sub>j</sub> Ali'yi **t**<sub>j</sub> [Ayşe'nin<sub>i</sub> Veli'yi **t**<sub>i</sub> kıskan-dır-dığın-dan] daha çok Ayşe nom. Ali-acc. Ayşe-gen. Veli-acc. envy-causative-nominalizer-abl. more kıskan-dır-ır envy-causative-aorist

Ayşe makes Ali envious more than Ayşe makes Veli envious

b.Ayşe<sub>j</sub> Ali'yi **t**<sub>j</sub> [Veli'nin<sub>i</sub> Ali'yi **t**<sub>i</sub> kıskan-dır-dığın-dan] daha çok Ayşe Ali acc. Veli gen. Ali acc. envy-causative-nominalizer-abl. more kıskan-dır-ır envy-causative-aorist

Ayşe makes Ali envious more than Veli makes Ali envious

(21), which corresponds to (20) in terms of derivation and interpretation, shows us that two different interpretations of (19d) stems from two different underlying structures ((21a) and (21b) respectively). Put it more concrete, comparison is between Ali's enviousness and Veli's enviousness both in (20a) and (21a) while it is between Ali's enviousness towards Ayşe and Veli in (20b) and (21b). So, comparison functions the same way before and after the incorporation of the psych verb into the causative morpheme.

## **6.2** Case Assigning Principle<sup>17</sup>

Comparing (5a) to (5b), we see that these arguments are in different syntactic position because they bear different cases. Ben (I) comes with nominative while  $k\ddot{o}pek$  (dog) comes with ablative in (5a). In (5b) However, Ben (I) comes with accusative while  $k\ddot{o}pek$  (dog) comes with nominative. When we add (6c) to the picture, we see that psych verbs have a complex case correlation. What determines which case is to be assigned to any given argument? One probable solution comes from the relation of theta roles to case. Syntax has to assign at least one nominative case which will be checked at spec,IP. Let us suppose that syntax initially searches for the argument that will be carrying nominative case. This argument is the one that bears the feature a. + indepedently of mapping. For example,  $k\ddot{o}pek$  (dog) is selected with nominative case since it bears the feature a. + in (5b). The other argument is

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<sup>&</sup>lt;sup>16</sup> Note that (20a.,b.) are the non-elided counterparts of (19c) and (21a.,b.) are the *frighten* type derivations of (20a.,b.) hence non-elided counterparts of (19d).

<sup>&</sup>lt;sup>17</sup> The term *assign* is used informally here. It is not synonymous to case-marking.

<sup>&</sup>lt;sup>18</sup> We can easily claim that the case of the complement of *fear* type psych verbs (let it be accusative, ablative, dative) is structural case since these arguments uniformly bear theme theta role. This is also verified by the fact that case varies with the psych verb used.

<sup>&</sup>lt;sup>19</sup> Remember Chomsky (1995) hints structural features may reflect semantic features.

selected with accusative case<sup>20</sup>. As to (5a), since no argument bears the feature a. + in the sentence, syntax now seeks for the argument that will bear the case which is stated in the lexical entry of V. This argument is theme bearing the features c. + b. + as principled in (22). Now, there is only one argument and one case left to be assigned, i.e. experiencer and nominative. This may be seen as plan B. In other words, plan B says "if you can't find the argument for nominative then find the argument for the case stated in the lexical entry of V. So the other argument is left with nominative".

## (22) Case Assigning Principle for Two Place Predicates (CAP 1)

Select the argument that bears the feature a. + with nominative case and the other argument with accusative case.<sup>21</sup>

If no argument bears the feature a. + then select the argument c.+, b.+, a.- with the case in the lexical entry of V. Select the other argument with nominative case.

#### (23) Case Assigning Principle for Three Place Predicates (CAP 2)

Select the argument that bears the feature a. + with nominative case. Select the argument c.+, b.+, a.- with the case in the lexical entry of V. Select the third argument depending on the case in the lexical entry of V.<sup>22</sup>

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<sup>&</sup>lt;sup>20</sup> See fn. 21 for an explanation of this fact.

<sup>&</sup>lt;sup>21</sup> One may ask at this point why Ben (I) is not selected with ablative case, which is the one stated in the lexical entry of V in (5a). The sentence should be  $K\"{o}pek$  benden korkuttu (dog- I ablative- fear-causative-past). The answer is that Ben (I) moves to spec,vP which hosts the causative morpheme. The psych verb has to check accusative case when it incorporates into v hosting the causative morpheme iff there is only one argument at spec,vP to check case. This is why Ben (I) is selected with accusative but not with ablative from the numeration. The case is not peculiar to Turkish and pscyh constructions. See Baker (1988) for the same behaviour of [V v] complex predicates in Chicewa.

<sup>&</sup>lt;sup>22</sup> As discussed formerly at the end of §5.2, this means that if the argument c.+, b.+, a.- is selected with accusative, the third argument is selected with dative (as in (6c)). If the argument c.+, b.+, a.- is selected with non-accusative then the third argument is selected with accusative (as in (6f)).

### **6.3 Inanimate Subjects**

It seems that only animate subjects should be allowed with verbs that tolerate the feature a.+ since inanimate objects or phenomena cannot volitionally cause a psychological state. (24), however, shows that this conclusion leads to wrong predictions. Storm and Ali's health are acceptable as the subject of the sentence.

(24) Fırtına/Ali'nin durum ben-i endişelen-dir-iyor Storm/Ali's health I-acc. worry-causative-cont. The storm/ Ali's health worries me

On the other hand, (25) shows that these subjects' agentivity should be treated carefully.

(25)\*Fırtına/Ali'nin durumu beni endişelen-dir-meye çalış-tı
Storm/Ali's health me acc. worry-causative-nominalizer try-past
\*The storm/Ali's health tried to worry me

Moreover, (26) leads us to say that grammaticality of (24) is not confined to psych verbs. (26) is equally grammatical although it contains a non-psych verb with an inanimate subject.

(26) Fırtına/Ali'nin durumu bütün planlarımızı suya düşürdü

Storm/Ali's health all of our plans acc. voided (*lit. dropped into water*)

It seems that the subject in (24) bears the feature a. + due to a semantic process that cannot be treated within the scope of this paper.

#### 6.4. Base-generated *frighten* Type Verbs

I discovered two psych verbs in Turkish data that seem to be base-generated *frighten* type verbs. These verbs are  $\ddot{u}z$ - (make sad) and sik- (bore). Still these verbs have *fear* type behaviours.

(27) a. Ali'nin gitmesi ben-i üz-dü

Ali's leaving I-acc. make sad-past

b.Ben Ali'nin gitmesine üz-ül-dü-m

I Ali's leaving make sad-??passive-past-1st sing.

One might think at first sight that (27a) is the base verb and (27b) is obtained via passivization. However, this sentence does not allow for the suppressed subject to appear in *by phrase*, which we expect from every ordinary passive sentence.

(28)\*Ben Ali'nin gitmesi tarafından üz-ül-dü-m

I Ali's leaving by make sorry-??passive-past-1st sing.

The most probable solution is that these pseudo *frighten* type verbs are obtained via back-formation of their *fear* type counterparts exemplified in (27b).

### **6.5** The Essence of Psych Verbs Dispute

It is not all about syntax, nor is it about semantics. Earthly phenomena that give input to the semantic component of Faculty of Language are nonlinguistic states. Syntax decides to what extent and in what way these earthly phenomena generated by the semantic component can be reflected in a sentence. However, it does not follow that any given structure that is disallowed in a sentence cannot be generated in the semantic component. For example, (29) shows that the verb *güven*- (trust) no way

<sup>23</sup> The psychological reading of *sik*- comes from physical sense of the verb which means to sequeeze or to tighten. This in fact leaves us with one single direct *frighten* verb. Actually many psych verbs of Turkish have non-psychological senses diachronically.

allows causativisation. But it does not mean that no one could ever cause someone to trust a third party.

(29) \*Ali ben-i Ayşe'ye güven-dir-di Ali nom I-acc. Ayşe-dat. trust-causative-past

If someone really manages to convince someone to trust a third party, the semantic component should easily establish such a relation among these three arguments. The ungrammaticality of the sentence is due to some restrictions of verb classes in semantic and/or syntactic structures. For example, if syntax says the verb *güven*-(trust) cannot causativise, the resulting sentence is ungrammatical. Note however that Faculty of Language has other means to express this kind of relation. (30) converges with causativising sense. Every native speaker of Turkish gets to know when he or she hears the sentence that I trust Ayşe and Ali is the cause of my trust.

(30) Ali Ayşe hakkında o kadar iyi konuştu ki ben de Ayşe'ye güvendim Ali spoke so highly of Ayşe that I trust her now

(30) shows us that Faculty of Language can establish causativisation for the semantic relation of trust but not in the way (29) tries. The relation of semantic component (thus earthly phenomena) to syntax is analogous to the relation of a decanter to a glass.

### 7. Conclusion

In this paper, I tried to describe and explain some idiosyncratic properties of psych verbs. I claim that two types of psych verbs, *fear type* and *frighten type*, share the same underlying structure. Of course my assumptions, especially clause structure in terms of MP, are not widely investigated for Turkish. I assume that clause structure is the way designated in MP.

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