Araştırma Makalesi / Research Article

Exploring the Turkish Concept *İrkil-*: Corpus-driven Cognitive and Lexical Profiling of a Pre-emotion
Türkçe *İrkil-* Kavramını Keşif: Bir Duygu Öncülünün Derlem Sürümlü Bilişsel ve Sözcüksel Profili[*]

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ABSTRACT: As a multi-disciplinary study about *irkil-* (get startled), which combines findings from psychology, cognitive and corpus linguistics, the article aims to identify the lexical profile and cognitive structure of this pre-emotion through its concordances from the TNC. We employed *model of extended lexical units,* which involves identifying *irkil's* typical collocates, colligates, semantic preferences and discourse prosodies. As part of its event schema, *irkil-* was found to have a linguistic schema to be filled by certain paradigmatic and syntagmatic choices. We found typical collocates of *irkil-* are determined by the experiencer's pre-startle situation (engrossment/absence), sudden stimuli of acoustic, tactile, visual and cognitive natures, post-startle behavioural tendencies characterised by hypervigilance, and the ensuing emotion – fear, surprise or anger. The corpus data demonstrated the schematic nature of *irkil-* dictates specific lexical environments with collocates from certain semantic domains, which also affect its prosody. The study also allowed us to place the pre-emotion *irkil-* in the right place in the cognitive appraisal pattern for fear prepared by Scherer (2001).

Keywords: irkil, startle reflex, fear, corpus-driven, model of extended lexical units

ÖZ: Bir duygu öncülü olan *irkilmek* fiiliyle ilgili psikoloji, bilişsel dilbilim ve derlem dilbilimi bulgularını birleştiren çok-alanlı bir çalışma olarak, bu makale, TNC'den alınan bağlı dizinler yoluyla bu duygu öncülünün sözcük profilini ve bilişsel yapısını tanımlamayı amaçlamaktadır. *İrkil-* fiilinin kendine özgü eşdizim, dilbilgisel eşdizim seçimlerinin, anlambilimsel tercihlerinin ve söylem ezgilerinin aydınlatılması için *genişletilmiş sözcükbirim modeli* kullanılmıştır. Olay şeması gereği *irkil-* sözcüğünün, belirli dizisel ve dizimsel seçimler gerektiren bir dil şemasına sahip olduğu saptanmıştır. *İrkil* sözcüğünün tipik eşdizimliliklerinin, deneyimcinin irkilme öncesi durumuna (dalgınlık), ani işitsel, dokunsal, görsel ve bilişsel uyaranlarına, pürdikkatin ön plana çıktığı irkilme sonrası davranış eğilimlerine ve korku, şaşırma veya öfke gibi irkilme sonrasındaki duyguya bağlı olduğunu saptadık. Derlem verileri, *irkil-* ile ifade edilen tepkinin şematik yapısının, söylem ezgisini de etkileyen, belirli semantik alanlardan eşdizmliliklerle özel sözcük çevreleri oluşturduğunu göstermiştir. Çalışma ayrıca duygu öncülü *irkil'i* Scherer (2001) tarafından hazırlanan korku için bilişsel değerlendirme örüntüsü tablosunda doğru yere yerleştirmemizi sağlamıştır.

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Introduction

This is a multidisciplinary study based on psychology of emotions, cognitive linguistics and corpus linguistics which aims to clarify the lexical profile of the fear-related Turkish verb *irkil-* (get startled). The findings and facts from psychology and cognitive linguistics about this pre-emotion and fear, to which it is related, are expected to dictate a lexical environment for this verb which can be explored and unearthed through concordance analysis. Because *irkil-* is a fear-related verb, our analyses and comments also draw upon cognitive appraisal of this emotion. Where the startle reflex -*irkil-* in Turkish-stands in cognitive appraisal pattern for fear (Scherer, 2001:115) was also taken into account to describe the whole profile of this verb.

One might say that countless studies can be carried out which explore lexical profiles of individual words. In this sense, the study on the lexical profiling of *irkil-*, based on our doctoral dissertation on fear-related verbs (*kork-*, *tırs-*, *ürk-*, *irkil-* and *ürper-*), could be underestimated, but should not because the dissertation revealed the fine grained differences between these fear verbs, which has implications for works of synonymy, and metaphorical profiles of somatic fear idioms (Adıgüzel, 2018). The most important implication of the present study on *irkil-*, developed from our dissertation, is that it proved that corpus linguistics is not only a distinct discipline but also provides a highly useful method with its tools to tease out lexical profiles or idiosyncratic behavioural patterns of lexical items. With a huge amount of attested data, a corpus reflects the mental models or lexicons of a speech community.

The corpus (TNC) to which we referred proved to have the capacity to unearth the event schema of *irkil-* on semantic, psychological and cognitive grounds, each of which determines what words it collocates with. Corpus concordances shed light on *contextual representations* of lexical items, which is defined by Miller and Charles (1991:26 cited in Gries and Otani, 2010:142) as "a mental representation of the contexts in which the word occurs, a representation that includes all of the syntactic, semantic, pragmatic, and stylistic information required to use the word appropriately." Furthermore, we believe that a corpus represents *mental concordances* of words entrenched in the brains of the members of a speech community. Then the concordance of *irkil-*, which we obtained from the Turkish National Corpus (TNC), reflects mental concordances of the Turkish speech community or *mental models of extended lexico-semantic units* (Stubbs, 2002:96) in our language community. Corpus linguistics provides efficient tools for unearthing information about words that might remain hidden to pure intuition. All in all, a corpus *teaches* us what we unconsciously already *know*, laying bare or making tangible any semantic and pragmatic facts about lexical items entrenched in our mental concordances as abstractions.

To sum up, the purpose of the present study is to unearth the lexical and cognitive profiles of *irkil-* from the corpus TNC. The findings are meant to place *irkil-* in the right place among other Turkish fear verbs which denote subjective experience of fear along with its precedents, conscious awareness, and behavioural tendencies which all dictate the use of certain collocates, colligates, semantic preferences and prosodies. The study aims to

reveal how different *irkil-* is from other fear tokens such as *kork*, *tırs*, *ürk*, and *ürper* in Turkish. The study aims to draw a comprehensive and interdisciplinary profile for *irkil-* (the startle reflex), focussing on its lexical environment dictated by its psychological, physiological, cognitive and behavioural aspects. The corpus-driven study provides us with "paradigmatic and syntagmatic dimensions of choice" (Sinclair, 1998:14) about *irkil-*.

The study aims to answer the following questions about the lexical and cognitive profiles of *irkil-*:

1. What are the typical collocates and colligates of *irkil-*?

2. What are the semantic domains from which the verb selects its typical collocates?

3. What are the semantic prosodies of the verb?

4. To what extent do psychological, physiological and behavioural facts involved in the startle reflex (*irkil-*) dictate a lexical environment for its collocates, colligates, and semantic preferences?

5. What is the event schema of *irkil-* in terms of pre-startle situation, post-startle action tendencies of the experiencer and the ensuing emotion and how does its event schema interact with the verb's co-selection tendencies in its lexical environment?

6. Where does *irkil-* stand as a concept when compared to the general concept of fear?

7. How does this pre-emotion concept compare to fear in terms of cognitive appraisal patterns for emotions (Scherer, 2001)?

Answering these questions, the study will make contributions to lexical semantics in terms of works of synonymy, cross-linguistic translation problems about psych verbs/fear tokens in Turkish. The study combines psychology, cognitive linguistics and corpus-linguistics; hence it sets an example for multi-disciplinary work about a lexeme.

Theoretical Framework

In this part we provide concise revisions of the relevant theoretical framework including brief notes about the superordinate term *korku* (*fear)* and subordinate term *irkil-* (*get startled*) and cognitive appraisal theory and lexical profiling and its components.

Fear and Startle (İrkil) Reflex

Fear is regarded as a basic emotion (Izard, 2007; Johnson-Laird & Oatley, 1992; Ekman, 1992 and Lewis, 2008). Acute fear "consists of a dangerous situation, a recognition of that danger, feelings of displeasure and arousal, flight, facial and vocal cues, the self-perception of oneself as afraid, and the various physiological happenings that accompany each of these" (Russel & Barret, 1999:816). This is a model of acute fear situations experienced in the present time with typical indicators such as inhibition of action, frightened face expression, trembling, crying, hiding, running away, hurried breathing, increased heartbeat, pale skin, prostration of the body, decreased skin temperature, and piloerection (Bowlby 1973; Darwin 1872/1965; Ekman et al., 1983). For

secondary fears we do not experience such indexes; we are just displeased about potential future events which may threaten our needs or goal pursuits. As in other languages, there are various fear-related tokens in Turkish which express physiological or cognitive aspects or intensities of fear (e.g. dehşete düş-, kork-, tırs-, ürk-, irkil-, ürper-, kaygılan-, endişe et- etc.). The present study focuses on *irkil-* which is the body's physiological (startle) reaction to a sudden stimulus which may or may not portend fear.

The startle reaction, expressed by *irkil-* in Turkish, is not an emotion like fear but a pre-emotion. *İrkil-* corresponds to the *startle* response "which refers to a defensive reflex, evoked by abrupt, intense stimulation, which functions to protect the body from potential harm" (Amodio & Harman-Jones, 2011:47). Izard (1977:356) states that of the density-increase emotions like surprise-startle, fear-terror, and interest-excitement, "the most sudden and sharpest increase in density of neural firing activates startle." The *startle* reflex is a bodily reaction resulting from a sudden, unexpected stimulus which rapidly and momentarily shakes the fear or surprise mechanism of the brain. The adaptive purpose of this reaction is to make us vigilant during the reaction itself and immediately afterwards. It makes us hypervigilant (Wildman, 2013), so we soon visually explore the environment to see what is happening. Lazarus (1991:54) argues that getting startled (*irkil-*) is "an initial reaction to uncertainty" and "some researchers have called it the "What is it?" reaction." The startle reaction expressed by *irkil-* in Turkish motivates an animal or a person to evaluate what is happening; that is, *irkil-* (get startled) functions "to alert the person to a condition whose personal significance is hinted at but is not yet evident, and which will be subsequently appraised as irrelevant, harmful, threatening, or beneficial" (Lazarus, 1991:54). Our lexical profiling of *irkil-* will demonstrate how facts about *irkil-* dictate a lexical environment in which we see certain collocates, colligates and corresponding semantic preferences and prosodies.

Cognitive Appraisal Pattern of Fear

Cognitive appraisal means subjective evaluation of the personal significance of a stimulus which can be a situation, an object or an event on the basis of some criteria which Scherer calls *stimulus evaluation checks* (Scherer, 1999). Discrete emotions are elicited as a result of an individual's cognitive evaluation of a stimulus. It is argued that when exposed to a stimulus, we carry out *stimulus evaluation checks,* hierarchically and rapidly namely, "novelty, intrinsic pleasantness, certainty or predictability, goal significance, agency, coping potential, and compatibility with social or personal standards" (Ellsworth and Scherer, 2003:573). According to these criteria, the typical cognitive appraisal pattern for acute fears is likely to be as follows: an individual is faced with an imminent threat which is usually sudden and highly unfamiliar and unpredictable. The event or the object is intrinsically unpleasant or threatening and highly relevant to one's goal pursuit, need, or survival. The outcome probability of one's being harmed is high. The individual's coping potential is too low to deal with the threat and seems to have a low level of adjustment capability for the anticipated harm. However, this cognitive appraisal pattern differs for secondary fears about future contingencies in which case there is no imminent threat but one is displeased about the prospect of an undesirable event. Scherer (2001:115) identified the following pattern for an acute fear situation, which also represents the appraisal

pattern for Turkish *kork-* for primary fears. At the end of our lexical profiling of *irkil-* (get startled), we will be able to place *irkil-* in the right part of this table.

Table 1. Cognitive Appraisal Pattern of *Fear* (*kork-*)

Stimulus Evaluation Checks (SECs)	Fear (*Kork-* as primary Fear)
RELEVANCE	
Novelty	
Suddenness	high
Familiarity	low
Predictability	low
Intrinsic pleasantness	low
Goal/need relevance	high
IMPLICATIONS	
Cause: agent	other/nature
Cause: motive	open[1]
Outcome probability	high
Discrepancy from expectation	dissonant
Conduciveness	obstruct
Urgency	very high
COPING POTENTIAL	
Control	open
Power	very low
Adjustment	low
NORMATIVE SIGNIFICANCE	
External	open
Internal	open

Lexical Profiling

Lexical profiling requires us to scrutinise concordances from a corpus to identify recurrent collocates, colligates, semantic preference and semantic prosody of a lexical item so as to determine 'extended units of meaning' surrounding the item (Sinclair, 1996/2004). Sinclair (2004:20) argues that "the meaning of words together is different from their independent meanings." He also contends that "a large proportion of the word occurrence is the result of co-selection – that is to say, more than one word is selected in a single choice." (Sinclair, 2000: 197). Apparently, cognitive and psychological facts and action tendencies of a person getting startled (*irkil-*) should dictate lexical environments in which it co-occurs with certain other words that describe the triggers of the startle reflex and what an individual does and feels afterwards.

Lexical profiling is an exhaustive coverage of the typical uses of a node (a lexical item or phrase under focus). Concordance lines of a node provide us with "paradigmatic and syntagmatic dimensions of choice" about a lexical item (Sinclair, 1998:14). Drawing on Sinclair's corpus-driven works (1991, 1996, 1998) about lexical items' co-selectional

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[1] The evaluation "open" means that different appraisal results are compatible with the emotion in terms of that stimulus check, or the check is irrelevant for *fear* compared to other emotions for which the same criteria of cognitive appraisal checks above are applied. As can be seen from the table, the most important cognitive evaluation checks for *fear* are to check a stimulus for Relevance and Coping Potential.

properties, Stubbs (2002) introduced the *Model of Extended Lexical Units*. The model is meant to dig deeper into a corpus about a node for "successive analysis of collocations, colligations, semantic preferences and discourse (semantic) prosodies" of a lexical item through concordance analysis (McEnery and Hardie, 2012:132). The concordance analysis of *irkil-*, used in Turkish to express the startle reaction to a sudden stimulus, is expected to help identify idiosyncrasies of the fear-related verb both in terms of its linguistic schema and cognitive structure.

Data and Method

The present study is a qualitative one; that is, our focus is not on statistical significance but exhaustive description of whatever notable features of the node *irkil-* (get startled) we discovered through concordance analysis. The study employs the *corpus-driven approach,* which regards the corpus as a source to posit hypotheses. Through this inductive process we dug through the corpus (TNC, Aksan, Y. et al., 2012) for the node *irkil-* "to uncover new grounds, posit new hypotheses and not always support old ones" (Tognini-Bonelli 2001:65). "The general methodical path is clear: observation leads to hypothesis leads to generalisation leads to unification in theoretical statement" (ibid:66). Under Stubbs' (2002:87-9) *model of extended lexical units,* we scrutinised the concordance of *irkil-* to identify its typical collocates, colligates, semantic preference(s) and semantic/discourse prosodies.

The corpus data for the Turkish fear-related node *irkil-* was obtained from the Turkish National Corpus (the TNC) with a span of -10 to + 10 words. About 500 hundred randomly retrieved examples were analysed, and typical collocates, colligates, semantic preferences and prosodies were identified. After all manual analyses, linguistic and cognitive schema of *irkil-* was determined. A holistic picture of the startle reaction described by *irkil-* in Turkish was created which gives us insight into emotion antecedents, the stimulus type, action tendencies of the individual who gets startled, and cognitive, physiological and behavioural aspects of the kind of fear involved.

For lexical profiling of our node, we employed Stubbs' (2002:87-9) *the model of extended lexical units,* which involves examining the lexical environment of a linguistic unit through "successive analysis of collocations, colligations, semantic preferences and discourse (semantic) prosodies" (McEnery and Hardie, 2012:132). To identify typical collocates of *irkil-*, we adopted the technique of *collocation-via-concordance*, following the requirements described by McEnery and Hardie (2012:126), who state that "the computer's role ends with supplying the analyst with a set of concordance lines. Then he/she "examines each line individually, identifying by eye the items and patterns which recur in proximity to the node word and reporting those that they find of note, possibly with manually compiled frequency counts but without statistical significance testing". In our efforts for the analysis of the concordance lines, we followed steps similar to Sinclair's (2003, cited in Tribble, 2012:178) seven-step procedure, namely 1) Initiate 2) Interpret 3) Consolidate 4) Report 5) Recycle 6) Result and 7) Repeat. This is a cycling process; you meticulously examine the concordance lines until no discernible collocational patterns are left. During the cyclic process many hypotheses are formed and revised on and on, to

finally form generalisations. For instance, the following paragraph summarizes our process of analysis for *irkil-*:

An initial hypothesis about *irkil-* (get startled) was that *irkil-* collocated with words or phrases that express a loud sound. However, as we kept reading again and again, we observed that for the *irkil-* reaction to occur, the stimulus does not have to be a loud sound, but suddenness of the stimulus is more salient and we saw collocates like "*birden, birdenbire, aniden, ani*" which express suddenness or abruptness. Hence, we modified our interpretation of the collocates which denote the triggers of *irkil-* as follows: for this reaction to occur, suddenness rather than loudness of a sound is a necessary condition. Our further readings helped us to formulate a new hypothesis that the stimulus is not necessarily a sudden sound; but a sudden appearance or physical contact can also instigate the startle (irkil-) reaction. As we further read and re-read the lines, we saw that *irkil-* collocates with words or phrases that express engrossment or absence (Turkish, *dalgınlık*) because for something to be sudden, the experiencer should be engaged, absorbed or engrossed in an activity. Then a final comprehensive hypothesis about the *irkil-* (startle) reaction can be that a sudden tactile, auditory, visual or cognitive stimulus causes one to get startled (*irkil-*) and all those dictate certain collocates from these domains in *irkil's* lexical environment. That is how an event schema that corresponds to a linguistic schema emerged out of the subtleties of the concordance lines.

With all the salient collocates determined, we identified the semantic preference(s) that *irkil-* has. We assigned several semantic preferences for *irkil-* depending on the number of semantic domains of collocate groups because a node may have more than one semantic preference (Partington, 2004). Our approach to the identification of semantic prosody or prosodies involves a pragmatic view of the node. Semantic prosody reflects the language user's pragmatic motivation to choose the node (Louw, 2000; Sinclair, 1996, 2000; Stubbs, 2002). For this reason, we did not make merely binary evaluations like positive/negative or pleasant/unpleasant to formulate a semantic prosody for *irkil-*; instead, we identified the particular reason(s) for which the language user should choose the word in his/her utterances.

Although not an obligatory component of lexical profiling on the basis of Stubbs' (2002) model, the cognitive appraisal pattern for *irkil-* was also identified because *irkil-* is related to an emotion (fear). Stimulus evaluation checks, that is, cognitive processes during a fear-portending situation, and their corresponding results were identified and tabulated by Scherer for fear (2001:115). We compared the cognitive appraisal pattern for *irkil-* with Scherer's table of cognitive appraisal pattern for fear and re-tabulated his table for *irkil-*.

Findings and Discussion

Lexical Profile of *İrkil-*

This section covers the lexical profile and cognitive appraisal pattern for *irkil-* in Turkish. Since the event structure of *irkil-* reflects a rather complicated semantic frame, we analysed about 500 random concordance lines to get the most out of the corpus to clarify the *irkil-* scene. Our inquiry reveals its colligational patterns, collocates exhibiting the

sources and the resultant affective state and action tendencies following the *irkil- / startle* response. Salient units of extended meanings which *irkil-* motivates with its lexical environment will be interpreted on the basis of (co-selected) collocates, semantic preferences and discourse prosodies.

Colligates of *İrkil-*

The source or trigger of the *irkil-* is marked with instrumental case (INST) "ile" or "-(y)lA." In terms of the experiencer and the object (inducing the stimulus for *irkil-*), the following structure is pervasive in Turkish:

Table 2. Structural Type of *İrkil-* in Turkish

Subject	Object	Sample Sentence
Experiencer (NOM)	Theme (INST)	**Ahmet** ani fren sesi-*yle* **irkil-di**.
		EXP.NOM sudden one braking sound-*INST* **get startled-PERF**.
		"Ahmet **was startled** by the sudden sound of breaking."

The concordance analysis helped us identify the following node-internal and node-external colligates of *irkil-*:

İrkil- colligates usually at –N1 position with the instrumental marker "ile" or its suffixal form –(y)lA, which corresponds to "with" or "by" in English. These instrumental case markers point to the sources that induce the startle (irkil-) reaction.[2]

(1) Bir gürültü, bir patırtı *ile* **irkil**-di-m. (OI22E1B-2908, TNC corpus).
   One noise, one clamor *INST* **get startled**-PERF-1Sg. (I **was startled** *by* a noise, a clamour)
(2) Koşarken sağ tarafından gelen ses-*le* **irkil**-di. (RA16B3A-0257)
   While running right side from come-REL sound-*INST* **get startled**-PERF.3Sg. (While running, he **was startled** *by* a sound coming from his right)

In many cases, *irkil-* colligates with temporal converbial (CV) suffix –(y) IncA, which corresponds to English *when* clause to express a sequential cause-effect relation. Such clauses, whose verbs with –(y) IncA colligate with *irkil-* at –N1 position, mark the temporal point at which the startle (irkil-) response was evoked.

(3) Birden, arkasında simsiyah parıldayan gözleri [*gör-ünc*e **irkil-di**.] (JA09B2A-0042). [*see-CV* **get startled-PERF**] (*When he* suddenly *saw* the jet-black glaring eyes behind him, he **was startled**)
(4) Tıp tıp …diye küçük küçük yankılanan ayak seslerini [*duy-unca* **irkil-di-m**]. (CA16B1A-1916). [*hear-CV* get **startled-PERF-1Sg**.] (*When I heard* the footsteps sounding tıp tıp echoing slightly, I **was startled**)

The subordinating suffix –(y)Ip on the startle verb *irkil-* (irkil-**ip**) is important because it functions like the conjunction "**and**" (CONJ), which profiles two actions

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[2] Hereafter, the ultimate English rendition of each Turkish concordance line is given in brackets

immediately following one another. It is quite significant in that our fear-related verb with this node-internal colligate directly displays what action tendency or cognitive operation the experiencer engages in after that affective state (or *irkil-* reaction here). That is, the pattern *irkil-**ip*** + *another verb* (*irkil-* **and** *another verb*) is supposed to show what the experiencer of the startle reflex first tends to do. Then this colligate should place limitations on the semantic domains of the collocates as well. Izard (1977:281) quotes Tomkins (1962) as saying "channel clearing emotion" about *startle*/surprise. Izard states that the function of the startle/surprise is "to clear the nervous system of ongoing activity that would interfere with adjustment to a sudden change in our environment" (ibid:281). An individual's action tendencies after the startle reaction include "trying to understand cause" (exploring/scanning the immediate environment), and "regaining control of self or situation" among others (ibid:282). Then in the post-node lexical environment of *irkil-ip* we are likely to see expressions of similar post-startle feelings and action tendencies in Turkish. As soon as one gets startled, characterised by "suddenness", one stops one's ongoing activity or mental activity and becomes bodily mobilised and mentally conscious to explore the emergent situation.

(5) Dalgın dalgın çalışan Sabri, *irkilerek ayağa fırladı*. Çetin de [**irkil-*ip***] bir adım *geri çekildi*. (KA16B4A-0712). [**get startled-*CONJ***]. (Sabri, engrossed in his work, *was startled and jumped to his feet*. And Çetin **was startled and** *took one step back*) (Bodily mobilisation)

(6) Kadın sesimi duyunca birden [**irkil-*ip***] *toparlandı*. (OA16B2A-0800) [**get startled-CONJ**] (When the woman heard my sound (me), she **was startled and** *collected herself/came to her senses*) (regaining control of self or situation)

(7) Kadın korkuyla [**irkil-*ip***] *etrafına bakındı*. (PI42E1B-2938) [**get startled-CONJ**] (The woman **was startled** in fear **and** *looked around*) (for visual check/ anxious curiosity)

Just like any verb*, irkil-* colligates with –(y)ArAk which functions as 1) a subordinating suffix (CONJ, "*and*") like –(y)Ip and as 2) converbial suffix (CV) which derives *manner adverbs* from verbs. We looked at the suffix –(y)ArAk on *irkil-* as a colligate rather than many other suffixes for its salient functions. The suffix can mark consequences of the startle (irkil-) reflex, with its function as a manner adverb being highly unlikely because *irkil-* construes a temporal event. How can its seemingly manner adverb form (*irkil-erek*, getting startled) modify another verb? What action can one do while also *irkil + ing* at the same time? Any verbs that *irkil-* could modify like a manner adverb would probably be temporary like it. Another possibility is multiple event reading– one *irkil*s repeatedly while doing something just like trembling. It might be for this reason that we came across few and controversial examples in the concordance although there are quite a few examples for the "–(y)Ip function" of –(y)ArAk, which manifests subsequent action or behavioural tendencies.

(8) MUSA, Rıza'nın ötüşüyle uyandı, [**irkil-*erek doğruldu***]. (JA16B3A-0796) [**get startled-*CONJ* stand up-PERF**] (When Rıza shouted, MUSA **was startled *and* stood**

up) (Ongoing activity of lying or sleeping is interrupted by startle (irkil-) and he proceeds to a state of sudden awareness of the surrounding)

(9) Mahkum, akrep lafını duyunca [**irkil-*erek* *yerinden fırlar*]. (JA16B2A-1304) [**gets startled-*CONJ*** *leaps up, –narrative present*]. (When he hears the word scorpion, the prisoner **gets startled *and*** leaps *up*) (Action tendency of hypervigilance)

(10) O gece Vildan [**irkil-*erek* *uyandı*]. (HA16B4A-0016) [**get startled-*CV*** *wake up-PERF*) (That night Vildan *woke up* gett***ing*** **startled**) (Manner adverb – "getting startled" modifies or accompanies the action of waking up. Both actions are short and simultaneous to some degree)

İrkil- colligates with degree adverbs. The adverbials observed at –N1 positions are *fena halde* (terribly/severely), *hafifçe* (slightly), *biraz* (a little), *derinden* (deeply).

(11) Gardırobunun kapısını açınca *fena halde* **irkildi**. (OA16B2A-0572) (When she opened the door of his wardrobe, he **was** *terribly* **startled**)

(12) …onun kömür siyahı gözlerini görünce *hafifçe* **irkildi**. (RA15B4A-0542) (When he saw her coal-black eyes, he **was** *slightly* **startled**)

İrkil- colligates with the postposition "*gibi*" (like) and manner converbial "*mış gibi*" (as if) to form an adverbial clause of manner. "The verb in the subordinate clause is marked with the evidential perfective suffix –mIş (EV/PF)…" (Göksel and *Kerslake, 2005:*403). Such adverbial modifications of the verb *irkil-* describe how intensely the reflex occurs. In clauses of *–mIş gibi*, the content of the clause is non-factual.

(13) Bir hayvan *gibi* **irkildi**. O ince, ama bir o kadar güçlü titreyiş beni büyüledi. (OA16B2A-0095) (He **got startled** *like* an animal. That delicate, but rather severe quake impressed me)

(14) Misafir sözcüğünü duyunca [iğne bat-*mış gibi* irkilir]. (EA14B1A-1616) [pin prick-EV/PERF *like* **get startled**] (When he hears the word guest, he **gets startled** *as if* pricked by a pin) (a flinching reflex)

(15) Dürbünü nasıl kullanılacağını gösterdiğimde, ilkin [tokat ye-*miş gibi* **irkildi**]. (QA16B1A-0775) [slap have-EV/PERF like **get startled**] (When I showed him how to use the binoculars, first he **got startled** *as if slapped*) (a severe startle reaction)

When the trigger of *irkil-* is from *COGNITIVE* domain, an unpleasant thought or idea *suddenly* crosses one's mind which is otherwise positive or neutral. Any such sudden speculatively worrisome thought disrupts one's ordinary flow of thought. In such contexts, the experiencer somewhat *irkil*-s (gets startled) and begins to worry about the cognitively constructed, speculative threat often in colligation with "**(ya … -sA/-(y)sA)**" – discourse connector *ya* followed by a verb with the conditional suffix –sA or –(y)sA, which corresponds to "what if…" in English (Göksel and Kerslake, 2005:443). In such contexts we also observe that *irkil-* colligates with modal adverbs **acaba** (roughly "I wonder if") which "indicates doubt or curiosity" (ibid:269) and the inferential connective **yoksa,**

(roughly "then" or "I hope not") "which "indicates a sudden realization on the speaker's part that the situation might be different from what s/he expected" (ibid:269).

(16) "**Ya** bacağına yaslandığım kişi filmde aranan gibi katil-**se**" *diyerek* **ilkildi**. (RI22E1B-2911) ("**What if** the person whose leg I am leaning against is a murderer like the wanted one in the film?" she *thought* and **got startled**. (sudden worrisome thought + startle/*irkil-*)

(17) "**Yoksa** beni mi takip ediyor" *düşüncesiyle* **irkildi**. (VA16B1A-2632) (He **was startled** by the *thought* 'Is he following me, **then**?') (worrisome thought + *irkil-*)

(18) "**Acaba** yanlış bir iş mi yaptık?" *diye* **irkilir**. (NF32D1B-2721) ("**I wonder if** I have done something wrong" he *thought* and **was startled**. (worrisome thought + startle)

In (17), the translation equivalent **then** for ***yoksa*** given by (Göksel and Kerslake, 2005) seems inadequate as a marker signalling a thought of potential threat for fear "**Yoksa** beni mi takip ediyor" could better be understood as "**I hope** he is ***not*** following me."

Table 3. Colligational Features of *İrkil-* on the Basis of the Corpus TNC data:

COLLIGATION PATTERNS (İrkil- colligates with)	EXAMPLES
INSTRUMENTAL CASE MARKER (INST) ile or –(y)lA	Ses-*le*, sesi *ile*, heyecan-*la* etc.
TEMPORAL/CAUSAL CONVERBIAL (CV) "–(y)IncA" (at –N position)	Duy-*unca*, çarpış-*ınca* etc.
SUBORDINATING SUFFIX (CONJ) "-(y)Ip ("-ip" for irkil- for vowel harmony)	İrkil-*ip* susar (got startled ***and*** went silent), irkil-*ip* ayağa fırladı (got startled ***and*** jumped to his feet) etc.
-(y) ArAk as SUBORDINATING SUFFIX (coordinating conjunction *and*)	irkil-*erek* "hayır" dedi (got startled ***and*** said "no." irkil-*erek* Melek'in arkasına doğru kaçar (gets startled ***and*** runs behind Melek.
-(y) ArAk as CONVERBIAL SUFFIX (Manner Adverb)	Irkil-*erek* uyandı (woke up (*by*) gett*ing* startled) "irkilerek" has an adverbial function to modify "woke up"
POSTPOSITION *gibi*, MANNER CONVERBIAL -*mIş gibi*, -*mIşçasına* (Such expressions reflect an association between the source of the startle reflex and its intensity)	bir hayvan ***gibi*** (***like*** an animal) iğne bat*mışçasına*, iğne batırıl*mış gibi*, iğne bat*mış gibi* (***as if*** pricked by a pin/needle), tokat ye*miş gibi* (***as if*** slapped), suçüsütü yakalan*mış gibi* (***as if*** caught red-handed), bir zaman tüneline gir*miş gibi* (***as if*** one had suddenly entered a time tunnel), ilk kez duy*muş*um ***gibi*** (***as if*** I heard it for the first time) etc.
ADVERBS OF DEGREE at –N1 position	*fena halde* (terribly/severely), *hafifçe* (slightly), *biraz* (a little), *derinden* (deeply).
MODAL ADVERBS	**Yoksa** (then), **acaba** (I wonder if), **ya…-sA/ -(y)sA** (discourse connector…conditional suffix) (These colligates occur in utterances expressing sudden thoughts of worry or curiosity)

Collocates of *İrkil-*

Sinclair (2000:197) argues that most word occurrences result from co-selection– "more than one word is selected in a single choice." The corpus data allows us to identify what meaningful relations words enter into with other words around them to create combinatorial (extended units of) meanings (Sinclair, 1996/2004; Stubbs, 2002). The concordance provides a unique window into the co-selectional properties of a node. The concordance of *irkil-* demonstrated that *irkil-* is not a stray word, but often occurs with certain other words which reflect its schematic nature (physical and psychological background, sudden/unexpected stimulus, the startle reaction, scanning for the cause with anxious curiosity or interest and the resultant emotion – fear, surprise, astonishment or anger). Below is a discussion of the collocates of *irkil-* on the basis of their semantic domains. Most examples are given with *irkil-di* in perfective aspect because it is in that viewpoint that *irkil's* lexical environment fully displays the whole schema of the reflex.

İrkil- collocates with words or phrases denoting the pre-reflex background characterised by the experiencer totally engrossed in an ongoing activity or thought. That is, *irkil-* collocates at –N positions with items expressing *dalgınlık* (*thoughtfulness / absence / engrossment*) or *durgunluk* (*stillness / silence*) which is abruptly broken and the startle reflex occurs. Stimuli that induce *irkil-* in our bodies are like a stone which suddenly falls into a still body of water, producing a strong impact and subsequent vibrations. In some concordance lines, the word *dalgın* (absent/thoughtful/engrossed) occurs explicitly in the pre-node co-text.

(19) Nermin Hoca *dalgın dalgın* kağıtlara bakarken birden **irkildi**. (EA16B2A-0744) (While Lecturer Nermin was glancing at the exam papers *absently/thoughtfully*, she suddenly **got startled**)

(20) Yıkıntılar arasında *düşünceli düşünceli* ilerlemeye başlamıştık ki, bir çocuk sesiyle **irkildik**. (RG37F1B-2934) (We had started to advance *thoughtfully* through the ruins when we **were startled** by a child's voice)

(21) Pembe el ilanına *dalmıştım*, taksi şoförünün sesiyle **irkildim**. (TA16B2A-0325) (I *was engrossed* in looking at the pink leaflet, and I **got startled** by the voice of the taxi driver)

Logically, for a stimulus to be appraised as sudden to the experiencer, he/she must be fully engrossed in an ongoing physical or mental activity, which is what is interrupted when the startle (irkil-) reflex is activated. Therefore, words or phrases denoting activities in the progressive aspect can be accepted as indirect collocates of "dalgınlık" (engrossment or absence). This can be a colligational feature of *irkil-* as well as a collocational one if certain verbs tend to be suddenly/abruptly interrupted by *irkil-* inducing stimuli. Then the primary collocates from the domain of engrossment/absence/thoughtfulness are lexical items or phrases that directly denote it in Turkish such as *dalgın, dalgınca, dalgın dalgın, dalmışken, daldığı, dalmışım, dalmışlardı, dalmak, dalmış olan, dalgınlığından sıyrılarak, kapıldım, düşünceli düşünceli, tembel tembel, kendinden geçmişti*. On the other hand, the secondary or indirect collocates which suggest one's engrossment or absence refer to

certain activities, often in progressive aspect (yürü-yor-du – was walking etc.) and can be accepted as a colligational feature of *irkil-* rather than a collocate. They are indirectly suggestive of the agent's engrossment/absence.

İrkil- collocates with words or phrases that express the source of the startle reaction. The most common instigator is a "sudden loud sound" which suggests the first appraisal criterion for fear – *novelty* check for the stimulus (Scherer, 1984:306). However, for the startle (irkil-) reflex to occur, the sufficient condition is "suddenness" rather than "loudness of a sound," yet "ses" (sound, voice, noise) is still the most frequent stimulus (about one third of the cases in the concordance). Furthermore, the experiencer's sudden/unexpected perception of an object, scene, person, thought or touch all stimulate the startle reflex. Then the collocates expressing the source of *irkil-* can be 1) *auditory*, 2) *visual*, 3) *tactile* or 4) *cognitive* motives, all of which must be sudden. Hence, we are highly likely to come across *birden, aniden, ansızın* (suddenly, abruptly, all at once) usually before the node with *birden* being the most recurrent.

(22) Orhan, bu düşüncelerle ağır ağır yürüken *ansızın* tanıdık bir sesle **irkildi**. (OA16B2A-1253) (While Orhan was walking slowly preoccupied with these thoughts, he *suddenly got startled* by a familiar voice)

(23) Laika "kaya bahçesi" sözünü duyunca *birden* **irkildi**. (IA16B2A-1499) (When she heard the words "stone garden", Laika **was startled** *all at once/suddenly*)

"*Ses*" (sound/voice/noise) is the most frequent collocate from the *AUDITORY* domain because it is a general word for acoustic stimuli; other auditory items include *patırtı* (clatter), *çalma* (ringing), *gürleme* (roaring), *gürültü* (noise), *çatırdama* (crunch), *patlama* (explosion), *zil* (bell), *siren* (siren), *çığlık* (cry, scream), *kahkaha* (horse laugh), *seslenme* (shouting), *homurtu* (grunting). It must be borne in mind that it is not the intrinsic property of these sound sources that evokes the startle reaction but that they occur suddenly or unexpectedly. Even a sudden whisper or a simple low noise like "tıp" in Turkish can evoke the *irkil-* reflex. A phone starting to ring often occurs in the pre-node lexical environment as a sudden breaker of silence or stillness.

(24) İşte tam aklından bunları geçirirken *birden* masanın üzerindeki *telefonun çalmasıyla* **irkildi**. (SA16B3A-1144) (He was just thinking about these when he **got startled** by the *phone* on the table *ringing suddenly*)

(25) Şimdiye dek hiç duymadığı bir kuş *sesiyle* **irkildi** genç yazar. (OI22E1B-2908) (The young writer **got startled** by a bird's *sound* that he had never heard before)

(26) Tam gölgesine girmiştim ki yukarılardan gelen bir *çığlıkla* **irkildim**. (QA16B3A-3326) (I had hardly entered its shade when I **got startled** by a *scream* coming from above)

(27) Yanağından süzülüp kucağındaki kitabın üstüne düşen damladan çıkan *"tıp" sesiyle* **irkildi**. (OA16B4A-0777) (She **was startled** by the *sound "tıp"* produced by the teardrop running down her face falling on the book in her lap) (sudden, very low simple sound)

Our second kind of startle trigger is from *VISUAL* domain. A person or an object appearing suddenly evokes the startle reflex. The pleasantness or unpleasantness of the suddenly emerging person or object determines whether the ensuing emotion will be fear or surprise synonyms. Whether one feels fear, surprise, astonishment or anger after realising the nature of the stimulus can be understood when we look at post-node words or phrases in irkil's co-text. Subsequent affective states will be mentioned while we discuss post-node collocates. Again abruptness, suddenness, unexpectedness are crucial components of the scene. The usual schema is that the experiencer is busy, engrossed, absent (psychologically) or thoughtful, or there might be silence. Something or someone abruptly appears in the experiencer's visual scope, which startles them. An outsider's intrusion into the experiencer's visual field which is otherwise empty or occupied with things that they have long been aware of evokes stronger reactions of *irkil-*. Collocates of *irkil-* which denote visual triggers include:

(28) *Birden*, arkasında simsiyah parıldayan gözleri *görünce* **irkildi.**] (JA09B2A-0042). (When he *suddenly saw* the jet-black glaring eyes behind him, he **was startled**) (fear expected to ensue startle)

(29) …ufka bir dev silueti gibi yaslanan bir adanın muhteşem *görüntüsüyle* **irkildiler**. (KA16B1A-0722). (They **got startled** by the *magnificent appearance* of an island leaning against the horizon like a silhouette of a giant) (surprise / astonishment expected to ensue startle)

(30) *...ölünün solgun yüzü çıktı ortaya*. Dede ile Süha aynı anda **irkildiler**. (GA16B4A-0048) (…*the pale face of the corpse/dead came into sight*. Grandpa and Süha **got startled** at the same time) (fear expected to ensue startle)

Words and phrases that *irkil-* collocates with from the visual domain are naturally various inflected forms of the verbs *gör-* (see), *bak-* (look), and *göz at-* (have a look). Some verb phrases that indirectly express visual triggers are: *gözlerine rastla-* (meet one's eyes), *karşısına dikil-/ çık-* (appear just before one's eyes), *önünde belir-* (emerge/come into sight before one). There are also nouns expressing (sudden) visual stimuli like *siluet* (silhouette), *uyarı ışıkları* (warning lights), and *patlayan flaşlar* (popping flashes).

The third kind of startle (irkil-) trigger is sudden *TACTILE* contacts. Then we should expect to see collocates from this domain in *irkil-*'s lexical environment. In some contexts, a simple sudden touch of the experiencer suffices to evoke the startle reflex, while in others stronger unexpected touches or even strikes combine with pain to evoke stronger startle reactions. Sudden approach, sudden change of stimuli and pain are among fear triggers (Izard, 1977:358). As soon as the experiencer gets startled, the *momentary* uncertainty or unpredictability of forthcoming events that might follow the sudden physical contact activates some kind of fear or anxious probing, pending the appraisal of the nature of the trigger as threatening or surprising. The experiencer will immediately check and understand whether the physical contact is conducive to fear or only a simple touch.

(31) …karşıdan gelen birinin omzuna indirdiği *yumrukla* **irkildi**. (TA16B3A-3348) (He **was startled** with *the punch* that someone coming from the opposite direction delivered to his shoulder*)* (likely to evoke fear)

(32) Kızının *omzunu sarsmasıyla* **irkildi**. (FA16B2A-0872) (She **was startled** by her daughter *shaking her shoulder*) (full-fledged fear is unlikely to ensue)

(33) …kapıcının *sırtımı sıvazlamasıyla* **irkildim**. (NA16B2A-0742) (I **was startled** by the doorman's giving *me a pat on the back*) (full-fledged fear is unlikely to ensue)

If the physical contact gives pain, such as when a needle / a pin pricks the experiencer, or the *irkil-* reaction is described as such, *irkil-* may collocate with words or phrases which suggest that the fear mechanism is activated as soon as the startle reflex occurs, or the reflex and the fear felt can be contiguous enough to say they are simultaneous. Izard (1977:171) states that drive states like pain can instigate fear, adding that "[f]or most people acute and unexpected pain is likely to elicit fear, or startle followed by fear." The startle reaction evoked by sudden pain is usually expressed by *flinch* in English.

(34) Parmaklarının arasında küçülen sigaranın *elini yakmasıyla* **irkildi**. (GA16B3A-1009) (He **flinched** / **got startled** when the cigarette getting smaller between his fingers *burnt his hand*) (no further appraisals necessary about the nature of the source)

(35) ...bir kadın *ensesine* aniden *inen şaplakla* **irkildi**. (UE36E1B-3296) (a woman **got startled/flinched** with a *slap* suddenly *delivered to her neck*) (further appraisal required to understand the threat)

(36) "Otuzundan sonra gelinlik giymek çok saçma" diye düşündü. Bir *iğne battı*, **irkildi**. (HA16B1A-1665) (It is stupid to put on a bridal dress after the age of 30," she thought. *A pin pricked her* and she **flinched** / **got startled**) (no further appraisals necessary about the nature of the source)

(37) …bulunduğu ortama alışmaya çalışıyordu. Midesine *saplanan sancıyla* **irkildi**. (SA16B4A-3367) (…he was trying to get used to the environment. He **was startled** by a *pang/pain striking* his stomach) (some further worrisome appraisal may follow to find out the source of the pain)

In these examples' Turkish is understood to express with *irkil-* what English prefers *flinch* or *wince* for. The collocates of *irkil-* from the tactile domain include *sars-* (shake), *sıvazla-* (give a pat), *yumruk vur (yumrukla-)* (punch), *iğne bat-* (of a pin, to prick), *şaplak/tokat at-* (deliver a slap), *sancı saplan-* (pang striking) and *zıpkın ye-* (be struck with a harpoon). *Tokat yemiş gibi* (as if slapped), *iğne batmış gibi* (as if pricked with a pin) and *zıpkın yemiş gibi* (as if struck with a harpoon) are used to describe the intensity of the *irkil-* (startle) reaction.

The sensorimotor reaction of *irkil-* can sometimes result from *COGNITIVE* stimuli. A sudden thought that occurs to us, if it portends threat/trouble for us or if it makes us curious, may evoke the startle reaction. The statements that express mental state usually given in quotation marks often include the colligates "**(ya … -sA/-(y)sA)**" (what if…),

modal adverbs ***acaba*** (roughly "I wonder if") and ***yoksa,*** (roughly "then"). These colligates directly signal that the utterance expressing sudden thoughts has elements of *worry* or *curiosity* for the experiencer. However, the linguistically decoded content of the thought in the concordance is lexically various because what is worrisome or curious depends on the experiencer's personality or current goals. As a result, we cannot list a certain list of repeating collocates, but we could say that thoughts suddenly inducing worry/curiosity have various lexical items expressing unpleasant potentials like trouble or difficulty. Here again the indispensable factor inducing the *irkil-* reaction – suddenness or unexpectedness – should be borne in mind. In addition to the examples given in the colligation section above, the following can also be considered:

(38) Birden **irkildi**. **Yoksa** Hayali'nin dükkana gelişi, olup biten her şey tezgah mıydı? (TA16B4A-0090) (She suddenly **got startled**. Was it a plot **then** that Hayali came to the shop, and what was all that happened?)

(39) Evlerinin kapısına geldiğinde içinde bir endişe duydu. "**Acaba** ben o şifreyi çözebilecek miyim?" Birden **irkildi**. (TI42E1B-2942) (When she reached the door of her house, she felt anxious. "**I wonder   if** I will ever be able to decipher that code?")

(40) Bir süre sonra sokakta yürümeye korkacağım, *düşüncesiyle* **irkildi**. (QA16B4A-0152) (He **was startled** by the *thought* that he would soon be afraid to walk in the street)

On the right side of the node *irkil-*, we see post-reflex behaviour or attitude of the experiencer. The startle (irkil-) reflex makes the experiencer *hypervigilant* to scan the environment to understand what is happening, and the true nature of the source of the *irkil*. However short the intervening time is between the startle reaction and understanding its potential for fear or surprise / astonishment, it seems to be spent with *curious* and *inquisitive appraisals*. If the trigger is a very loud sound or sudden touch from behind which portends fear, we see post- startle anxious curiosity about how pertinent it is to the experiencer. Non-reflex reactions such as "curiosity, surprise, attentiveness and "the orienting reaction" (Lazarus, 1991:54) will follow. The results of such appraisals can prove to be "harmful, threatening or beneficial" (ibid:54). If the trigger of the startle is understood to be non-threatening, the experiencer's anxious curiosity ends in relief, which corresponds to what Ortony et al. (1988:110) describe as *relief* – "pleased about the disconfirmation of the prospect of an undesirable event." If the trigger which rings the doorbell of the fear module with the initial reaction of *irkil-* is understood to be really dangerous or threatening, then we feel "fear confirmed" – "displeased about the confirmation of the prospect of an undesirable event" (Ortony et al., 1988:110). In terms of *irkil*'s collocation selections, universal facts about the whole startle/*irkil-* event schema are important for our lexical profiling efforts because the facts about post-reflex feelings, action tendencies, appraisal patterns etc. *should naturally dictate a lexical environment with certain collocates expressing them.*

Below are sample concordance lines that display post-startle scanning of one's surrounding as part of automatic orienting reaction. The trigger of irkil- is probably a sound which can come from any direction, so that the source needs to be unravelled:

(41) Koşarken sağ tarafından gelen *sesle* **irkildi**. "Allah kahretsin." *O yöne döndüğünde …* (RA16B3A-0257) (While running he **was startled** by a noise coming from his right. "God damn it" When he *turned in that direction…*)

(42) Kadın korkuyla **irkilip** *etrafına bakındı*. Bebekle kendisinden başka kimse yoktu. (PI42E1B-2938) (The lady **was startled** in fear and *looked around*. There was nobody other than the baby and her)

Some other collocates that express scanning the surrounding or orientation towards the source include *dön-* (turn), *kafasını/ başını çevir-* (turn one's head), *bakışlarını dolaştır-* (direct one's look), *etrafını incele-* (examine the surrounding), *o yöne dön-* (turn in the direction of), *başını kaldır-* (look up), *bak-* (look) and *bakın-* (look around). Indirect scanning phrases include *pencereye koş-* (rush to the window), *dışarı çık-* (go out to look), *fırlayıp sokağa çık-* (rush out into the street to see what's happening) etc.

The following are examples for lexical or phrasal collocates that express post-startle *anxious curiosity* or *fear anticipation*. Fear may be confirmed or disconfirmed.

(43) Apartmanın balkonunda oturan yaşlı aile, sert fren sesiyle **irkiliyor**. Çaresiz ihtiyarlar, "*Bakalım ne olacak?*" diye bekliyorlar. (MA16B1A-0689) (The elderly couple sitting in the balcony of the apartment **get startled** by a driver's standing on the brakes. The poor elderly couple wonder "*What will happen next?*)

(44) Duasını bitirmişti ki gelinin baba diyen sesiyle **irkildi**. Yataktan sıçrayıverdi. *–Ne var ne oldu kızım?* (KA16B2A-0784) (He had just finished his praying when he was startled by his daughter-in-law's calling 'father'. He jumped out of the bed. *"What's the matter, what happened, daughter?"*)

(45) Dışarıdan gelen ikinci *patlamayla* bir kez daha **irkildi**. Öylece *donup kaldı*. Bir süre *devamını bekledi*. (RA16B3A-0257) (He **was startled** again by the second *explosion* outside. He *was just frozen*. He *expected other explosions*)

It is misleading to think of startle (*irkil-*) as always connoting worry or fear. It can also be activated by something surprising or astonishing. As Izard (1977:280) says, "…surprise and fear have similar or overlapping components at the neurophysiological level." These are manifested in *irkil's* lexical environment by words or phrases expressing *curiosity, interest* or *inquisitiveness*. The trigger tends to be pleasant, impressive or awesome. The experiencer gets startled by a sudden appearance, a sudden occurrence or utterance of something surprising or astonishing.

(46) ...sekerek kapıya gitti, kapının aralığından içeri baktı. Gördüğü *güzel yüzle* **irkildi**. Yataktaki bu kız Tarık beyin karısı olamayacak kadar gençti. *Kızı olmalıydı* yada *yeğeni* gibi bir şey. (KA16B2A-0879) (He tiptoed to the door and looked through the door ajar. He **was startled** by the *beautiful face* he saw. The girl in the bed was too young to be Mr Tarık's wife. She *must have been his daughter* or someone like his niece) (unexpected perception of beauty + startle + astonishment + interest)

(47) …dağınık saçların o örtünün altında nasıl gizlendiğini düşünürken *güzelliğiyle* **irkildim**. *Büyülenmiş* bir durumda neler olabileceğine bakıyordum. (PA16B3A- 0686) (…thinking how her unkempt hair was hidden under the cover, I **was startled** by *her beauty*. I was enchanted and curious about what would happen) (unexpected perception of beauty + startle + astonishment + interest)

(48) Annesi başını gökyüzüne kaldırıp, uzun uzun içini çekti. *"Babanla…"* Aylin **irkildi**. Annesi pek babasından söz etmezdi. *Soluğunu tutarak bekledi*. (PA16B2A-0748) (Her mother looked up into the sky and sighed deeply (and said). *"With your father..."* Aylin **was startled**. (Because) Her mother did not use to speak of her father very often. She *waited holding her breath*) (Unexpected utterance + startle + curiosity)

(49) Birdenbire duyduğum bu ses bir kadına ait. Sesi duyunca *şaşkınlıkla* **irkiliyorum**. *Yoksa* yanlış mı duydum? *Pür dikkat sesin yeniden gelmesini bekliyorum*. (FI09C2A-0715) (That voice I heard all of a sudden probably belongs to a woman. Hearing the voice, I **get startled** *in surprise*. May I have been mistaken about it? I *wait in all ears* (highly attentively) for the voice to come again) (sudden unidentified voice + startle + curiosity/interest)

Especially when the surprising or astonishing trigger is related to humans, collocates / colligates expressing *inquisitiveness* about the trigger are displayed in the form of inner talk or explicitly questioning the person whose surprising words or actions evoke the startle reaction *irkil-*. Naturally we notice plenty of co-occurrences of question words with *irkil-*.

(50) …bir türlü çıkaramıyordum ama bir ara Türkçe "bronz" kelimesini duyunca **irkildim**. *"Ne* konuşuyorlar?" diye Mustafa'ya *sordum*. (CG22C2A-0424) (…I couldn't understand at all but I **was startled** to hear the Turkish word "bronz." *"What* are they talking about?" I *asked* Mustafa) (startle + inquisitiveness)

(51) Mustafa söyledi. İTÜ'lü bir arkadaş. Paşa bir anda **irkildi**. –Aha, *hangi* Mustafa bu lan? Galatasaray mezunu filan olmasın? (TA16B3A-0450) (Mustafa said that. A friend from İTU (University Name). Paşa suddenly **got starled**. – Aha, *which* Mustafa is that? Can he be a graduate of Galatasaray University by any chance?) (startle + inquisitiveness)

(52) …kesik kesik bir hıçkırık sesiyle **irkildi**. Ağlayan Şebnem'di. *Niye* ağlıyordu acaba? (RA16B2A-0840) (…she was startled by someone sobbing intermittently. It was Şebnem that was crying. *Why* was she crying, who knows?) (startle + inner questions)

In such cases we observe collocates / colligates of question words *ne (what), neler (what on earth), ne var (what's the matter), niçin (why), neden (why), hangi (which), ne zaman (when)*, *nerede* (where).

There is a special case of the startle schema where we see *irkil-* (startle) collocates with *korkuyla* (in fear, 12 times), and *dehşetle* (in horror, 17 times) at –N1 position. In such cases we do not observe the typical tendency of anxious and vigilant detection until realising whether the trigger is threatening or not. Fear and startle are simultaneous startle

is not a pre-emotion then if the sudden trigger is clearly and readily frightening. These collocates also disambiguate sentences with *irkil-* about whether the reflex is to be associated with fear or surprise. *İrkil-* is readily associated with fear or worry rather than surprise. However, in some cases *dehşetle* simply suggests the strength of the startle reflex.

(53) Ateşli başıma elini koyuyor. *Dehşetle* **irkiliyor**. Sonra dereceyle ateşimi ölçüyor. Telaşı daha da artıyor. (EA16B2A-1205) (He puts his hand on my hot forehead. He **gets startled** *in horror*. Then he takes my temperature. He becomes even more worried)

(54) Cesur olmaya çalışarak perdeyi araladılar. Bir anda, *korkuyla* **irkilerek** gerilediler. Net seçilemiyordu, ama bahçedeki yaşlı çınar ağacının üzerindeki, dev bir kuş vardı sanki! QI22E1C-2910) (Trying to pluck up their courage, they drew the curtains a little open. Suddenly, they **got startled** *in fear* and stepped back. It was not clear, but there seemed to be a huge bird on the old oak tree in the yard)

Table 4. Collocational Behaviour of *İrkil-* (*startle reaction*) on the Basis of Its Event Schema and Semantic Domains

PART OF THE SCHEMAOF *İRKİL-*	**Pre-Startle Situation**	**Triggers by Domain**	**Post-Startle Actions or Feelings**	**Others**
SEMANTIC DOMAIN	Absence, Engrossment, Thoughtfulness, Silence	Auditory Visual Tactile Cognitive	Hypervigilance Visual Scanning Orienting Reaction Curiosity Interest Inquisitiveness	Fear Horror

According to the table, collocates from ***pre-startle situation*** are from the semantic domains of Absence, Engrossment, Thoughtfulness and Silence. Typical collocates in the concordance are *dalgın, dalgınca, dalgın dalgın* [absent(ly), thoughful(ly)], *dalgınlığından sıyrılarak* (leaving one's thoughtfulness aside), *dalmışken, dalmışım dalmışlardı, dalmış olan* (various forms of the verb *dal-* which means engrossment or absorption in some activity/thought), *kapıldım* (get lost, absent in something), *düşünceli düşünceli* (thoughtfully), *tembel tembel* (lazily), *kendinden geç-* (be entranced).

Collocates from ***triggers*** of the startle reaction are from the semantic domains of: 1) ***Auditory domain*** with collocates like *ses* (sound, voice, noise), *patırtı* (clatter), *çalma* (ringing), *gürleme* (roaring), *gürültü* (noise), *çatırdama* (crunch), *patlama* (explosion), *zil* (bell), *siren* (siren), *çığlık* (cry, scream), *kahkaha* (horse laugh), *seslenme* (shouting), *homurtu* (grunting); 2) ***Visual domain*** with collocates such as *gör-* (see), *bak-* (look), and *göz at-* (have a look); indirect verb phrases expressing visual events like *gözlerine rastla-* (meet one's eyes), *karşısına dikil-/ çık-* (appear just before one's eyes), *önünde belir-* (emerge/come into sight before one); and nouns expressing (sudden) visual stimuli like *siluet* (silhouette), *uyarı ışıkları* (warning lights), and *patlayan flaşlar* (popping flashes); 3) ***Tactile domain*** with collocates like *sars-* (shake), *sıvazla-* (give a pat), *yumruk vur (yumrukla-)* (punch), *iğne bat-* (of a pin, to prick), *şaplak/tokat* at- (deliver a slap), *sancı saplan-* (pang striking). *Tokat yemiş gibi* (as if slapped), *iğne batmış gibi* (as if picked with

a pin) and *zıpkın yemiş gibi* (as if struck with a harpoon) are used to describe the intensity of the startle reflex; and 4) ***Cognitive domain*** involves diversely worded thoughts whose significance depends on the emoter's personality or current goal. In such cases, *irkil-* typically colligates with *acaba, yoksa, ya…-sa/-(y)sa.* See the colligation analysis above.

   Post-Startle actions or feelings in the event schema of *irkil-* dictate a lexical environment where we often see collocates from the semantic domains of *hypervigilance, visual scanning* and *orienting reaction*. The typical collocates are *dön-* (turn), *kafasını/ başını çevir-* (turn one's head), *bakışlarını dolaştır-* (direct one's look), *etrafını incele-* (examine the surrounding), *o yöne dön-* (turn in the direction of), *başını kaldır-* (look up), *bak-* (look) and *bakın-* (look around). Phrases of motion to scan include *pencereye koş-* (rush to the window), *dışarı çık-* (go out to look), *fırlayıp sokağa çık-* (rush out into the street to see what's happening) etc. ***Post-Startle actions or feelings*** also involve the selection of collocates from the semantic domains of *curiosity, interest* and *inquisitiveness* with typical collocates like *donup kalma* (frozen astonishment), *büyülenmiş* (enchanted), *soluğunu tut-* (hold one's breath), *seyret-* (watch), *şaşır-* (get surprised), *pür dikkat* (in all ears). We see *evaluative phrases* like *güzel* (beautiful), muhteşem (magnificent, pre-node). Also, we see *question words* to satisfy curiosity such as *ne (what), neler (what on earth), ne var (what's the matter), niçin (why), neden (why), hangi (which), ne zaman (when)*, *nerede* (where).

   Finally***, other*** collocates include *korkuyla* (in fear), *dehşetle* (in horror). They suggest either that fear or horror is a trigger of *irkil-* or the intensity of the startle reaction.

Semantic Preference of *İrkil-*

   From the concordance analyses having been made so far about *irkil*'s collocational and colligational patterns, it can be concluded that the universal startle reflex, expressed by the Turkish verb *irkil-,* has an event schema which manifests itself in a linguistic schema to be filled by certain paradigmatic and syntagmatic choices. Like many words, *irkil-* has a semantic frame which is a collection of facts that specify "characteristic features, attributes, and functions of a denotatum [*irkil-*, here], and its characteristic interactions with things necessarily or typically associated with it" (Alan, 2001: 251).

   As for the semantic preferences of *irkil-*, the corpus TNC revealed a very clear picture, demonstrating that *irkil-* (the startle reflex) has a highly schematic nature. The schema is made up of by what triggers the startle reflex, how the experiencer responds to instigators, cognitive processes involved in evaluating the stimuli, collecting oneself, curious scanning of one's environment, hypervigilance and the ensuing emotion or feeling after the stimulus has been appraised. Thus the whole event of the startle reflex is not just a sudden body movement as a reaction to a sudden stimulus. The following figure both shows the schema of an *irkil-* event and points to the semantic domains for which this lexical item has semantic preferences. The prototypical *irkil-* schema especially for a sudden acoustic trigger which takes a while to unravel is as follows:
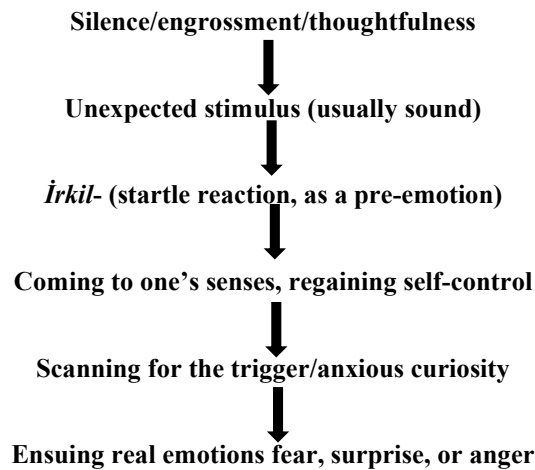
Silence/engrossment/thoughtfulness

↓

Unexpected stimulus (usually sound)

↓

İrkil- **(startle reaction, as a pre-emotion)**

↓

Coming to one's senses, regaining self-control

↓

Scanning for the trigger/anxious curiosity

↓

Ensuing real emotions fear, surprise, or anger

Figure 1. The Event Schema of *İrkil-* and Semantic Domains Dictated by the Schema in Its Lexical Environment

This schema quite naturally dictates a lexical environment in which each step in the schema is expressed by lexical or phrasal collocates from the appropriate semantic domains. Then *irkil-* has semantic preferences for domains of 1) THOUGHTFULNESS, (mental) absence/engrossment, 2) SUDDENNESS, abruptness, unexpectedness, 3) ACOUSTIC, VISUAL, TACTILE and COGNITIVE STIMULI, 4) ORIENTATION, HYPERVIGILANCE and 5) (ANXIOUS) CURIOSITY, surprise, interest.

Semantic Prosody of *İrkil-*

Unless evoked by a stimulus already portending fear or immediately accompanied by fear, *irkil-* has a neutral prosody because the trigger could be intrinsically bad or good and the resultant affective state might be fear/worry or astonishment/amazement. On the other hand, our focus here will be on this word's pragmatic function; that is, the reason why *irkil-* is chosen rather than other fear type tokens (i.e. korkmak, tırsmak, ürkmek, ürpermek, kaygılanmak, dehşete düşmek etc). What motivates the language user to use *irkil-* in his / her utterances. That is what Sinclair (1994/2004; 2000) and Stubbs (2002) regard as *discourse* prosody.

In a typical case when a sudden loud sound is heard, the individual gets startled as a first reaction to that sudden stimulus. If the suddenly heard sound needs unravelling and careful appraisals before an emotion is actually evoked, then *irkil-* (startle) is like knocking the door of the fear or surprise module. Because appraisals are made by milliseconds, it is still too early for a full-fledged fear for example. The experiencer becomes highly vigilant and scans the environment for the appraisal of the sound in somewhat anxious curiosity. If the stimulus is found to be threatening, the door to the fear module opens and the person begins to feel certain intensities of fear depending on the gravity of the situation. If the stimulus is identified as non-threatening, the worrisome anticipation turns into relief and the door to the fear mechanism remains closed; if it is already ajar with the effect of fear anticipation, it closes. Then surprise synonyms like interest, curiosity, astonishment or amazement will ensue.

For visual and tactile stimuli, the experiencer who suddenly gets startled needs a very short time to understand the valence of the stimulus. Therefore, fear or surprise/astonishment is evoked without a long-lasting vigilant scanning. In such contexts, the discursive function of the use of *irkil-* is *sudden awareness of fear or surprise/astonishment* stimuli. Therefore, while default prosody of *irkil-* is *neutral,* the ensuing emotion astonishment or amazement with positive connotations or fear with negative connotations can spray *positive* or *negative* aura on this verb.

For unfamiliar and sudden acoustic stimulus, grasping the valence of the stimulus as to whether it is threatening or not lasts longer compared to visual tactile stimuli. Then the function of *irkil-* is *becoming ready for anxious hypervigilance.* In terms of bipolar assignment of a prosody, *irkil-* is neither negative nor positive, but neutral. As for its discourse function, *irkil-* suggests a discourse prosody of *entry into anxious hypervigilance* (sudden stimulus + irkil- reaction + anxious scanning). The resultant emotion may have positive or negative prosodies.

If the sound *already portends fear* like a bomb, the startle reaction and fear are temporally adjacent or even concurrent. Then the discourse function of *irkil-* is not only expressing the startle reflex but also the fear felt simultaneously or just after it. (sudden clear fear stimulus + irkil- reaction + fear). In such contexts, *irkil-* has a *negative* prosody and the word can be used metonymically for fear.

For cognitive stimuli, a sudden thought or idea which the experiencer thinks to be relevant to their goal pursuit crosses their mind. However, a sudden unpleasant idea of a possible threat for one's present or future situation is likely to evoke a less intense *irkil-* reaction as compared to a reaction to a sudden loud sound or a painful touch. *İrkil-* colligates with modal adverbs *yoksa* (marking negative expectation) and *acaba* (I wonder if…). These sentence-initial words spray the sentence or utterance under their effect with anxiety. We have an *unfavourable* prosody for *irkil-*. Then it could be said that the language user selects it as indicator of a person's entry into a state or worry. Collocates and colligates are co-selected under a frame in our collective mental lexicon – *sudden worrisome thought+physically less intense irkil- reaction+entry into a state of worry*

In conclusion, whereas *irkil-* is as simple as a first reaction to a sudden stimulus – usually acoustic, the semantic frame of the *irkil-* event is rather complicated. *İrkil-* is not an emotion, but a pre-emotion reaction which clears the neural channels to prepare a person for a hypervigilant assessment of the nature of the stimulus only after which fear, surprise, astonishment, anger or embarrassment are evoked. As Lazarus (1991:54) states, "the startle (irkil-) is *neutral* emotionally until the personal significance of the eliciting stimulus has been appraised." He also states that "startle does not involve emotion without added meaning." In this part we have demonstrated these "added" meanings oozing from *irkil-*.

The Placement *of İrkil-* in Cognitive Appraisal Pattern for Fear

It may seem that *irkil-* can be used metonymically for *kork-* (fear). However, this must be limited to contexts where a sudden stimulus already portends fear like a bomb explosion. In such cases this startle reaction occurs because a person fears or the reaction and fear are concurrent. Therefore, in certain contexts, due to the metonymic principle for

emotions – THE PHYSIOLOGICAL EFFECTS OF AN EMOTION (FEAR) STAND FOR THE EMOTION (FEAR) (Kövecses, 1990:69), *irkil-* can be considered to point to the emotion verb kork- (fear).

However, *irkil-* (the startle reflex) is not an emotion but an initial reaction to a sudden stimulus, therefore, Scherer's (2001) table of cognitive appraisal patterns for emotions do not include a separate colon for *irkil-*. Nevertheless, while discussing the *novelty* check/criterion for any emotion, Scherer (1984:306) states that "a startle reaction to a sudden loud noise may be the immediate result of such a basic check." Then *irkil-* often suggests only a (startle) reaction that takes place as part of the cognitive appraisal check of *novelty* for *fear* or surprise, preceding these emotional states. Therefore, in the second (*irkil-*) column of the table below, all the other stimulus evaluation checks after the novelty check is irrelevant for *irkil-* because we do not know what emotion or whether any emotion will follow the reflex. *İrkil-* just licences *eventual* reading –an event that takes place in time, but *not* an *emotive state* that obtains in time per se.

Table 5. Predicted Cognitive Appraisal Pattern of *İrkil-* in Comparison with *Fear* (*kork-*)

Stimulus Evaluation Checks (SECs)	FEAR	İRKİL- (startle)	
RELEVANCE			İRKİL
Novelty			
Suddenness	high	**very high**	
Familiarity	low	**open**	
Predictability	low	low	
Intrinsic pleasantness	low	**open**	
Goal/need relevance	high	**open**	
IMPLICATIONS			ensuing emotion
Cause: agent	other/nature	other/nat.	
Cause: motive	open[3]	open	
Outcome probability	high	**open**	
Discrepancy from expectation	dissonant	**open**	
Conduciveness	obstruct	**open**	
Urgency	very high	**open**	
COPING POTENTIAL			
Control		open	
Power	open	**open**	
Adjustment	very low	**open**	
	low		
NORMATIVE SIGNIFICANCE			
External		open	
Internal	open	open	
	open		

---

[3] The evaluation "open" means that different appraisal results are compatible with the emotion in terms of that stimulus check or the check is irrelevant for that emotion compared to other emotions for which the same criteria of cognitive appraisal checks above are applied.

From the table it is clear how cognitive appraisal patterns for emotions apply to *irkil-* (startle) reaction. As can be seen above, *irkil-* is only relevant to the appraisal of *novelty* sub-checks. For example the only and most pertinent factor is *suddenness*. It is the necessary condition for the reflex to occur. While *familiarity* is *low* for fear, it is open for *irkil-* because as we discussed in this section, a *familiar* stimulus can evoke *irkil-* as long as it is sudden. For example, we are habituated to the ringing of a telephone or a doorbell – we have "stored schemata that match the input" (Ellsworth and Scherer, 2003:576). However, if we are engrossed in an activity or psychologically absent or thoughtful, the ringing of a phone or a doorbell is "sudden" and evokes the *irkil-* reflex. While *intrinsic pleasantness* of the stimulus is *low* for *fear*, it is *open* for *irkil-* because we have examples from the corpus TNC above that reveal that one can *irkil-* (get startled by) with a suddenly appearing beauty. While *goal/need relevance* is *high* for *fear*, it is *open* for *irkil-* because *irkil-* can occur when we suddenly perceive something surprising or astonishing. Both pleasant and unpleasant triggers are involved with differing results for the experiencer.

To sum up, corpus-driven analyses should be made so as to identify context-dependent semantic and pragmatic differences of seemingly synonymous lexical items (Ersoylu, 2011:255). As one digs through the corpus for the fear type words in our doctoral dissertation (*kork-, tırs-, ürk-, irkil-* and *ürper-*), presented as synonymous in some Turkish dictionaries, it is highly likely that one will come across many idiosyncratic facts about each item. This corpus-driven article has unearthed the profile of the lexical item *irkil-* in terms of its semantic, psychological, and cognitive entrenchment in Turkish speakers' mental lexicons.

Conclusion

As a corpus-driven study about lexical profiling of one of the Turkish fear-related verb *irkil-*, the study revealed from corpus (the TNC) data the schematic nature of the irkil- (startle) event. Stubbs' (2002) *model of extended lexical units*, was employed which involves "successive analysis of collocations, colligations, semantic preferences and discourse (semantic) prosodies" (McEnery and Hardie, 2012:132). As the Cognitive Commitment requires in cognitive linguistics, the study on the lexical unit *irkil-* combines cognitive, psychological, physiological and behavioural aspects of the startle event in the analyses of the concordance data. As emotions emerge as a result of cognitive appraisal of a stimulus, the identification of the lexical profiling of *irkil-* also adequately enabled us to place it the cognitive appraisal pattern of *korku* (fear) determined by Scherer (2001: 115).

İrkil-, the startle reflex, is evoked in response to sudden, novel stimuli. It was found that *irkil-* has a clearly delineated schematic event nature which the corpus (the TNC) successfully unearthed. As required by its schematic nature, *irkil-* occurs when the experiencer is thoughtful/absent, engrossed in another activity or when there is silence. Then a stimulus, usually a sound, suddenly evokes this 'what is it?" reaction of the body (Lazarus, 1991: 54). The experiencer becomes hypervigilant, scanning the environment for the (nature of the) source. Then anxious curiosity ensues. This schematic nature of *irkil-* dictates a lexical environment in which it collocates with certain words or phrases expressing absence/thoughtfulness, engrossment or silence [*dalgın, dalgınca* (absently/thoughtfully), *düşünceli düşünceli* (in deep thoughts). *İrkil-* was found to

collocate with words or phrases about four groups of triggers –auditory, visual, tactile and cognitive domains. On the right of the node *irkil-*, we see collocates expressing the experiencer's post-startle behaviour such as hypervigilance, visual scanning and orienting reaction. *İrkil-* is not truly a word that describes an emotion. Rather, it is the experiencer's first bodily reaction to a sudden novel stimulus. Therefore, it is called a pre-emotion (Lazarus, 1991). *İrkil-* functions "to alert the person to a condition whose personal significance is hinted at but is not yet evident, and which will be subsequently appraised as irrelevant, harmful, threatening, or beneficial" (Lazarus, 1991:54). Hence, it is also possible to observe collocates in its post-node lexical environment concerning how the reaction ends up – surprise, astonishment or fear. The whole schematic nature of the *irkil-* (startle) event dictates a lexical environment in which *irkil-* is semantically primed to occur with certain words.

It is needless to say that the event schema of *irkil-*, which is very richly complex, causes the word to have specific semantic preferences for its collocates. Pre-startle situation of the individual characterised by engrossment/thoughtfulness/silence; triggers classified as auditory, tactile, visual and cognitive; and the experiencer's post-startle action tendency characterised by anxious or curious scanning (hypervigilance) reflect the semantic domains to prefer collocates from.

As for discourse prosody of *irkil-*, default prosody value is neutral, but any negativity or positivity depends on whether the startle reaction is followed by fear or amazement/astonishment/surprise, or whether the stimulus already portends fear. When the trigger is cognitive (marked by negative modal adverbs *yoksa* or *acaba*) *irkil-* has an unpleasant prosody.

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