SEMANTICS OF TEMPORAL REFERENCE IN URDU AND ENGLISH SYNTAX

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Candidate of **Doctor of Philosophy** at the National University of Modern Languages do hereby declare that the thesis **Semantics of Temporal Reference in Urdu and English Syntax** submitted by me in partial fulfillment of PhD degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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ABSTRACT

Title: Semantics of Temporal Reference in Urdu and English Syntax

This dissertation aims to present a cross linguistic analysis of Urdu and English aspectual systems. Aspect is a crucial yet complex facet of temporal reference. *Temporal reference* corresponds to the means employed by languages to associate situations with time. Human beings cannot express situations linguistically without situating them in time. Languages encode temporal reference through tense, aspect and temporal adverbials. Out of these three, this study focuses on aspectual reference as it allows speakers to express situations according to their orientation and perspective, and thus gains significance in terms of its semantic contribution. Aspect has special temporal characteristics that can vary across languages leading to the parametrization of aspect. In this background, by adopting a generative framework, this dissertation focuses on the realization of the core dimensions of aspect viz. perfectivity and imperfectivity in Urdu and English, and attempts to address the semantic issues associated with how perfectivity and imperfectivity are realized in both of these languages. This research is descriptive and exploratory and aims to develop theoretical propositions regarding parameterization of grammatical aspect in Urdu and highlight the constraints on aspectual reference in Urdu. The analysis focuses on how each of the two grammatical aspects interacts with different types of situations as aspectual choices are constrained by the temporal constitution of situation types. This dissertation firstly addresses the realization of perfect in Urdu and English, and based on the issues uncovered through the analysis of perfect, the meaning contribution of perfectivity is discussed. Lastly the realization of imperfectivity in Urdu and English is analyzed. The analysis highlights that Urdu and English aspectual systems differ along two major lines. Firstly, perfectivity in Urdu is realized through light verbs primarily, which form a verbal complex, especially in case of dynamic and durative situations in comparison to English which utilizes simple verb constructions. Secondly, Urdu and English present perfect constructions differ in their aspectual value; Urdu perfect constructions are not obligatorily perfective but English perfect constructions are. Urdu imperfectives pattern with English imperfective mostly and exhibit the same semantic issues as English except the patterning of Urdu habituals with counterfactuals which require a fake-tense interpretation in Urdu. This study adds to the existing knowledge about the meaning contribution of aspectual markers by shedding light on how two structurally different languages Urdu and English express the same temporal information through different forms.

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LIST OF ABBREVIATIONS

1	First Person	LOC	Locative
2	Second Person	M	Masculine
3	Third Person	NOM	Nominative
ACC	Accusative	OBJ	Object
ART	Article	OBL	Oblique
AUX	Auxiliary	PASS	Passive
CAUS	Causative	PFV	Perfective
DAT	Dative	PL	Plural
DEF	Definitive	POSS	Possessive
DET	Determiner	PRED	Predicate
ERG	Ergative	PRF	Perfect
EMPH	Emphasis	PRS	Present
FUT	Future	PROG	Progressive
GEN	Genitive	PST	Past
IMP	Imperative	SBJV	Subjunctive
INF	Infinitive	SG	Singular
INS	Instrumental		
IPFV	Imperfective		

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- my apologies to time for all the world I overlook each second

As is the norm with intricate tasks, the trajectory of writing this thesis took many turns, mostly unexpected and unanticipated ones. I had dreamed of unraveling the mysteries of how humans understand time through a transection of language when I selected the topic, inspired by Lera Boroditsky's work on linguistic relativity. However, upon reading the existing literature, I realized that opportunities for conducting an experimental study were gravely slim and I lacked both the access to required resources and the training to carry out the experimental work. Consequently, I settled to write a thesis elaborating the semantics of aspectual system in Urdu in comparison to English. This thesis is essentially an endeavor to lay out a comprehensive account of the realization of and issues associated with aspectual meaning in Urdu (with a lot of limitations, of course). Despite assuming a generative framework in the Universal Grammar tradition, I have painstakingly avoided the precarious sea of formalizations in this dissertation as I didn't believe that I could do the math – and get it right for Urdu.

I would like to thank, firstly, my supervisor Dr. Farheen Hashmi for her guidance and compassion. She is one of the few people I know of who practice integrity not only in words but also in deeds. I am grateful to her for being patient with me and for letting me work at my own pace. I don't think I would have written a thesis on Semantics, had it not been for the Semantics course she taught my cohort back in the fall of 2015. These classes proved to be a point of impact between the unyieldingly hazy yet alluring world of Semantics and I, and if this thesis is any indication the impact was destined to last.

The greatest debt I owe, when it comes to the writing and execution of ideas/arguments about temporal reference in this thesis, is to Sabine Iatridou (Professor, Department of Linguistics, Massachusetts Institute of Technology). Rajesh Bhatt called her *a force of nature* in the acknowledgements of his PhD dissertation which seems like the most apt and befitting description of who Sabine is as a person. The nine months that I spent at MIT made me realize that she is much more than *a force*, however. She made me aware about the aesthetics of kindness, compassion and heart. The dexterity with which she taught Syntax in the *Crete Summer School* and later at MIT, enabled me to understand a syntactic tree as one of God's wonders and marvel at it. Sabine showed me the magic patience can do

in a classroom. I owe her the realization that any intellectual endeavor without humility is a recipe for self-gratification entirely, and the real adventure begins only once we start to give…

I am immensely grateful to Dr. Sarwet for bearing with me for the past so many (read *gazillion*) years, and for all else that can be hardly put into words – which is not due to lack of trying on my part but simply an effect of all things imbued with that simultaneously extant yet rarest of qualities we know and understand as *humanity*. And also, because I don't think I have found the right words yet. It is because of her that I understand, now, that durability, of character and relations, is as much an admirable human trait as any other; and that perhaps it is the only trait that counts in the long run. She was the first one to read the compiled draft of the thesis and she told me that it was not absolutely beyond hope, and that it could be salvaged – and I needed to hear that. It was one of those rare moments when space and time conspire to give us hope despite the stark realities surrounding us. Her continued support enabled me to see the flaws in my own reasoning (in life in general and about Urdu constructions specifically). Dr. Sarwet has shown me how one takes on adversity with grace and in the process wins against it. I feel extremely blessed to have her in my life.

All my life I have been talked down to for being eerily ambitious; for treading into the unknown and failing all the time; for living too much in my own head, for not giving in and, for being undeterred by setbacks in my pursuit to become *more*. However, despite the plethora of voices telling me about my misguided hopes, my mother always supported me, unabashedly and unconditionally; which was enough to keep me going. When I think about it, it seems almost unbelievable that I am submitting this thesis and Amma is not here anymore to see me do one more thing I was not supposed to have been doing. This thesis is first and foremost a dedication to my mother because, to quote J. M. Coetzee, *'why do we do these things if not for our mothers'?* I would have quit a long time ago, had it not been for the memories of my mother's resilience against every imaginable calamity. All the good in me comes from her – the very little that there is – although Asima insists that I am deluding myself about *this little amount of*, *read non-existent*, *"good" in me*. Regardless, I just wish that I had more of her in me. I am, solely, entirely, responsible for all else: the bad, the berserk and the amorphous. My sister is my rock. Asima! nothing I have ever done or will do could have been and could be possible without you. I love you to infinity and beyond...

I have to mention my nieces Sakina and Manahil for the beauteous wonders they are. Their fascination with all the oddities that constitute my daily routines constantly renews the joy of life for me. Sakina helped me in transcribing the Urdu sentences based on the modified Velthius script and inspired me to take deadlines seriously – she is twelve at the time I am writing this. Manahil, who is only eleven, reminded me every day that I was not working as hard as I thought I was and although at times it was annoying and a little disheartening, I couldn't have tried harder had it not been for her honesty and daily reminders – had she not said often enough that *the universe only conspires for those who persevere*. You two are nothing short of miracles and *Phupho* loves you both so so much!

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my apologies to great questions for small answers!

DEDICATION

For my beautiful, wonderful mother:

because, she would have wanted me to do it; because she showed me that there is dignity in following through; because, now that she's gone, this is the only way I know to keep her with me – being whom she wanted me to be; and mostly because she taught me better…

I AM NOTHING BUT A CONTINUATION OF YOU AMMA!

Time the destroyer is time the preserver!

– The Dry Salvages, T. S. Eliot

CHAPTER 1

INTRODUCTION

> some of [time] is past and no longer exists, and the rest is future and does not yet exist; and all time […] is entirely made up of the no-longer and not-yet.
>
> (Aristotle, quoted in De Wit, 2016, p.1)

This thesis focuses on uncovering the meaning contribution and ingredients of temporal reference in Urdu in comparison to English. Temporal reference refers to how languages express the relation of events to time spans and time points. Time is perhaps the most elusive yet essential dimension of human cognition. Despite its intangible nature, it is impossible for us to make sense of our world without it. Events occur in time and according to modern Physics time is an integral part of the physical fabric of the universe. Thus, time is not entirely abstract and is objectively a part of our world – despite the ongoing metaphysical debate on the reality of time. Irrespective of its imperceptible nature, time manifests itself in a number of ways. The nature of time and its passage has been a subject of philosophical enquiry since ancient times and in present times this enquiry is a major concern for quantum physics. The notion of time varies across disciplines as there is a biological time, an inner time (psychological time), time as it is understood in the field of physics in terms of quantum theories, time that philosophers argue about and time that linguists talk about. However, there are some common underlying assumptions about the notion of time which are discussed in section 1.2 of this chapter.

Due to its complicated nature, the encoding of time in language and the ability to talk about past events as well as future events through language marks an important stage in the evolution of mankind. As a result, all natural languages have developed a number of means to express temporality. Languages rely on different structures and forms to express similar phenomena and concepts. Klein (1994) argues that there is asymmetry in the way language treats time and space (this complication arises because time is represented and conceived mostly in terms of spatial terms – hence the comparison). Although speakers of any language are free to talk about space, this does not hold for time. We need to locate situations in time to express them and it is extremely difficult to think of a linguistic expression to express a situation without relying on an anchor in time. Finite verbs

necessarily encode temporal information including tense or aspect or both in English, for example.

It is not enough to analyze the structure of language as an abstract system and the study of different structural elements in relation to their semantic contribution can provide us with valuable insights about how cognitive faculty function in relation to language processing. Correspondingly, this study is an attempt to shed light on how situations are expressed in relation to time with reference to Urdu and English. Humans possess an inherent ability to express change in the world – which constitutes an important part of how we construct and understand reality (Mani, Pustejovsky, & Gaizauskas, 2005; Thomson, 2005). When we express that an event happened, we naturally draw inferences about what else would have happened in relation to that event. Some of these inferences are lent by the clausal structure we use for event descriptions. On similar lines, we draw inferences from specific words and grammatical forms which arise both because of the semantic meaning and our knowledge of the world. Any semantic analysis attempts to tease out the underlying assumption behind the functioning of human cognition in relation to the meaning we associated with linguistic expressions (Smith, 1997).

Temporal relations are a huge part of how we look at the world and its realities as they unfold around us. Languages differ drastically in terms of the structures and forms they use to express a particular sort of information. However, over the last seventy years we have seen through the lens of Universal Grammar that languages are, in fact, not that different from one another. It is owing to this genetic ability – the language faculty – that we acquire language at such a fast pace. This genetic ability is triggered by linguistic input and is independent of where a baby is born or where his/her birth parents are from. A baby growing around people speaking English will acquire English as his/her first language regardless of race and ethnicity. We acquire the structure of our native/first language without ever being taught. Because of this genetic endowment we term as the Universal Grammar children know how to produce perfectly good and acceptable sentences in their first language (sentences which they might never have heard before), and they are also able to distinguish if a sentence is grammatically unacceptable in their first language.

Languages differ in their structure but these differences are in-line with the overarching structure they have. Cross-linguistic analysis, therefore, gains significance in this context as it allows us to dissect the apparent structural differences in languages

including variations in forms and structure to express the same semantic information – including aspectual values which are the main concern of the present study.

In this background, this study aims to bring the variations in the linguistic encoding of temporal relation to the fore through a cross-linguistic comparison between Urdu and English. Urdu and English have different morphological system and this study is an attempt to shed light on how the differences examined link to the same universal categories/values as far as aspectual meanings are concerned.

This chapter outlines the foundations on which this study is formulated including a basic and preliminary introduction to how time is expressed in language, main features associated with the notion of time, the research problem and questions of the study, and details about the transcription and glossing of Urdu data on which the analysis is based.

1.1 Expression of Time in Language

Temporality is encoded in language through tense, grammatical aspect, lexical aspect and temporal adverbials. Tense is used to locate information in time, whereas aspect refers to the internal nature of the event in question. Verbs in conjunction with other expressions encode meanings about the temporal nature of the event. In addition, languages employ a number of other resources to differentiate between external and internal viewpoints on an event (Mani, Pustejovsky, & Gaizauskas, 2005). Research on temporality in language, especially English language is extant, however a clear inclination towards tense and aspect can be observed in the body of literature on this subject (Klein, 1994). Temporal adverbials have been discussed in relation to how they interact with tense and aspect but they are seldom studied in isolation.

The grammaticalized expression of location in time of an event is known as tense. This grammaticalization can occur either through morphological marking and change in forms of different elements in the syntax. Auxiliaries and affixation on the verb are two of the common devices that express temporal reference (Thomson, 2005). For example, in the sentence *Ali washed his socks* the past tense is expressed through the past marking inflectional morpheme -ed on the verb which expresses that the action occurred before the time of speech. Similarly, in the sentence *I will go to the university tomorrow*, the subject's intention/plan to go the university is expressed through the modal auxiliary that locates the event being described in this sentence after the moment of speech. Tense-marking occurs most commonly through morphological affixation on the verbs and auxiliaries in most of

the languages of the world. However, temporal reference as a grammatical property is not limited to verbs only and nouns can be marked for temporal reference as well. In Nootka (which is a North American Indian language), for example, tense is expressed on the noun phrase (Comrie, 1985).

In addition to tense, aspect is the second crucial facet of temporal reference in languages. Mandarin Chinese does not have tense marking, for instance and temporal reference is expressed largely through aspectual markers. Temporal reference is not limited to aspectual markers in Mandarin Chinese and sometimes even these are absent. Temporal adverbials are used primarily to locate events in relation to specific time point e.g. *from 1 a.m. to 2* a.m., and *for two days* (Lin, 2003). Temporal adverbials differ from tense and aspect in their behavior as they are not grammaticalized but they can serve to locate the event in relation to a time span in the same way as tense and aspect do. The adverb *yesterday* can locate an event in the past, for example in English. Similarly, we can locate according to the coordinate system given by different calendars or in relation to cyclic natural events like morning, fall etc. or a completely arbitrary time point as *the day I regained hope*. The following definition eloquently captures the most commonly held beliefs about tense and aspect:

> TENSE refers to the grammatical expression of the time of the situation described in the proposition, relative to some other time. This other time may be the moment of speech: e.g., the PAST and FUTURE designate time before and after the moment of speech, respectively… TENSE is expressed by inflections, by particles, or by auxiliaries in connection with the verb… ASPECT is not relational like tense; rather, it designates the internal temporal organization of the situation described by the verb. The most common possibilities are PERFECTIVE, which indicates that the situation is to be viewed as a bounded whole, and IMPERFECTIVE, which in one way or another looks inside the temporal boundaries of the situation… These aspects are usually expressed by inflections, auxiliaries, or particles. (*International Encyclopedia of Linguistics*, 1992, cited in Klein, 1994, p. 2)

Tense allows the speaker to talk about events in relation to a reference point. This reference point can be deictic – the moment of speech most commonly – or a time point established but the discourse context. Aspect enables speakers of a language to express how they view the structure of an event. A two-way distinction is made usually between perfective and imperfective aspect. Perfective aspect is used to express an event or an action

without any reference to the structure of the event, in its entirety and as marking completion. This is however, an oversimplification of the notion of perfectivity and perfective forms can obtain stark variation in meaning. Issues related to perfectivity and its expression in Urdu and English are the main focus of chapter.6 of this study. Imperfective aspect is used to express that an event or action is either not complete – in progress – or there is some form of continuity associated with the event/action/process, repetition or occurrence or cyclic events, for example.

Imperfectivity is realized through progression and habituality which expresses that an event is still continuing when viewed in relation to the reference point (which can be present, past or future). Habituality expresses that an event, action or process occurs multiple times, again in relation to a reference time (habituals can be about past, present or future). Imperfectivity and related semantic issues in Urdu and English are addressed in chapter 7 of this thesis. Tense and aspect can be expressed in conjunction as well through a grammatical device. In Spanish, for example the imperfective *Maria leia cuando entre* (Maria was reading when I entered) the imperfective *lie* expresses that the event of *reading* was in progress and it happened in the past (Mani, Pustejovsky, & Gaizauskas, 2005). A combination of grammatical devices can also be used to express a tense-aspect variation. The present progressive and present perfect in English, for example. Verbal tense and aspectual morpheme can both express aspectual information.

Perfectivity and imperfectivity are considered a grammatical property and often referred to as *grammatical aspect* in contrast to lexical aspect. Lexical aspect is a term used to refer to different types of situations depending on their temporal structure. Grammatical aspect interacts differently with different situation types. One of the most widely accepted categorization of situation types was proposed by Vendler (1967) which is still used in present day discussion with minor modifications. These categories are based on the semantic content associated with different situations in relation to how they obtain in time. The four categories are activities, accomplishments, achievements and states. The characteristics of each of these four categories are discussed in detail in chapter 2. Activities include actions like running and walking and are characterized by the repetition of a similar action over time. Activities most commonly occur with the progressive but they are completely compatible with the perfective as well. States describe the condition/s of a subject and have a homogenous internal structure. Happiness, sadness, being tall are states. States don't occur with the progressive. Accomplishments are actions that extend over time

and have a final end-point or a goal. Reading a book is an accomplishment as it extends over time and when the book is fully read, we can say that the goal of the action is reached. Due to their temporal constitution accomplishments can also occur with both the imperfective and the perfective. Achievements are situations that happen in a relatively shorter span and thus they are not durative – they appear to reach their goal or completion very quickly. Progressive is therefore less compatible with achievements.

Grammatical aspect allows the speakers of a given language to express a situation in different ways. The perfective aspect, for example, marks termination in case of activities and asserts completion when used with accomplishments and achievements. Mandarin Chinese does not have tense markers, but the language does express temporal reference. The perfective is expressed through the morphemes *-le* and *-guo* in Mandarin Chinese but it only asserts termination not completion (Lin, 2003). Completion is asserted by another morpheme which also expresses resultativity *-wan*. Similarly, Russian does not allow perfective aspect to be combined with states. The prefix -po marks short duration and -pro expresses an unexpected interval (Mani, Pustejovsky, & Gaizauskas, 2005; de Swart, 2012).

In addition to tense and aspect, temporal reference is also expressed through temporal adverbials. Klein (1994) elaborates that the term temporal adverbials (abbreviated as TADVs) can be used to refer to three kinds of linguistic devices which can be used to locate situations in time. These are as follow:

- Temporal adverbials of the typical kind including today, tomorrow, yesterday etc.
- Temporal particles, like Chinese le, Tok Pisin bai, or Hawaii Creole English bin.
- Compound expressions (other than by adverbials), in particular compound verbs, like to run on, to continue to run, to finish crying, etc.

The analysis of temporal adverbials gains significance from their universality – there are languages which lack grammatical categories to express time but there is no language without temporal adverbials. TADVs occur in different syntactic functions: for instance, a TADV such as yesterday can be the subject of a sentence, as in *Yesterday was nice*: it can also be predicative, as in *The party was yesterday*; it can further be a NP modifier, as in *The party yesterday will be a success* or *The party tomorrow* was badly

announced. Note that in these cases, there is no direct interaction between the time of the party, as indicated by the adverbial, and the time expressed by the finite verb (Klein, 1994).

1.2 Structure of Time

As elusive as time is, human beings conceive of time in relation to a number of features and cognitive correlatives which, of course, have considerable bearing on how time is expressed in language. This section deals with the elementary conceptual structure through which we understand time elaborated by Klein (1994) and (Wolfgang & Li, 2009). We understand time in terms of six crucial features including segmentability, inclusion, succession, duration, origo, proximity (Wolfgang & Li, 2009).

Time is *segmentable* in that we can divide time spans into smaller time spans or time intervals. This is a controversial property of time as we cannot, definitively set a limit on how minimal a given time interval can be. However, this doesn't affect how we talk about time because the speakers don't concern themselves with a deliberation about the "time quantum" but understand that time can be broken into smaller time spans nonetheless.

Time spans allow overlapping. If we have two distinct time spans T-1 and T-2, it is possible that T-2 may be *included* partially or fully in T-1. Thus, time spans carry the property of inclusion. Correspondingly, time spans can succeed one another. However, two distinct time spans can only succeed each other if they don't fully or partially *include* each other. These properties correspond to a linear conception of time. We assume a temporal progression within time spans and thus envision that time is moving forward. These properties enable us to think of events in terms of the earlier/later than distinction as well as the simultaneity of events.

Time spans are *durative*, that is time spans can be shorter or longer in duration. Durations of time can be subjective or objective depending upon the linguistic expression being used to express the duration. *Origo* refers to the experience of the present moment – the here and now. Origo acts as a distinguishing time point according to which we assess the pastness or the futureness of a situation. Past is accessible only through memory and the idea of future is based on expectations rather than reality. Klein and & Levinson (2009) contend that origo plays a central role in how languages express time, although origo does not have any major place in the conception of physical and biological time. Tense, for example, situates events in relation to the moment of speech which is the linguistic equivalent of origo. As time spans can overlap and succeed one another, they can also be

in proximity of another time span. This can translate to being close to or far from a given time span.

Additionally, time spans lack quality – they don't have any color or texture or any other property that we can associate with other concrete as well as abstract notions. We can talk about a particular time span in relation to a state or event that corresponds to it and to which we can attach a number of descriptions but the time span itself does not have any quality.

The understanding of time structure provides us with a framework or a frame of reference according to which we understand and events as they unfold in the real world. The relations of time are established with the help of two time spans – which are termed as temporal relata (Wolfgang & Li, 2009). In order to understand the sentence *Aalia walked in the park yesterday*, we need two temporal relata: one is the time at and during which the walking action happened in the real world and the other relata is the time of utterance of this sentence. The first relata is associated with the other through the relation *before* and a number of complex as well as simple relations can be established in temporal relata through language.

In most typical cases, languages assign values to two relata. One of these relata functions as a central point, an anchor and the other second relata is established in relation to the anchoring point. For tense, the first relata or the anchoring point corresponds to the moment of utterance or moment of speech of a sentence. Klein (1994) terms the first kind of relata that acts as an anchoring point to establish relation of time as *relatum*. Relatum can be established in three ways in discourse: deictically, anaphorically and it can be calendric. Deictic and anaphoric relata are more common and of main relevance with reference to the expression of tense and aspect in languages.

The notion of *origo*, which was mentioned earlier in this section, plays a central role in how we locate situations in time. The notion of *origo* is most closely expressed by the terms *moment of speech* and *moment of utterance*. Wolfgang and Li (2009) argue the expression moment of utterance is preferable to moment of speech because when we are speaking, one sentence can extend over more than just a moment in time. Linguistic expressions which locate situations with respect to the moment of utterance are classified as *deictic*. Tense is primarily deictic. The main difference between the three sentences I was walking, I am walking and I will be walking is that the situation of walking is related

to a time span differently in each of the three sentences according to the deictic center i.e. the moment of utterance. Deictic relata are also at work when we are using adverbials like *two months ago* which means that two months before the moment of utterance.

The notion of deictic relate is not without complications, however. The time of utterance is not clearly defined as it can be argued to span over the entire duration during which a linguistic expression or a sentence is uttered or it refers to the time at which an entire sentence has been uttered. Linguistic expressions vary in length and take different times depending on the words, the speaker's state and the contextual constraints. Furthermore, we need to consider what counts as a moment of utterance for a longer discourse like a speech or even a written document: both of which take some time to be produced in the real world. Wolfgang and Li (2009) contend the notion of *origo* corresponds to the idea of 'experienced present'. This is the time at which we experience all the world around us instead of remembering it (a reality that corresponds to the past) or imagining it (which may correspond to the future). Therefore, the *origo* on the basis of which languages express temporal location is an abstract notion based on *psychological nows* which might not align exactly with real-time *nows*. Another issue is the difference between time of hearing and time of speaking. Although, in most cases the moment of speaking accounts for the relatum but there are contexts where the relatum is established according to the hearer. In *turn right,* the speaker is referring to the right of the listener in most cases. There is nonetheless an asymmetry in how speakers locate events in time.

Anaphoric relata are provided by the discourse context. Anaphoric relatum can be in the same clause or provided in a preceding or following clause. In the sentence *at 2 o'clock Ali left for school,* the temporal adverbial provides an anaphoric relatum according to which Ali's leaving for school event is located in time. Similarly, anaphoric relatum is provide by the first clause in the sentence *when all the birds had flown, he closed the window* – the closing of window event happens after the birds have flows. Both of these examples are similar, as the time of utterance in that the time of utterance is not the primary anchor according to which these sentences are primarily understood. However, in some cases when a temporal adverbial is used as an anaphoric relatum is used, it is understood in relation to *origo.* Consider the difference between *two months ago, I was broke* and *two months before, I was broke*. In the sentence with the *two months ago* adverbial the adverbial is understood in relation to the moment of utterance and is deictic as well as anaphoric – because the clause introduced after the adverbial is understood in relation to the reference

time established by it. On the other hand, *two months before* adverbial corresponds to a contextually given time and is anaphoric because this time is not associated with the moment of utterance. It follows that temporal reference can be both deictic and anaphoric and we can have anaphoric chains (in narrative discourse, for example) in which case one anaphoric relatum is linked to a preceding one and so forth.

Therefore, we need anchoring points in time to express the temporal features of a situation. These anchoring points including the moment of utterance and anaphoric reference points allow us to comprehend situations in relation to other situations with the features like BEFORE, AFTER, SIMULTANEOUSLY, etc.

1.3 Statement of the Problem

One of the most debated issues in Generative Linguistics is whether the differences in the ways languages encode the same information follow directly from the differences in morphological structure or in some instances are a reflection of universal dimensions that languages will always express and which may as such not be subject to variation. In this backdrop, the central focus of this study is the interplay of the semantic ‘meaning’ of tense, aspectual forms, and temporal adverbials, and the intrinsic lexical or phrasal contour in which these forms participate with specific reference to a comparison between Urdu and English. A form must have a consistent value or else communication is impossible; we cannot have linguistic forms which derive all their meanings only from context. However, this premise is most obviously true for concrete lexical vocabulary; the more abstract or 'grammatical' a morpheme is, the more it draws upon context for its interpretation. Aspectual structures are highly abstract. Tense morphemes have a concrete relationship to the observer – the observer's own time-line, in contrast aspect depends on an absolute, observer-independent shaping of a state or action. In case of Urdu, these abstractions are even more complicated because of the presence of split-ergativity, light verbs and a relatively free word order and this study aims to illustrate the mechanisms underlying these complexities from a semantic perspective. Languages express aspectual reference through different means which essentially entails a type of parametric variation. The focal point of this study is to lay out the semantic-syntax interface of Urdu language in relation to the aspectual system of the language and draw a comparison with English. A central issue in this regard is that English is an analytical language morphologically and Urdu a synthetic one. As opposed to English, Urdu is highly inflected and this makes the tense-aspect system as well as the syntax of the language more complicated – more specifically from a semantic

perspective. Split-ergativity is also associated with volitionality of the agent in Urdu. This feature, is however, absent in English – and thus has implications from a semantic perspective. This in turn can also shed light on the cognitive aspects of the language which makes these two languages different. This study primarily aims to layout a descriptive account of the semantics of temporality in Urdu in comparison to English which can, in future, serve as a basis to carry out studies on the cognitive aspects related to the sematic structures of temporality and how they differ cross-linguistically.

1.4 Significance of the Study

This study assumes a Universal Grammar (UG) perspective, which I believe is better understood as an ongoing *project* rather than a theory or an approach, a term I want to use after Chomsky's *Minimalist program*. In a way the Universal Grammar project appears to be the linguists' attempt to bring harmony to the world – by uncovering the underlying common structure across languages. This study gains significance by drawing a comparison between how two structurally very different languages express temporal information about situations with an emphasis on aspectual reference. This comparison can shed light on how languages realize the same semantic notions – temporal reference in the present case – through varied devices. Aspectual categories which allow speakers to express situation in multiple ways are not language dependent and correspond to the cognitive processing of time by human beings. At the broader level this study has implications for how languages convey similar temporal information differently. The expression of time through language, being a largely complicated phenomenon, provides valuable insights about how language (its forms as well as structure) interacts with our cognitive abilities. Languages have different mechanisms for encoding information about time through different forms as well as structure, and the absence of tense system that relies on verb marking in some languages like Nootka (spoken by a North American Indian tribe living mainly on Vancouver Island) entails that time as a semantic notion does not have a singular mechanism through which it is represented in language structure. Furthermore, as it will also be discussed in various sections in chapter 4, 5, and 6 of this dissertation, some situation types are not compatible with all tense and aspect forms. Therefore, the way situations transpire in the real world is also reflected in the constrains languages put on various structures and forms. From a UG perspective, it is interesting to note that children learn and internalize these constraints without being explicitly taught. The knowledge of the interaction of grammatical aspect with tense and lexical aspect is therefore part of the

acquisition of internalized language (I-language) and a cross-linguistic comparison of tense-aspectual forms definitely adds to our knowledge about the underlying conceptual structures that correspond to how we understand time and how this understating is realized through different grammatical structures and forms in morphologically different languages. Aspectual categories are not language dependent (Smith, 1997) and children acquire knowledge of aspectual distinctions automatically. Aspectual categories are, therefore, parameterized across language. At present, work on the aspectual system of Urdu is scant, and studies focusing on various semantic puzzles of Urdu language are extremely rare. The present study aims to bridge this gap by explicating the aspectual system of Urdu and addressing the semantic issue associated with aspect, which will also be a contribution to the field of Linguistic Typology. A comparison has been drawn with English because of the extensive literature available on the language in addition to the theoretical work on semantic issues regarding aspect which is based on English. In the absence of any existing study on Urdu that could have served as a foundation, this study has relied on the existing work on English to elaborate the aspectual system in Urdu. The aspectual system elaborated in chapter 4 to 6 can serve as a model for analyzing other regional languages spoken in Pakistan which are still extremely underexplored – as far as the field of Semantics is concerned.

1.5 Research Questions

The main research question that this study will address is as follows:

Q. How are temporal restrictions represented in Urdu in comparison to English?

The relevant subsidiary questions that will be the focus of analysis are:

1. How is present perfect realized in Urdu in comparison to English in terms of its semantic contribution?
2. How can the realization of perfective aspect in Urdu be compared to the realization of perfective aspect in English in relation to the meaning associated with perfective forms in both languages?
3. What are the main differences in Urdu and English imperfectives and how do imperfectives interact with various situation types in both languages?

1.6 Chapter Breakdown

This study is divided into eight chapters. The next chapter (chapter 2) provides a review of the existing literature on tense and aspect. Most of the theoretical discussions reviewed in this chapter assume a Generative framework. The purpose of this chapter is to lay out the theoretical foundation about both tense and aspect on which the discussion in the analysis-chapters 4, 5, and 6 is based. The last section of this chapter provides a detailed account of the grammatical system of Urdu with a focus on the tense-aspect system in Urdu. Most of the verb constructions and features in Urdu have been discussed in this chapter with an aim to create a comprehensive picture of Urdu grammar for readers not familiar with Urdu language and aims to outline the basic grammatical structure of Urdu for the readers' facilitation.

Chapter 3 is the research methodology chapter. The process of data collection, and glossing and transcription of Urdu sentences has been explained in this chapter. In addition, this chapter lays out the elementary theoretical foundations of this study including a brief account of Generative Grammar and the Syntax-Semantic interface, and how it relates to the semantics of aspect. Several linguistic devices and structures are used as diagnostics for different aspectual values and features. A brief account of these tests is included in this chapter. Most of these diagnostics have been used at one point or the other in the analysis where ever relevant but not applied consistently.

Chapter 4 deals with the realization of present perfect in comparison to English. The main concern of this chapter is the meaning of present perfect constructions in relation to their temporal reference. The major differences between the morphosyntactic realization of perfect are discussed in this chapter. Corresponding semantic issues including the interaction of perfect with grammatical aspect and lexical aspect, interaction of perfect with temporal adverbials and the stative nature of perfect are discussed with reference to both Urdu and English perfect constructions.

Chapter 5 focuses on perfectivity and the semantic issues associated with how perfective aspect is marked in Urdu as Urdu has a different aspectual system in comparison to English. Various interrelated issues including telicity and the interaction of internal argument with grammatical aspect and lexical aspect is discussed as well. The apparent incompatibility of negation and present tense are also explored in the last sections of this chapter.

Chapter 6 aims to shed light on the meaning contribution of imperfectivity and draw a comparison between Urdu and English in terms of the various constraints on the realization of imperfective aspect. One of the main focus of this chapter is the interaction of progressive with achievements and stative as both of these situation types show different behavior when combined with the progressive. Lastly, the patterning of Urdu habituals with counterfactuals is discussed.

Chapter 7 attempts to draw all the threads together and provide a comprehensive picture of the main semantic issues discussed in relation to temporal reference in Urdu and English. Possible future avenues of research on semantic issues associated with tense and aspect in Urdu in comparison to English are also discussed in this chapter.

1.7 Delimitation

There are two major delimitations of this study: firstly, I haven't included modality in Urdu in the analysis because, although, it is a notion that is quite closely related to the tense-aspect system, the analysis of modality lies outside the scope of this study. The analysis of modality requires a recourse to intentional semantics (possible world-times) which merits a separate study. Secondly, as it is expected to some degree, the tense aspect interpretation in both Urdu and English is context dependent in some instances which requires a pragmatic analysis. Due to the constraints imposed by the nature of data included in this study, an in-depth pragmatic analysis is not feasible because real-life data might not provide the range of tense-aspect variations that I intend to address in this study.

CHAPTER 2

LITERATURE REVIEW

Languages use a variety of morphological devices and syntactic features to encode time in relation to situations and events. Temporal reference is an overarching term adopted in this thesis to refer to the various ways in which time is expressed in language. As it was briefly discussed in the introductory chapter tense, aspect and temporal adverbials are the three means through which situations are associated with time points in language. Out of these three, tense and aspect are the most crucial from the Syntax-Semantics interface perspective. The contribution and effect of temporal adverbials on determining the temporal reference is discussed in relation to various semantic topics throughout the course of this thesis but I have not discussed them in a separate section. The mainstream theoretical accounts of tense and aspect in the Generative/Universal Grammar framework are discussed in this chapter to layout the theoretical foundations on which the various semantic issues are discussed in the analyses chapters. The first section of this chapter focuses on elaborating the semantic properties of tense as a grammatical property. The second section focuses on aspect and its meaning contribution. The relevant topics including the various types of situations and how they interact with both tense and aspect are also discussed. The next two sections of this chapter deal with the expression of tense and aspect in syntax. In the last section of this chapter the basic grammatical structure of Urdu is outlined first briefly and then the Tense-Aspect system is elaborated.

2.1 Temporal Reference and Tense

2.1.1 Comrie's Account of Tense

Comrie's (1985) work on tense provides a basic overview of the theoretical discussion on tense in different languages. Comrie's work is quite extensive so I only review some of his discussion in this chapter that sets out the conceptual foundation for the nature of tense in different languages. For Comrie, the notion of tense as the "grammaticalized expression of location in time" (1985, p. 9) is directly tied to the idea of a "deictic centre". The deictic notion of tense is significant because a lot of theoretical deliberation on tense in language has to rely on the conception of time in spatial terms and situating events in terms of how they are located at, before or after the deictic centre.

Furthermore, the expression of location in time is severely constrained across languages – especially when it comes to how location in time is grammaticalized.

Since time has no actual beginning (that we know of), the location of time in language has to be hinged around a reference point and often this reference point is the speech time – such a system where entities are related to a reference point is a deictic system and thus tense is essentially 'deictic'. In this context, the main theoretical question is that whether all tenses can be described in this sense or we need more than one deictic center. According to Comrie, this holds for most languages except some peripheral cases where a bound morpheme shows the time of the day at which the situation holds (every day, today or that particular day). Examples of this phenomenon are observable in Australian languages Yandruwandha and Tiwi (see Comrie, 1985 for more details). Yandruwandha has suffixes – *nina* (by day), *-talka* (in the morning) and *-yukarra* (at night) which are attached to verbs to locate them in time. Kom, a Western African language has a similar affix *lƐ* meaning 'in the morning (Comrie, 1985). However, if we look at the typology of tense across the languages of the world, the aforementioned languages can only be taken as peripheral cases and they don't express the general pattern of tense realization in languages of the world.

2.1.1.1 Absolute Tense: Present, Past and Future

All the tenses which have the moment of utterance as their deictic center are classified as *absolute tenses*. While the term absolute can be a little misleading, it only signifies that one of the time-points according to which the temporal reference of a give situation is evaluated in absolute tenses is always the moment of utterance. The basic meaning of present tense, for Comrie (1985), includes locating a situation at the present moment. However, the situation could hold true for past as well as future – present tense only indicates that a particular situation, state or process holds true for the present moment but it can extend into the past or the future (which is determined by one's knowledge of the world and the way the sentence is structured). There is no progressive/non-progressive aspectual distinction in Russian for instance so the punctual or extended reading of the present will depend on the context and world knowledge. Present tense also encodes habitual aspectual meaning but, in this case, again the state holds true at the present moment – however, Comrie emphasizes that the grammatical expression of habituality relies on the aspectual/modal system of the language and not the tense system.

Comrie further elaborates that as it is difficult to think of habitual tense that does not rely on the present tense, there exists no universal tense to express truths that hold true for all the time. This universality is usually made explicit by the use of adverbials like 'always'. Exceptions do exist, however, and Swahili is one of those languages that has a universal tense with morphemes like *a*-encoding truths not restricted to a particular time, and the *hu*- encoding habitual tense (in contrast to the *na*- which encodes the present tense). This picture, nonetheless, is not a simple one and there are pragmatic factors that may affect the choice and interpretation of tense in Swahili (Comrie, 1985).

Moving on to the past tense, in simple terms it locates an event in the left of the present moment. As in the case of the present tense, the past tense just locates the time before the present and doesn't explicitly say whether the situation extends to the present or to some point in future – but there is usually a conversational implicature that it doesn't extend to the present and future (Comrie, 1985 attributes this to Grice's maxim of relevance because if the situation did extend the speaker is expected to use the present. However, this implicature can be cancelled by the context). What is important here is that whether a past event/situation extends beyond the past point is not encoded by tense but depends largely on the contextual information. Comrie argues that we should be wondering if there is any language that can encode a situation in such a way that it held in the past but does not hold in the present through a grammatical form. This is, indeed, possible through non-grammatical means – like a separate clause as in '*I used to like chocolate but I don't anymore*' or '*I used to like chocolate and I still do'*, and by a lexical item as in *'I no longer like chocolate'* (this carries a presupposition that I did like chocolate in the past but I don't in the present).

The account of future tense i.e. being located after the present time and the fact that whether the context determines whether a (past) situation holds true for present time or not, seems to follows directly from the above discussion, but Comrie contends that the future is markedly different from past in the sense that a past event cannot be affected, whereas future is only speculative. For Comrie, then, it can be argued that the main difference between the past and the present is that of tense but when it comes to the future it is a difference of 'mood' rather than tense. However, in English the future is distinct from modal constructions in the sense that 'I will go to school tomorrow' is definite statement in comparison to 'I might go to school tomorrow'.

Another important observation in this regard is that although many languages make a clear distinction between past and non-past, there is less grammatical distinction in future and non-future (German and Finnish use present forms to talk about future, see Comrie, 1985 for more details). Some present forms are also used in English to refer to future 'I am going to meet her tomorrow', and 'the president arrives at 6 p.m. Monday'. Yet again, the picture is not this simple and some languages don't allow the use of same forms for both present and future. In these languages, however, the distinction is between the tense system and the modal system – in Dyirbal, for example, the future time reference is made through iirealis and the present has a realis grammatical realization. Future forms have been derived from modal expressions including the English '*will*' (Comrie argues that there are other non-future uses of 'will' to where it is used to indicate volition with present time reference), however, in English we see a distinction in the use of 'will' for future reference and as an auxiliary. Lastly, Comrie concludes that future tense appears to be a weak grammatical category in European languages.

2.1.1.2 Relative Tense

Absolute tense has the speech time as its deictic center but events can also be located in relation to a particular point in time – through relative tense. This reference point is either explicitly mentioned or it can be deduced from the context. In the case of English, relative tense is usually found with non-finite verb forms. For Comrie (1985), the main difference between absolute tense and relative tense is that the potential reference point for relative tense is provided by the context. One of these possible reference time can be the present time. In the absolute tense the reference point is specific, that is the moment of utterance, but in the case of relative tense, it is subject to interpretation. The various ways in which relative tense is realized in discussed below.

Comrie (1985) argues that languages like Latin, which do have relative tense with finite forms are similar to English in the sense that, the reference point is usually determined by the finite verb being used in a subordinate clause. 'Imbabura Quechua[1]' is another such language where the main clause verb has absolute tense but the verb in the subordinate clause receives relative tense. See the following examples from Comrie (1985, p. 61):

a) Marya Agatupi kawsajta (present) krirkani (past).

[1] Spoken in Ecuador

I believed that Mary lived in Agato.

b) Marya Agatupi kawsashkata (past) krirkani (past)

I believed that Mary had lived in Agato.

c) Marya Agatupi kawsanata (future) kn'rkani (past).

I believed that Mary would live in Agato

Usually the most salient relative tense is interpreted as simultaneous with the closest absolute tense – for instance in the sentence 'students possessing a registration form can proceed to the hall', the participle is interpreted as present in accordance with the present absolute tense. If the absolute tense being used is past, the participle would have a past interpretation barring any other reference provided by the context. In English, non-finite forms with future time reference are rare – the 'about to' constructions, for example. Additionally, languages also vary in the case of non-finite verb forms. Although in English, even the subordinate verbs have absolute tense, in Russian some non-finite verb forms have absolute time reference, for example the imperfective past participle -*vs*- (but there are other participles which receive relative tense as English participles) (Comrie, 1985).

On the other side, there are languages like Classical Arabic where even the verbs in the main clause have relative time reference. Classical Arabic has a morphological distinction between two verb tense-aspects: imperfective has a time meaning component in addition to the aspect component – that of relative non-past. Similarly, the perfective carries a relative past component along with the aspect meaning. If the context doesn't provide any specific reference than the present moment becomes the reference point and imperfect has absolute non-past meaning and the perfect receives a past meaning. Comrie (1985) argues that we could assume that these forms have a basic relative time meaning component and the relation to the present moment is one of the contextually available reference points (leading to the absolute tense).

In English, we can observe the absolute-relative tense in the case of pluperfect – the past in the past. The reference point in absolute-relative tense is determined in relation to the present moment and a certain state/event is then situated in relation (before, after or at) to the reference point. Context plays a crucial role in absolute-relative tense especially when a temporal adverbial is being used. Since the pluperfect situates an event in the past of a past reference point, the event itself can also principally be referred by the past, however, this does not hold true of all the absolute-relative tenses. The future perfect, for

instance, can't be replaced by an absolute tense. Comrie argues that we tend to glean chronological information from the way we structure an event in a given sentence, pluperfect allows us to encode more information about the order of events. For example, in the sentence *Sam arrived, Mia left* we would assume that Mia left after Sam arrived. If we wish to indicate otherwise, we would have to say that *Sam arrived, Mia had left*. Most languages with tense forms have pluperfect but other languages like Russian which does not have a pluperfect the chronological order is tied to the linear order in which events are represented and adverbs like *uže* – meaning *already* are used in situations similar to the sentence mentioned earlier in this paragraph. The interesting point to note here is that in English, even with the adverb *already* we have to use the pluperfect.

Some languages like Urdu and Armenian do not have a pluperfect like English but a remote past tense utilizing a past auxiliary and a past participle. These verb forms have the same interpretation as pluperfect but different semantics. Pluperfect can be easily confused with remote past as it locates a times in point before the past. However, although pluperfect can be used to show remote past it is not always the case – as all that is required to use pluperfect is an intervening point but this is not true for remote past. This is further clarified by the fact that in English we cannot use pluperfect to locate an event in the remote past. In Urdu and Armenian, however, the form used to locate a past point before another past reference point is also used to locate remote past (Comrie, 1985).

The English future perfect similar to the pluperfect requires a future reference point in relation to which an event in located by the use of future perfect. In the case of pluperfect, the reference point and the pluperfect are both located in the past in relation to the present, however, this is different for future perfect. For Comrie (1985) absolute time reference for future perfect is not possible because it also indicates that the event/situation occurred before a future time and it could be located in the present, before the present or after the present. Comrie also points out the English future perfect usually combines with adverbials with future time reference – it is not possible to say that *'I will have called Annie yesterday'* (usually conversational implicature and Grice's maxim of quality disallows such usage if I have already called Anne yesterday, the use of this sentence becomes infelicitous as I already know that I have called her and this implies that I don't know whether I have done so or not). However, it is also possible to say that '*if it rains tomorrow, we will have worked in vain yesterday'*, thus, over here the future perfect is used for an event that is located in the past (in relation to the present). The interesting meaning of the sentence is that although

the actual event of ‘working took place’ yesterday, the ‘work being in vain’ can only be confirmed tomorrow – contrary the sentence mentioned before in this sentence. In Latin, nonetheless, the future in the future can be formed as in ‘*datūrus erit’* which literally translates to ‘about to give he will be’. The closest we can come to this form of constructions in English is ‘*he will be about to give’.*

2.1.2 Topic Time (TT), Time of Utterance (TU), and Time of Situation (TSit)

This section elaborates on the semantics of tense based on Klein’s (1994) account of tense and aspect which is a reformulation of Reichenbach (1947). Klein utilizes three terms in his account: ‘topic time’ (TT hereon, this is the same as Reichenbach’s ‘Reference Time’c.f. Chapter.1); ‘time of utterance’ (TU); and ‘time of situation’ (TSit). TT is the time interval for which the claim is made by a particular sentence (and by the speaker to be more specific), TU refers to the time interval during which the sentence is uttered, TSit refers to the time interval (in the actual world) during which the event holds.

Tense encodes the relation between TU and TT, and aspect refers to the relation between TT and TSit. Both TT and TSit can be modified by temporal adverbials. Klein makes important distinction between the various difference in TT and TSit:‘0-state’ when there is no TT-TU contrast means that the states holds true at the time of utterance although the claim is being made about the past/future; ‘1-state’ when there is an outside contrast (the claim is being made about a time interval different from the time of utterance; and ‘2-state’ which refers to there being a possibility of different state condition within the time interval for which the situation holds true in. Consider the following sentences, for example:

- I also bought a dress yesterday. It was red.

In the first sentence the TT evidently occurs before the TU (1-state) but there must be a point in time where the ‘buying’ event would be incomplete (2-state) and lastly in the case of the second sentence 0-state because there is no TT-TU contrast as the quality of the dress ‘being red’ also holds true at the moment when the sentence is uttered (considering all things being normal). Klein further elaborates that it is possible to quantify over TT. The speaker can make a claim about a number of TTs or the TT can be anaphorically related to another TT´. For every situation there is a first state for which it holds true and a post-state. TT is contained within the fist state in the case of the progressive and the post-state in perfect. All these distinction for the semantics of tense because there is a significant

difference between properties of a particular situation in the actual world and the properties of the utterance which represents it or makes a claim about it – an utterance is only a partial description of a situation or an event.

Klein (1994) asserts that TU cannot be partly associated with TT; it contains it, follows it or precedes it. The notion of 'relata' is central to the working of tense system. The anchoring time, Klein (1994) terms as the 'relatum' and the other time span which is temporally related to the 'relatum' is 'theme'(cf. chapter 1: The Basic Time Concept) can be deictically related or anaphorically located or in some cases it's part of the speaker's world knowledge (calendric time for instance). English has a relatively transparent system with three basic tense forms:

Past: TU after TT

Present: TU contains TT

Future: TU before TT

There are however different atypical usages of various tenses in many languages. The 'historical present' in English is one example where present tense is used for past 'vivid narration'. There is no aspectual differentiation in Italian and French for 'present' but there is for 'past', and in case of English for verbs like 'to remember', 'to know', and 'to need'. For Klein (1994) the relative tenses are combination of tense and aspect, and hence we can assume the following relations for the English Perfect:

Present Perfect	TU is included in TT and TT is situated after TSit
Pluperfect	TU follows TT and TT is situated after TSit
Future Perfect	TU precedes TT and TT is situated after TSit

Klein asserts that TT is only be associated with finite verbs. However, B. Rothstein (2008) argues that this is not always the case. Moreover, Klein's TT has the shortcoming of being speaker-dependent and reference point itself should contribute to the truth conditions. See the following examples:

a) When Sara crossed the finish-line, she cried with joy.

b) When Sara had crossed the finish-line, she cried with joy.

There is considerable difference in the meaning of the above two sentences: (a) entails that the crossing and the crying event happened simultaneously whereas (b) entails that the

crying event happened after the crossing event. Based on the difference in sentence of similar structure, B. Rothstein (2008) argues that we need to define Reference time as an objective notion and not as a subjective category – as the time of utterance (TU) and time of situation (TSit) are.

Reference time, although not specified by Reichenbach has been touted to be a vantage point from which a situation is described. Consequently, a number of temporal referents can be termed as reference time (R). B. Rothstein (2008) contends that R can refer to a contextually give time point or a contextually salient time point. Therefore depending on the context, the time of utterance (TU) can also acts as R or an adverbial can specify R as the following examples show respectively:

a) Ali has arrived. (R = TU)

b) At four o'clock, Ali had already arrived at the office. (R = four o'clock)

R differs from TU and TSit in this regard as TU is determined by time of speech so it is always indexically determined and TSit is time of the situation and we may or may not know exactly for how long the TSit lasts in the real world. Partee (1984) has argued that R cannot be permanent. In narrative discourse R changes with the progression of the narrative, for example. B. Rothstein (2008) argues that R is established by an antecedent in discourse according to which the following tenses are established as anaphoric relation. The time points to which R is associated are termed as discourse time point (D) by Rothstein. Both R and D are defined as follows:

- R is a time point in relation to which time of situation (TSit) is located.
- D is a time point specified by an antecedent in discourse according to which anaphoric relation are established for the event time in the sentences that follow.

Rothstein's re-formulation of R to account for progression of time in discourse is an elegant solution to account for the shortcomings of Klein's Topic Time (TT) but these terms are not relevant per se to the main focus in this thesis.

2.1.3 Tense and Discourse

Smith (2007) elaborates on the inter-relatedness of tense and discourse contexts. She remarks that there are various discourse modes which have distinct linguistic characteristics. Tense can be deictic or anaphoric depending on the mode of the discourse or it can convey continuity (as in narratives). Smith terms this as the information-based

point of view on tense– as it depends on the context and sentence. Her main argument is that the interpretation of tense depends on what sort of passage/text the tense occurs in – the discourse mode determines what temporal meaning the tense expresses.

Time is usually understood in spatial terms as a single unbounded dimension and hence it requires an anchoring point (the deictic nature of tense has been discussed in the previous section). However, Smith (2007) remarks that the distribution of tense is not systematic in terms of how different tenses combine or embed. Furthermore, temporal domains of tense and aspect interact. Bounded events (situation with end points) are contained in the time of Situation 'SitT' (E ⊆ SitT) whereas unbounded situations only overlap the SitT. But present tense is difficult to use with bounded situations because mostly present tense indicates situations that are ongoing. Smith contends that the incompatibility of present tense with bounded situation is because of a significant paradigm constraint in English; as communication is momentary and the present can only express something that is instantaneous; it is bad with bounded events because they have extended time spans. This is termed as the 'bounded event constraint' by Smith which is realized in different way in different languages. In English, for instance, the use of present tense with semantically stative situations like *He speaks French* expresses a pattern rather than an event and that's why a sentence like *He builds a wall* is odd.

Smith (2007) argues that discourse modes utilize different aspectual entities (these are essentially different situation types which are discussed later in this chapter). At the level of clause aspectual entities are realized through the verb and its arguments (and adverbs) but semantically they express different conceptual categories. And that the reason clauses representing different situations have different distributions. Smith proposes that aspectual entities have three subtypes: eventualities including states and events; general statives expressing generalizations and; abstract entities that express facts and propositions. The temporal modes can be narrative, report or description.

For Smith eventualities are more commonly used in narratives, reports and descriptions, general statives are a characteristic of informative passages and abstract aspectual entities are used in arguments (2007). In addition, different discourse modes use different types of advancements. Advancement is used as a linguistic term here which refers to the structure of the text in terms of how it leads to a particular temporal interpretation. Correspondingly, the three patterns of tense interpretation rely on deixis, anaphora and continuity. Thus, in narratives we see continuity because events are related, in descriptions

we see anaphora as there is usually an established reference time according to which events are described and finally, tense is deictic in reports. In informative texts and arguments, tense is also used deictically. Each of the discourse modes is discussed briefly below:

Narratives consist of events, which are related sequentially (not including the flashback or flashforwards) and thus the order of sentences is directly tied to temporal interpretation of narratives (Smith, 2007). Usually a time interval is set in the beginning of narrative (which can be real of fictitious) and events either follow this time interval or occur simultaneously in relation to the time already set – however, events are not always recounted in the actual order in which they appear. Aspectual information plays a crucial part in the advancement of the narrative. When the narrative is moving forward, perfective aspect is utilized but if it is not moving forward than unbounded situation are used which could be states or ongoing events. Specific temporal adverbials can also be used to advance the narrative. Thus, the major contribution of tense to narrative is continuity and the use of past tense doesn't relate the time of situation go the speech time rather it relates the events to each other.

Temporal stability is one of the characteristic features of descriptions. There is no temporal dynamism involved so tense is interpreted anaphorically with all the events referring back to the same time point (the reference time, Smith, 2007). As the text advance, the scenes shift from one scene to another and there is spatial advancement. The anaphoric use of tense hold for all eventualities. In reports, tense is used deictically so different tenses can be used in the same fragments with the speech time as an anchoring point for temporal interpretation, and aspectual information interacts with tense. The patterns of tense interpretation in discourse modes are summarized as follow by Smith (2007):

Table 1
Tense Interpretation in Discourse Modes (adapted from Smith, 2007)

Narrative	Continuity	Non-first clause, bounded events, narrative mode	Narrative advancement E1…….E2…….E3…….. RT1<SpT RT2>RT1 RT3>RT2
			States/progressives E3…….S1…….. RT1 RT2=RT1
Report	Deictic interpretation	Default-	E1……...E2…….S1……S2….. RT<SpT < SpT <SpT < SpT
Description	Anaphoric interpretation	non-first clause, unbounded events and states, narrative mode and/or non-first clause, all eventualities, descriptive mode	E0……..S1…….E1…….. RT1<SpT RT2=RT1 RT3=RT1

2.2 Aspect

Tense serves to locate a situation in time in relation to a reference time but it doesn't tell us anything about the internal constitution of the situation and how the speaker/s express it. Aspect refers to the various ways in which a situation can be viewed or represented in terms of its internal temporal properties. Aspect expresses information about the internal constitution of the situation: whether it is complete or incomplete, in progress or repetitive. One of the main proposals about aspect is known as the 'viewpoint approach' which is espoused most prominently in Smith's (1997) and Comrie's (1976) work. Comrie (1976) argues that the term aspect refers to how speakers represent an event or situation: from the outside or from the inside. Both tense and aspect tell us about the temporal nature of an event but as discussed in the previous section, time is deictic in nature. However, tense doesn't tell us how the time of the event is related to its internal temporal nature.

Comrie (1976) terms the situation external time as 'tense' and situation internal time as 'aspect'. Just as in some languages tense is not grammaticalized (but encoded through lexical devices), in some languages the aspectual distinctions are not

grammaticalized. In Finnish for instance, the difference in aspect is represented by different cases on the direct object (accusative in case of perfective and partitive in case of imperfective). This notion of aspect is termed as the 'viewpoint aspect'. Viewpoint aspect allows a speaker 'latitude' in presenting a situation. Comrie (1967) only talks about perfective aspect which express as situation in its entirety, and imperfective aspect which indicates only part of a situation without a beginning or end, but Smith (1997) defines another category 'the neutral viewpoint' which can express a situation in various ways: expressing either the initial endpoint or an internal stage.

Smith (1997) contends that 'aspect' has a subjective factor because usually the speaker can choose between different aspectual forms. For Smith 'aspect' conveys two types of information regarding a situation: firstly, the viewpoint and secondly about the temporal nature of the situation i.e. a state or an event. The main difference between perfectivity and imperfectivity for the author is whether the situation is represented as a whole or a part of it. The temporal nature of the event can be different too, for example see the following two sentences:

1. Jim fought.
2. Jim was in a fight.

The above two sentences represent the same situation but (1) expresses the situation as an 'activity' and (2) as 'a state' – this difference is significant in terms of temporal features because activities are dynamic whereas states are not (different types of situations and their properties will be discussed later in this chapter). The internal temporal constitution of a situation also depends on the inherent properties of the situation as well usually referred to as 'lexical aspect' or 'Aktionsart'. Smith (1997) terms this as 'situation aspect' and argues that it also involves a point of view meaning. For Smith, the viewpoint aspect and situation aspect express information of different types which are independent. Various types of aspect and related semantic issues are discussed in the following sections.

2.2.1 View Point Aspect: The Perfective

Comrie (1976) clarifies on the distinction between perfect and perfective (usually it is taken to be a tense vs aspect distinction respectively). The author points out that perfective refers to a situation viewed from the outside in its entirety whereas 'perfect' is used to denote a past situation which has a present relevance generally (but not always).

However, we could say that 'perfect' expresses a relation between two time-intervals as in the case of past perfect in English between past and a time point before that past, and future perfect between future and a time point before it. Comrie also emphasizes that it is wrongly assumed sometimes that the perfective is used for situations of shorter duration and imperfective indicates a longer duration. Moreover, perfectivity is compatible with the representation of duration of a situation: '*I taught there for ten years'* – which substantiates it further that perfective can encode situations of longer durations. Similar is the case of viewing perfective as looking at situations as 'punctual' (or momentary) which is not true for all cases – a situation doesn't have to be viewed in relation to a single one-dimensional moment rather it can be viewed as a three-dimensional point with a beginning, middle and end.

A further aspect that needs clarity is regarding the notion of perfective as viewing a situation as 'completed' in comparison to 'being complete'. Comrie (1967) argues that the use of 'completed' indicates a termination whereas, although the perfective does represent the situation as complete as a whole, but 'completed' emphasizes the end point. However, contrasting examples from Mandarina Chinese can be pointed where certain adjectives and verbs referring to a state can get ingressive meaning with perfective aspect. Comrie contends that in the English sentences like '*and suddenly he understood what was going on'* also provide similar cases where perfective can give ingressive meaning. But this happens only for states and because it is less common that perfective is used for states then events, it is expected, in Comrie's view, that perfective forms are used to represent ingressive meaning. Similarly, perfectivity may include resultatives but is in no way limited to them. Resultativity emphasizes the completion or termination of the situation.

Hence, perfectivity doesn't involve a reference to the internal temporal nature of a situation and presents an external point out of view. The situation, nonetheless, could be complex internally and could last/could have lasted for a long time or it may comprise a number of different phases or intervals. But it must be emphasized that perfective forms cannot be used to indicate the internal constituency of the situations – which, however, can be accomplished by using other means (the lexical aspect of the predicate or the context).

Smith (1997) further elaborates on the nature of perfective. For Smith, the perfective aspect only focuses on the end point of a situation and that's the reason perfective is not generally used with states because the end points of states are not included in their temporal structure (the temporal structure of situations is discussed later in this chapter).

The author notes that perfectives with more information than the span of the situation in question are more 'marked'. Perfective is incompatible with forms that focus on the internal points in a situation as the sentence *He swam in the pond and he may still be swimming* seems semantically odd (for the hearer it appears to be infelicitous because if the person is still swimming, it seems unnecessary to use the first clause). As far as the completion versus termination distinction is concerned, Smith argues that perfective encodes termination in the case of activities (*he swam* implies that he stopped swimming), and completion with accomplishments (*He wrote a letter).* This can be further illustrated by the use of conjunctions: *He wrote a letter but he didn't finish writing it* seems odd because the implication of completion is cancelled by the second clause.

2.2.2 Imperfective: Habitual and Progressive

The meaning of imperfective follow from the above account. Imperfective represents the internal temporal constituency of a situation – thus the situation is viewed internally in contrast to the external viewpoint in perfective. However, Comrie (1976) points out that perfectivity and imperfectivity are not completely incompatible and it is possible to express them both if a particular language has the means to do it. Most languages have a single category that expresses 'imperfective' but there are other languages where several distinct categories correspond to the imperfective. The following figure represents the subdivisions of imperfective:

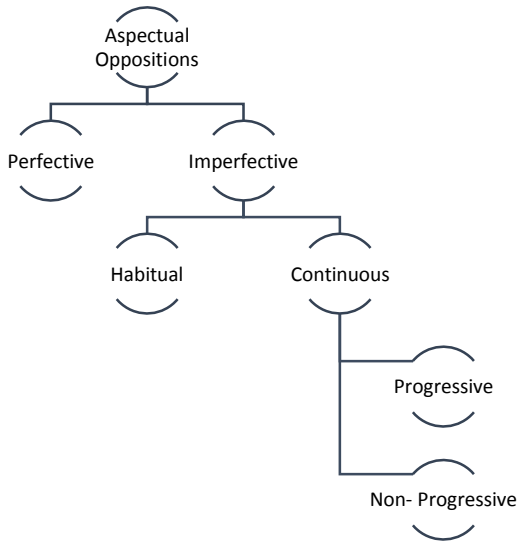

Figure 1. Classification of Aspectual Oppositions (Adapted from Comrie, 1976)

Imperfectivity is usually subdivided into the continuous-habitual or durative-habitual categories. English has a habitual aspect but only for past '*we used to play football together'* and a distinct progressive form '*we were playing football'*. However, the simple form '*we played football together'* may have habitual meaning (in addition to the more obvious perfective meaning). However, Comrie (1976) argues that some languages just have one category which subsumes all the various subdivisions of imperfective. As it has been mentioned before, just as perfective cannot be used to refer to the internal structure of situations, so the imperfective can't be used to express situations in their entirety, the question then is whether there are any situations that are so strictly punctual that they can't be represented as consisting of various phases.

Habituality can be misleadingly construed as iterativity but as Comrie (1967) argues the habitual aspect doesn't merely encode meaning of some situation that is repeated a number of times; because if a situation is repeated a limited number of times, it could be in principle viewed as one complete situation and expressed through perfective form. On the other hand, the habitual aspect can be used to express a situation that is not repeated at all: '*this building used to be a hospital'.* Thus, habitual aspect may express iterativity but there are situations where there is no intermission in habitual situations.

Another important feature of habituality is that it extends over a long duration and in fact it is not viewed as something incidental but rather a characteristic feature of the period. However, Comrie (1976) argues that this is a conceptual rather than a linguistic distinction – once we decide that a situation is characteristic in some way, we can use habitual aspect. '*I used to work there when I was a child'* does not refer to me working there for one day or one month but it refers to a characteristic situation that can be protracted over a longer period. In the case of English habitual past, the implication generally is that the situation does not hold any longer. This is, however, contextually dependent. Furthermore, habitual forms can be combined with progressive or non-progressive forms depending on if the language has the means to do it.

An interesting case of using two aspectual forms together is found in Bulgarian which has an Imperfective Aorist (aorist refers to perfective past) and a Perfective Imperfective. The imperfective aorist is used to express the internal structure and the aorist (perfective form) circumscribes it. Similarly, the perfective imperfective expresses a situation which is perfective (complete or viewed externally) and imposes on it habituality (which is one of the forms of the imperfective). Georgian also has a perfective imperfect

that expresses a habitual situation and the continuous occurrences of the situations are expressed through a perfective form.

When it comes to progressive aspect, some languages have specific forms corresponding to progressive and non-progressive but there are others where using a progressive form is optional – and thus in these languages the non-progressive forms can express progressive meaning. Comrie (1967) points out that English belongs to the first class and progressive and non-progressive forms are, thus, not interchangeable. The author argues that progressive is not limited to situations which are in progress – because this simplifies imperfectivity to progressiveness. As the discussion in the preceding paragraphs entail, habitual aspect is a form of imperfectivity which can or can't be viewed as progressive (for instance the non-progressive habitual '*I used to write poems'* in comparison to *'I used to be writing poems each time I had a premonition'*). However, it is important to notice that habituality and progressive are compatible (the habitual of a progress) as in the sentence '*I used to be writing poems…'*. Thus, it can be argued that the range of meaning expressed by non-progressive forms is wider than the progressive forms especially in language that don't have an obligatory progressive/non-progressive distinction (French, for example).

In relation to progressive forms, verbs can be divided into two classes (which are not overlapping): verbs that can have progressive forms and verbs that can't combine with progressive. More specifically this division is related to the statives versus the non-statives distinction as progress combines with non-stative meaning and stative verbs don't have progressive forms generally – as this would involve a contradiction. However, this is not a rule that's true for all languages and cross-linguistically different languages have different rules for permitting progressive forms. As Comrie elaborates in English the verbs of inert perception like 'see' and 'hear' don't have progressive forms generally but these verbs can have progressive forms in Portuguese. It can be argued in this case that these processes can be viewed as states or non-states (which is why Portuguese permits the progressive form of these verbs). Whether a language permits these forms (for verbs that can be expressed as states or dynamic situations) is arbitrary.

2.2.3 Aspect and Klein's TT-TSit Contrast: 0-States, 1-States and 2-States

As mentioned in the previous section aspect relates the topic time TT to the time of the situation TSit (Klein, 1994). TSit can follow TT, precede it or be partly or fully

contained in it. Although, there are many possibilities of representing these relations, most languages only employ a subset of these relations. For Klein (1994) there are two factors that determine how TT is related to TSit: the lexical content (referring primarily to the inherent temporal nature of the event/process/state) and the use of specific grammatical devices (morphological marking on the verb, for instance).Klein (1994) gives three main possibilities for how TT can be related to TSit:

TSit fully includes TT

TSit partly includes TT

TSit excludes TT

Lexical content plays a very important role in determining the relation between TT and TSit. If the time for a particular situation is very long, for instance, then TT is naturally included in TSit. Aspect is grammaticalized in many languages but the interpretation of aspect is still dependent on the lexical content and a particular grammatical device, a morphological marking on the verb alone, for instance can't independently determine the aspect. This is related to the three states mentioned in the preceding section: 0-state, 1-state and 2-state (c.f. see section 2.1.2), which are discussed below.

In the case of 0-states there is no TT contrast hence if the situation linked to one TT, it is linked to any other TT as well – hence the TSit of 0-states always includes TT. Klien (1997) argues that even in the case of very general assertion, the TT cannot be outside the TSit for 0-states. For example, it is not possible to say: '*three plus five is making eight'* or '*the book has been in English'*. It is because of this reason that it seems awkward to say that '*The king has been dead'* – as the TT in this sentence is located after the TSit and TT includes TU but since if someone is dead at one time, they would be dead for all timer intervals after that hence this sentence seems unusual. On the other hand, if we say that '*the king has been dead for five days'* it becomes felicitous because it is possible that the post time is located five days after the death of the king.

1-states include a TT contrast to both the right and the left. In the case of 1-states the TSit can fully include or exclude the TT or be partially included in the TT. Thus, the situation does not have to be confined to the TT but it can extends to the pre-time and post-time of the situation. For example, consider the following sentences:

1. There was a teapot on the kitchen counter.

2. He was sitting on the couch.

In both of these sentences the TT is located before the TU as it the situations are in the past but the TSit in (1) of the teapot being on the kitchen counter and in (2) of the person being sitting on the couch the TSit is not limited to the TT as the teapot might have been on the counter before the TT and could be there even at the TU, same is the case for (2). So, the TSit fully includes TT. It is possible that the TSit only partially includes TT; for instance, in the sentence 'Annie slept' the TT includes Annie's not sleeping and Annie's sleeping. However, Klein (1997) contends that it is not because of the lexical content of sleeping (as falling asleep and waking up are different from 'to sleep) but rather because of the aspect marking on the verb. Similarly, TSit can exclude the TT in which case the TT can be either before or after the TSit. In English if the TT is located in the post-time of TSit, it is expressed through the perfect. Consider the following examples:

3. He has driven home without taking a break.

4. He was about to drive home without his glasses.

In (3), the time for which the assertion is being made is after the driving home situation whereas, that is TSit is before TT', and in (4) the situation is located after the topic time. Example (4) expresses 'a prospective aspect' and English doesn't have a specific way of marking it but the 'going to' constructions are usually used to express such or similar meaning.

Moreover, if the TT coincides with the TU, that's we use present instead of past, there is an asymmetry between how the present combines with TSit located before TT in which the TSit has to be in the past: if *he has driven*, it follows that *he drove* and that *he was driving* – hence there is a TT´ that falls in the TSit – but we don't need a TT´ for 'going to' construction to which the TSit can be hooked. Klein (1997) points out that this may be the reason why the TSit pre-time markers (or lexical devices) are also used to mark future tense.

2-states situation have more possibilities of linking TSit to TT as they have a source state and a target state. However, Klein (1997) argues (on the basis of Dhal, 1985) that most of the languages exhibit only few of these possibilities as in many cases only one of the two states is selected for aspect marking. This, then, results in a 1-state interpretation but the pre-time or post-time is -lexically characterized. In English the reference state is the source state. (elaborate p. 107-108)

The TSit-TT contrast can be expressed in the following way for various aspects:

Table 2

TSit-TT Contrast for Various Aspects

I.	IMPERFECTIVE	TT includes TSit
II.	PERFECTIVE	TT is at TSit
III.	PERFECT	TT after TSit
IV.	PROSPECTIVE	TT before TSit

2.2.4 The Present Perfect: Tense or Aspect

The basic difference between 'perfect' and 'perfective' was discussed briefly in the preceding section. Klein (1997) argues that the inflectional or periphrastic form known as the 'perfect' can vary in its function across languages. The German *'Perfekt'* can have both the tense and aspect interpretation depending on how it is used. The English present perfect is often compared to the simple past tense, mostly because both present perfect and past express anteriority. However present perfect and simple past in English differ in the way they link temporal anteriority to time of the eventuality (Iatridou, Anagnostopoulou& Izvorski, 2001). Hornstein (1990) points out that the simple past links the speech time S to be after Reference time R ($R < S$[2]), but the present perfect places the event time E before the reference time ($E < R$).

Moreover, perfect can be used in a variety of ways which leads to several semantic puzzles. The perfect can be used in an existential sense, in which case the event is located at some point in the indefinite past. In addition, perfect can be used in a universal sense in which the predicate holds over the entire period that may or may not extend the present (depending on the context), for example: *Miriam has lived in Lahore*.

Similarly, the meaning of present perfect in English include 'temporal recency' as in the sentence *I have broken the window.* As Kuhn and Portner (2002) point out, the fact that the present perfect combines with temporal adverbials that express present time intervals (or intervals including the present) but never those that express intervals totally preceding the present shows that the meaning of 'recency' is part of the present-perfect's

[2]Reference time occurs before Speech time

meaning; for example it is possible to say that *I have bought two dresses since Saturday,* but not **I have bought a dress last week.* Iatridou, Anagnostopoulou and Izvorski (2001) argue that it seems unusual that past-oriented adverbs are not compatible with the present perfect as it does encode anteriority or precedence. It is interesting also that where '*since'* can be used with present perfect, it is not compatible with simple past.

How the present perfect is used also depends on the felicity conditions. *Einstein has visited Princeton* is infelicitous if someone say it today (this was noticed by Chomsky, cited by Kuhn and Portner, 2002), but *Princeton has been visited by Einstein* would be acceptable. As Kuhn and Portner (2002) further point out, the sentence *My mother has changed my diapers many times* is infelicitous when spoken by an adult.

Preset perfect has aspectual properties as well because it expresses a state that results from a preceding eventuality – which entails that sentences with present perfect present a state. On the other hand, simple past sentences get the aspectual properties of the main predicate and can therefore be statives or non-statives (Iatridou, Anagnostopoulou& Izvorski, 2001).

There are various points of view about the English perfect but as Klein (1997) adopts Comrie's classification of English perfects, the four types he lists will be discussed in this section. For Comrie (1967) the perfect is an essentially different aspect as it tells us nothing about the internal temporal constitution of a situation but rather relates a continuing relevance of a situation which has already taken place. The subtypes of perfect are as follow:

i. Perfect of Result

In this perfect the present state is caused by a past situation. For Comrie (1967) this is one of most typical instances of expressing the present relevance of a past situation. Hence, the major difference between '*I wrote an article'* and '*I have written an article'* is that in the former case the act of my 'writing a letter' is still relevant. Similarly, in the case of the sentence '*The director has arrived',* the arriving is relevant to the present situation in some way. However, the perfect does not indicate what the results or relevance of a situation are to the present, only that there are some relevant continuing results. The type of perfect is only possible with telic predicates (Iatridou, Anagnostopoulou& Izvorski, 2001).This can be further clarified if we look at how different languages vary in the use of perfect. In Ancient Greek and Swahili perfect is used for what would account for stative present in

English. The Swahili *a-me-choka* (literally 'he has got tired') translates to English '*he is tired'*. The languages that don't have a perfect, the past tense is used to express similar situations. In Mandarin Chinese the particle *-le* is used to indicate perfectivity and relative past and in the case of stative predicate it expresses a state which results from a previous situation: *dŏngxi guǐ-le* which translates to 'things are expensive' but has the implication that things have become expensive and they were not expensive before.

ii. Experiential Perfect

The experiential perfect expresses that a situation has taken place at least once before the present. This can be illustrated through the difference between '*my sister has been to China'* and '*my sister has gone to China'*. The latter is a perfect of result and tells us that my sister is now in China, but the former only tells us that at some point in the past (at least once), my sister went to China. In English there is so distinct form to express experiential perfect but other languages do. The Chinese suffic *-guo* marks the contrast between "*nchi-le yrichi mei-you* 'have you eaten the shark's fin? ' and *nr chi-guo yucht mei-you*' have you ever eaten a shark's fin? ' (Comrie, 1967, p. 59).

The time during which the situation occurred lasts from unspecified past time to the present generally, but it can also be restricted for instance in the sentence '*I have been to the hospital since you called me'* which means that a left boundary can be *set* for the situation.

iii. Perfect of Persistent Situation – Universal Perfect

This form of perfect expresses a situation that started in the past but continue to the present: '*we have been living here for ten years*. This type of perfect is also referred to as the 'universal perfect' the literature and it is formed only if used with stative verbs or adjectives or with a progressive form (Iatridou, Anagnostopoulou & Izvorski, 2001). Comrie (1967) elaborates that many languages use present tense for similar situations including German and French which entails that the 'universal reading' meaning is not part of the core-meaning of the present perfect. The use of perfect for these situations is not unusual as the situation includes both the past and the present.

iv. Perfect of Recent Past

The perfect of recent past expresses a situation which occurred very recently. As there is temporal closeness between the present and past situation, it is possible to use temporal adverbs that show that the situation is 'recent'. For example, it is possible to say '*I have*

recently gotten to learn the names of everyone in the group' in contrast to '**I have gotten to know the names of everyone last week'.* This again varies across languages as in Spanish it is possible to say that '*I have been to the hospital this morning'.* For Comrie (1967), as the perfect combines both the present and the past, languages can vary in terms of how much 'the perfect form' is linked to the present or the past.

2.2.5 Existential/Universal Perfect Distinction and The Perfect Time Span (PTS)

The term 'existential perfect' is often used in existing literature as an umbrella term for resultative perfect, experiential perfect and perfect of recent past (Iatridou et al., 2001). Existential perfect (E-perfect/E-reading hereon) is often contrasted with universal perfect (referred to as the U/E distinction hereon) with respect to whether the time span encoded by universal perfect is different from that of existential perfect. This ambiguity is attributed to be a sematic one by some and a pragmatic ambiguity by others (see Iatridou et al, 2001 for a detailed account). The pragmatic accounts see the universal perfect (U-perfect/U-reading hereon) as a limiting case of the existential perfect because in the universal reading there is an ambiguity regarding the duration of the eventuality expressed by the stative predicate. The perfect locates the time for which situation hold before (as preceding) the reference time but it is not specified whether the eventuality hold at and after the reference time is not clear – giving rise to the ambiguity.

However, on the semantic account the U-perfect is not a limiting case of E-perfect because as soon as we prepose the adverb in sentences like *I have lived in Lahore for five years*, only the universal reading is available – and if the U-perfect is a subcase of E-perfect, it should entail an E-perfect. In addition, on the E-reding in the sentence *She has been in Lahore since Tuesday* the set of possible intervals in which the state of being-in-Lahore holds does not include Tuesday but on the U-reading it is. Thus, U-reading cannot be a subcase E-reading.

Furthermore, E-perfect allows simultaneous eventualities reading in embedded clauses. Consider, for example, the sentence *Anne claimed that Millie was sick* warrants a simultaneous reading. In the same way, when we have a clause embedded under a present perfect predicate like *Anne has claimed many times that Millie was sick since last Monday*, the two eventualities can be interpreted to be contemporaneous. But the U-perfect does not allow the simultaneous interpretation as in the case of *Anne has been claiming that Millie was sick since last Monday* (this only has an interpretation that Millie's being sick precedes

Anne claiming event). These arguments lend support to the semantic argument for the U/E-readings.

Iatridou et al (2001) discuss the semantics of U/E-perfect in details and introduce the perfect time span (a time span which is different from the time intervals introduced earlier: E, R, U by Reichenbach and TT, TU and TSit by Klein, 1994). They argue that in U-reading, the eventuality is true for the entire interval expressed by the adverbial and the endpoints of this time interval. With present perfect the time of utterance is naturally included in the time span. U-reading is never possible without certain adverbials and anteriority is not part of the meaning of the perfect participle.

Thus, Iatridou et al. (2001) assert that the difference between the U and E readings is a semantic difference and not a pragmatic one. The time interval for which the perfect accounts for is termed as the ***perfect time span*** by the authors. The left boundary of this time span is defined by the argument of the adverbial and the right boundary is specified by the tense. Hence, in present perfect the right boundary includes the time of utterance and in past perfect it precedes the utterance time. In future perfect the utterance time precedes the right boundary. In the U-reading of present perfect, the predicate holds true at the left boundary by assertion, similarly the predicate's time span includes the time of utterance by assertion (it is entailed). This can be further substantiated by the following sentences:

*She has been working at the clinic since 2005 but she is not working there now.

*We have lived in this house for twelve years but we don't live here anymore.

Because the eventuality holds true for the entire perfect time span and since in the case of the present perfect the right boundary includes the time of utterances, these sentences lead to contradictions (specifically the second clause of each of the above two sentences).In the U-perfect readings of past perfect (pluperfect specifically), the right boundary is set in the past with respect to the utterance time because of the past tense and the same holds for future perfect. The earlier accounts of the U-perfect had asserted that on the U-reading the time interval of the predicate only extends till the time of utterance and its left to the context whether the assertion also extends through/including the utterance time.

As it was mentioned earlier, the U-reading is available only when used with certain adverbials. So individual statives like *being tall* or *having blonde hair* cannot be used in the perfect without the adverbials. For example: **She has had blonde hair*. This is because

individual level predicates are supposed to hold true for an individual's entire life. Stage level predicates, however, can be used without adverbials as in *She has been sick* which can have both the E and U-readings. However, Iatridou et al. (2001) contend that on the E-reading (which doesn't include the utterance time), this sentence has the meaning that *She has been sick lately* (and is not anymore). So, the *lately* is either covertly present or indicated anaphorically by the context. The authors argue that this is actually not a U-perfect but a 'perfect of recent past' because in Bulgarian the same cannot be expressed with a perfect and if the speaker wants to indicate that the person in question is still sick, they would have to use the present and if they are not sick anymore the past.

The perfect of the progressive is usually assumed to have the U-reading only. Iatridou at el. (2001) remark that it is possible to say *I have been eating your cookies and now they are all finished* which entails that the U-reading is not always available for the perfect of the progressive. The authors postulate that the U-reading is available only with certain adverbials and the perfect of the progressive does not have the universal reading in isolation. The U-reading is possible with some adverbs and obligatory with some:

Possible U-Perfect: since, for X days

Obligatory U-Perfect: at least since, ever since, always, for X days now

The possible and obligatory U-readings of the perfect are associated with the two levels of adverbs, viz. perfect-level and eventuality-level adverbs. Iatridou et al. (2001) claim that the perfect level adverbs are located higher (in the structure/tree) than the eventuality level adverbs – thus the perfect morphology is higher in the structure than the eventuality.

2.2.6 Some Other Proposals about Aspect

In the preceding section, we saw that aspect can be analyzed in terms of how the speaker views a given situation. Filip (1999 & 1993) has proposed an alternate aspectual system on the basis of the telicity/atelicity distinction which I briefly discuss here as it relies extensively on formalization. States and activities are atelic whereas accomplishments and achievements are telic. Filip's (1999) proposal, which is built on Filip (1993), is based on the notion of cumulativity and quantization of eventualities. Cumulativity is defined as follow:

If a predicate is cumulative iff when if it is applicable on x and y, it is also applicable on the sum of x and y. Cumulativity requires that the predicate applies on two distinct entities at least.

$$\forall x,y\ [[P(x) \,\&\, P(y) \rightarrow P(x + y)] \,\&\, \text{card} \geq 2]$$

Quantized is defined as follow:

If a predicate applies to x and y, y cannot be a proper part of x.

$$\forall x,y\ [P(x) \,\&\, P(y) \rightarrow \neg\, y < x]$$

Filip posits that the perfectivity-imperfectivity aligns with the telicity-atelicity characterization. Her main argument is that semantic ingredients of both these sets of properties have the same mereological components. The perfective is characterized by a holistic interpretation of a given eventuality – the same can be said about telicity. Therefore, Filip proposes that perfective is a function that maps eventualities as total events. With the perfective, eventualities are expressed as integrated whole, in their totality. Similarly, imperfective function doesn't specify the eventuality as complete or total as imperfectivity can express culminated eventualities as well. Imperfective serves to relate an eventuality to its parts. For Filip (1999) the interpretation of imperfective-function is context dependent.

On Filip's approach every eventuality expressed with the perfective is telic. The perfective eventuality can be a result of transition into a state, activity, accomplishment or achievement. This proposal is useful in accounting for the statives expressed with perfective in particular (Borik, 2006). A perfective form used in the case of stative can be posited as a transition from not-being in that state to being in that state. Perfective statives are characterized through the quanitization property instead of cumulativity – although Filip assumes that all perfective predicates are quantized. Quanitization is needed to put temporal and spatial limits on events when they are expressed in their entirety. This proposal is not, however, without drawbacks. As we have seen perfectivity and telicity do not always co-occur. Borik (2006) also contends that the analysis of Russian data doesn't uphold Fillip's proposition that perfective predicates are essentially telic. Borik elaborates that there is no fundamental link between perfectivity and telicity; in her opinion the approaches mixing up the two are aiming to conjoin two separate system which, in reality, work independently.

De Swart (1998) has developed another proposal within the framework of Discourse Representation Theory (DRT). De Swart argues that both lexical aspect (or aktionsart) and grammatical aspect have the same underlying model-theoretic notions. She introduces states, processes and events as ontological entities in her model. In this model aspectual information is encoded on three levels which form a nested structure as follow:

[Tense [Aspect [Eventuality Description]]]

The type of the eventuality determines the eventuality description at the first level. At this level a correspondence is established between the eventuality as an ontological entity and the eventuality description. Borik (2006), however, counter argues that this can lead to problems as if an eventuality is expressed as terminated or delimited it does not have to be terminated or delimited in the real world.

Telic eventualities are taken to be 'events' in De Swart's Model in contrast to states which are homogenous. Events in this system can be quantized but not states. The contrast between the two is explained on the basis of the progressive entailment test:

a) Ali was reading $\models$[3] Ali read.

b) Ali was reading *The Alchemist* $\not\models$ Ali read *The Alchemist*.

In (a) the eventuality is homogenous so we can infer that the Ali read but in (b) the eventuality is quantized and therefore the entailment is blocked. On the next level the aspectual operator applies which maps one type of eventuality to another eventuality type. The application of progressive can map an event into a state, for example. It should be noted, however, that more than one type of operator can be applied on an eventuality at this level – perfective + progressive, for example.

At the third and last level, only some information regarding aspect is specified through the tense. Tense operators are sensitive to eventuality types as well. For example, the French *passé simple* and *imperfait*. *Passé Simple* requires a quantized event whereas *imperfait* requires a homogenous eventuality type. The level of aspect in De Swart's model corresponds to view-point aspect discussed in detail earlier in the chapter.

[3] x $\models$ y means x semantically entails y. x $\not\models$ y means x does not semantically entail y.

2.2.7 Existing Studies on Aspect in Russian, French and Mandarin Chinese

The perfective/imperfective distinction utilized for aspectual categories is more explicitly expressed in Slavic languages. In Russian lexicon each verb is labelled either as perfective or imperfective and verbs are modified through affixation or stem alternation (de Swart, 2012). Imperfective is the predominant form in Russian and it is available for all situation types. Russian verbs combine with various prefixes to express a range of meanings. Verbs that only differ in aspectual value form an aspectual pair. For example *pisat* (imperfective) 'write' and *na-pisat* (perfective) 'write'(de Swart, 2012).

Various semantic and syntactic concerns regarding aspectual characterization in Russian has been extensively studied (Forsyth, 1970; Gladney, 1982; Smith, 1997; Janda, 2008; Gerasymova, 2012). Gladnery's (1982) study sheds light on the syntax of bi-aspectual verbs in Russian. As most of the verbs in Russian dictionaries are labelled for their aspectual values (either perfective and imperfective). Gladnery's study attempts to account for over 600 verbs which are labelled as bi-aspectual in Russian grammars and represent an anomaly.

Smith's 1997 work on aspect is one of the most comprehensive and preliminary works available on aspect. The theoretical part relevant to perfective and imperfective aspect has already been reviewed in sections 2.2 and 2.3. Smith's (1997) book also includes a detailed overview of aspect – both grammatical and lexical – and semantic/pragmatic issues in Russian, French, Mandarin Chinese and Navajo. According to Smith (1997), the Russian verbs carries information about both the viewpoint aspect and situation type. See the following examples, from Smith (1997, p. 229)

prostit'	proshchat'
to forgive (perfective)	to forgive (imperfective)
priobresti	priobretat'
to acquire (perfective)	to acquire (imperfective)

In addition, Smith (1997) elaborates that the perfective aspect in Russian expresses dynamic eventualities and requires that the bounds of the situation are specified. Perfective is available not available in Russian for statives. Consider the following examples (quoted from Smith, 1997, p. 230):

a. On posidel v parke
   He sat for a while[Perf] in the park. (Activity)
b. On napisal pis'mo
   He wrote[Perf] a letter. (Accomplishment)
c. On stuknul v okno
   He knocked[Perf] at the window. (Semelfactive)
d. Vanja vyigral matč
   Vanja won[Perf] the game. (Achievement)

Accomplishments and achievements are intrinsically bounded but activities are not. Therefore, the prefix in the sentence in (a) above bounds expresses a bound for the activity. In comparison to the perfective, the imperfective in Russian is available for all situation types and is the dominant viewpoint aspect in the language.

In another study, Janda (2008) sheds light on the prototypical status of motion verbs in Russian and their primary role in the grammaticalization of aspect in Russian which happened gradually over the course of time. Janda argues that motion verbs provide a conceptual basis for the understanding of such notions as process, progress, result and repetition:

> Semantically, motion verbs provide the concrete source domain anchor for understanding the temporal dimensions of the events and situations described by other verbs. Relevant concepts such as progress, result, process, and repetition can all be motivated on the basis of metaphorical extension from motion verbs. Formally, motion verbs lexically mark a distinction that governs the formation of Perfectives for all verbs. The cluster structures of motion verbs display the full range of aspectual relations available for verbs in Russian, and the clusters of other verbs have either the same structure or a reduced variant of it. These facts point to a robust interaction between lexical meaning and aspectual behavior in Modern Russian… The structure of aspectual clusters implies a hierarchy among Perfectives, placing Natural Perfectives in the privileged position of the central prototype, followed, in order of decreasing prototypicality, by Specialized Perfectives, Complex Act Perfectives, and Single Act Perfectives. The asymmetry of such a hierarchy justifies certain synchronic and diachronic expectations concerning grammaticalization. (Janda, 2008, pp. 187-188)

Janda (2008) posits that if the grammaticalization occurred synchronically, it would be expected that the grammaticalization would be most complete at the prototype and to a lesser extent at the periphery. This is borne out by the empirical study carried out by Janada on Russian verbs. Janda (2008) further argues that the grammaticalization of aspect in Russian may have been because of the change in the role of 'determinacy'. With the grammaticalization of aspect and formation of aspect clusters, the notion of determinacy expanded to completability and eventually became incorporated in the verbal lexicon. The various types of perfectives became the new means of the expression of determinacy: "where Determined meanings motivated the derivation of Natural and Specialized Perfectives, and Non-Determined meanings motivated the derivation of Com-plex and Single Act Perfectives" (Janda, 2008, p. 193).

Gerasymova's (2012) sheds light on how Russian aspectual system can be approached under the Fluid Construction Grammar which provides a formal system for indexing lexical and grammatical constructions and their meanings. Gerasymova's (2012) study is more relevant to computational linguistics.

Aspectual system of Romance languages including Italian, Spanish and French is characterized by the close association of aspect and tense in the language. According to de Swart, (2012), in French tense and aspect are 'morphologically fused'. This leads to a close connection between tense and aspect in French: "The aspectual contrast between the French Passé Simple (PS) in (a) and the Imparfait (Imp) in (b) below resembles that between the Simple Past and the Progressive" (de Swart, 2012, p. 12):

a. Il écrivit sa thèse en 2009. [French]

He wrote.PS his thesis in 2009.

'He wrote his thesis in 2009.'

Il l'a fini en Septembre.

He finished in September.

#Je pense qu'il est en train d'écrire la conclusion maintenant.

#I think he is writing the conclusion now.

#Il n'a jamais fini, car il est mort en Septembre.

#He never finished, for he died in September.

b. Il écrivait sa thèse en 2009.

He wrote.IMP his thesis in 2009

'He was writing his thesis in 2009.'

Il a fini en Septembre.

He finished in September.

Je pense qu'il est en train d'écrire la conclusion maintenant.

I think he is writing the conclusion now.

Il n'a jamais fini, car il est mort en Septembre.

He never finished, for he died in September. (Examples from de Swart, 2012, p. 12)

The perfective/imperfective variation is available for the past tense only in French through *passé composé/passé simple* and the *imparfait* (Smith, 1997). *Passé composé/passé simple* is used to express situations which are viewed as complete, whereas the *imparfait* is used for situations viewed as in-progress or to express habituality. Furthermore, French is one of the few languages in which the perfective, imperfective and neutral viewpoints can be used for all situation types (Smith, 1997).

Andrews (1992) illustrates the difference in English and French past tense variations with respect to their aspectual meanings. This study is significant as French equivalents of English past constructions differ in their aspectual values. Andrews argues that the English simple past and French *passé composé/passé simple* don't express the same meaning. For instance, the English expression "as I walked, I though about…." does not express perfective meaning. To express the same meaning French requires the *imparfait* '*je marchais*' and not the perfective *'j'ai marche'* (Andrews, 1992, p. 284).

In another study conducted on French, Homer (2011) sheds light on the interaction between French modals and perfectivity. This study is based on the earlier observation of Bhatt and Hacquard according to whom if a circumstantial modal appears in the perfective in languages that have distinctly separate morphology for perfective and imperfective aspect, it is possible to infer the truth of the complement of modal in the actual world. This

inference is termed as actuality entailment (AE) by Homer (2011). See the following example given by Homer (2011, p. 106):

Olga a	pu_{abil}	soulever un frigo	#Mais elle	ne	l' a	pas	fait	
Olga has	can-PP	lift	a fridge	but	she	NEG it has	NEG	done

'Olga had the capacity to lift a fridge. But she didn't do so.'

Homer (2011) posits that the presence of actuality entailments is not necessarily associated with the presence of root modal under the perfective but rather a case of aspectual coercion. Furthermore, he argues that root modal predicates are stative and stative are not suitable complements of the perfective. Therefore, when root modals occur under the perfective, they are coerced. This is substantiated by the fact that some non-modal statives under perfective lend actuality entailments.

Arche (2014) focuses on a re-analysis of imperfective (including examples from French) and argues that if we take a constructionist approach to grammatical aspect, it does impact the situation-aspect of predicates. This is contrary to the most of the earlier approaches to imperfective specifically as it has been thought to exert a coercive role as a de-telicizer/de-stativizer. Arche (2014) argues that the viewpoint aspect heads don't modify the situation-aspect properties of predicates as contrary to earlier proposals viewpoint-aspect properties are nor always in opposition to situation-aspect properties:

> [not] all combinations are equally natural (e.g., some states with the progressive do not seem viable); rather, this means that when a combination is given in the syntax, viewpoint-aspect heads do not alter the nature of the predicate… different imperfective readings (e.g., progressive, continuous, and habitual) emerge from a specific syntax-semantics based on interval-ordering predicates and quantifiers… the component that unifies all the imperfective readings is the interval-ordering component, which is what shows as Imperfect morphologically…[the progressive] always gives the interpretation that part of the eventuality has been substantiated and does not turn heterogeneous predicates into homogeneous ones; that is, it does not have an antitelic power… the progressive cannot be associated with the imperfective only but can also be associated with perfective forms… the

> correlations between the syntactic-semantic representation and the morphology... vary across languages; the fact that only one form is shown morphologically (e.g., English past tense) does not necessarily mean that the language does not have different semantic components represented in the syntax. The proposal that homogeneity or heterogeneity is a property that depends on syntactic structure and that it does not correlate with given aspectual forms casts doubt on the correlation very often assumed between (a)telicity and (im)perfectivity. (Arche, 2014, pp. 827-828)

Sino-Tibetan languages including Mandarin Chinese don't have verbal tense and employ a rich aspectual system (de Swart, 2012). Aspectual values are expressed through separate markers in Mandarin in contrast to English, Slavic and Romance languages in which grammatical aspect is expressed through inflections on the verb. This entails that sentences can have different temporal interpretations if they are no aspectual markers. Consider the following examples:

a. Lisi hen jushang
   Lisi very depressed
   'Lisi is very depressed.'

b. Zhangsan dapuo yi-ge huaping
   Zhangsan break one-cl vase
   'Zhangsan broke a vase.' (de Swart, 2012, pp. 19-20)

Without temporal adverbials and aspect markers, sentences expressing atelic situations get a preset tense interpretation. However, sentences with telic situations get a past time reference. Huang (1987) provides a detailed account of the aspectual system in Mandarin Chinese. This study examines in detail the semantics of four crucial aspectual markers *le, guo, zai* and *zhe* in Mandarin Chinese.

Shirai's study (1998) reveals how the differences in the aspectual system of English and Mandarin Chinese arise from the varying degrees of grammaticalization of imperfective markers in these languages. Verbs like *si* (die) and *wang* (forget) express the point of dying and forgetting respectively in Mandarin Chinese but in English these verbs

don't entail the same. In English, similar verbs can be combined with the imperfective marker *-ing* (for example *he is dying)* but in Chinese they are anomalous with the imperfective marker *-zhe* which is also durative. Shirai (1998) argues that this is because of the difference in the semantics of aspectual markers rather than the differences arising from the differences in verb semantics. Therefore, it seems that imperfective markers in different languages have different functions in terms of focusing on different phases. The progressive marker *-zai* in Mandarin is also incompatible with achievements. Shirai argues that this is because:

> *zai* in Mandarin cannot focus on the process leading up to the endpoint, whereas English progressive can… The difference between Mandarin progressive and English progressive appears to be the different degrees of grammaticization. Mandarin *zai* still has the status of a lexical item (locative preposition), and in some cases it is still difficult to distinguish whether it is used as a progressive aspect marker or a locative preposition... On the other hand, English progressive can refer not only to a process leading up to the endpoint but also to habituals and futurates, which indicates a higher level of grammaticalization. (1998, p. 675)

In another detailed study on aspect in Mandarin Chinese, Xiao and McEnery's (2004) utilize a corpus-based approach and illustrate the various structural and semantic dimensions of both grammatical and lexical aspect in the language. Li (2012) examines how information regarding the temporal location (usually expressed through tense) and aspectual values are managed at different levels in Mandarin Chinese. According to Li, syntactic positions before and after the verb are associated with semantic and pragmatic functions. The position before the main verb is associated with temporal location, whereas the position after the verb with aspectual information, Li (2012) contends that this pattern can account for the historical change in the position of prepositional phrases in Mandarin. Furthermore, Li (2012) argues that aspectual reference in Mandarin is largely a discourse phenomenon and contextual information plats a crucial role in the interpretation of aspectual information: "the early appearance of overt temporal expressions in a discourse segment, be it a clause or a stretch of discourse, serves as an anchor or creates a scope for the temporal interpretation of the unit… By contrast, aspectual information pertains to the individual event and is thus managed locally at the clause level" (2012, p. 2063). The author posits that this has psycholinguistic implications as in discourse temporal information is

provided before temporal location – which, in turn, entail that during language processing temporal location is processed before aspectual information. Aspect provides the temporal scope under which temporal location is processed.

2.3 Temporality and Lexical Content: Types of Situations

Situation vary in terms of their inherent temporal features which are independent of the tense and grammatical aspect that may be used to express them in language. The term *lexical aspect* is used for the inherent temporal properties of situation types. Vendler's (1957) division of verbs into four categories based on their semantic content is still widely utilized in discussion on lexical aspects – with some refinements. Vendler notes that verbs which describe activities like running, working, etc., express actions that 'consist of successive phases following each other in time.' As a result, it is natural to express events by means of a 'continuous tense', i.e. a verb in the progressive form (John is running).

Vendler characterizes verbs that describe activities as processes. By contrast, states do not involve successive phases, as a result, they sound odd in the progressive form, e.g. *John is knowing (the oddness indicated here with an asterisk). Vendler (1957) also observes that 'while running or pushing a cart has no set terminal point, running a mile and drawing a circle do have a ''climax''.' He points out that a man who stops running did run, while a man who stops running a mile didn't run a mile. Similarly, running for half an hour involves running for every subperiod within that half hour, whereas having run a mile in four minutes precludes having run a mile in any subperiod. Thus, processes are distinguished from a further class of events that culminate, called accomplishments. Processes allow adverbials with 'for' but sound odd with 'in', as in pushing a cart for/*in half an hour. Accomplishments have the opposite behavior, e.g. draw a circle in/*for twenty seconds. Vendler then goes on to distinguish the class of achievements, namely events like reaching a hilltop or winning a race that can be predicated for single moments of time. Since achievements don't extend over time, they can't in general co-occur with 'for' adverbials.

Smith (1991) classifies events into five categories based on the categories initially given by Vendler (1957). Smith (1991) contends that the situation type of a sentence is conveyed by the verb and its arguments, the verb constellation – as she terms it. Verb constellations are associated with a given situation type according to temporal features.

However, the relation between verb constellations and situation types is not one-to-one – they can be associated with several situation types. This variation is due to the range of aspectual information available to the speakers; sentences may present a situation in its entirety (in the perfective aspect), or focus on the beginning of a situation. Smith divides situation types into five categories based on three temporal properties: dynamism, telicity and duration. Stated as semantic features, the properties form three contrasting pairs. The features are expressed compactly with the plus and minus valued (see table below).

The *Static/Dynamic* distinction is a basic one. Situations are either static – states – or dynamic, that is, events which are constantly subjected to new input of energy. Events, because they are dynamic, consist of successive stages which occur at different moments, and thus have the 'stage property'. Events take place in time. In English, an event occurs, happens, takes place, while a state holds or obtains.

Events, in addition, can be *telic or atelic*. Telic events have a change of state which constitute the outcome, or goal known as *the telos*. When the goal is reached, a change of state occurs and the event is complete. The category of telic events includes events without agents. A rock falling to the ground from a cliff is a telic event: the final endpoint is reached when the rock is on the ground. To avoid agentive connotations, it can be said that telic events have a natural final endpoint or intrinsic bound. In contrast, atelic events are simply processes. They can stop at any time: there is no outcome. In other words, atelic events have arbitrary final endpoints. The feature of telicity is grammaticized in many languages.

Similarly, situations are either *durative or instantaneous*. The notion of instantaneous is conceptual, an idealization. An event such as [win the race] may take several milliseconds, strictly speaking, without marring its categorization as 'instantaneous'. Durative situations can be used with inceptive and terminative morphemes but instantaneous events are ungrammatical with these morphemes:

I began to build the wall. (durative and inceptive)

I stopped building the wall. (durative and terminative)

I finished building the wall. (durative and terminative)

*The balloon finished exploding. (instantaneous + termination)

Smith (1997) remarks that the main difference between events and states is that events are heterogenous in the sense that they include a change of state and thus don't have

a uniform mereological (part-whole) structure whereas states have a uniform structure (if a state hold for an interval 't', it also holds for all the sub-intervals of 't'). Events occur in successive stages but states range over an undifferentiated time period. The clusters of features that distinguish the situation types are as follows:

Table 3
Situation Types and their Temporal Features (adapted from Smith, 1997)

Situations	**Static**	**Durative**	**Telic**	**Examples**
States	[+]	[+]	[-]	be hot, cold, tall, dark, young, thin, square, long, jagged; feel, experience, see, think, love, hate
Activity	[-]	[+]	[-]	walk, swim, fly, paint, write, eat, snore, breathe, sleep, dream, speak, sing, run, watch, snow, seek, sit (around), read in a book, paint away at a fence, eat cherries
Accomplishment	[-]	[+]	[+]	walk to NP, fly to NP, paint NP, write NP, eat NP, wash NP, tell NP, sing NP, bake NP, destroy NP, create NP, sit out NP.
Semelfactive	[-]	[-]	[-]	break, knock, hit, rap, shatter: (once); some of these verbs have a repetitive meaning in which case they are not semelfactive
Achievement	[-]	[-]	[+]	arrive, reach succeed, pass, win, lose, gain, die, happen, acquire, find say, claim, declare, aver, recognize

For Smith (1997), the notion of causation plays an important role in how situations are conceptualized and expressed in languages. Thus, the causal structure of an event is one of its defining characteristics – the other being agent, instrument and action constituting the event. This causal chain can be represented as follows:

Cause ⟶ Subject ⟶ Action ⟶ Instrument ⟶ Object ⟶ Result

The causal chain can indicate the lexical span of a situation (verb constellation) which can tell us how much of this chain a situation covers. If we look at the difference between 'to arrive' at some place and 'to go' to someplace, we can see that 'arrive' has a shorter span towards the end of the chain as compared to 'to go' which covers a bigger part of the chain. Both of these verbs are telic but 'to go to China' is an accomplishment whereas 'arrive in China' is an achievement.

Smith (1997) elaborates that activities and semelfactives occupy the early parts on the chain as they don't have the stage of result. Accomplishments occupy the most part on

the entire chain and thus are more complex situation types. States occupy the end of the chain with a shorter time span. The following figure shows the spans various situations occupy on the causal chain:

Cause ⟹ Subject ⟹ Action ⟹ Instrument ⟹ Object ⟹ Result

Activity _____sing_____

Semelfactive _____Knock at the door_____

Accomplishment _____write a letter_____

Achievement _____reach the destination_____

State _____know French

In addition to the features discussed above, Jackendoff (1991) has introduced two other features that characterize various situation types: bounded and unbounded events. These features are based on the strong similarities between count nouns and bounded events, and mass nouns and undbounded processes. A count noun such as *apple* cannot be divided in such a way that we can refer to the parts by the same referent that refers to the count noun. On the contrary, a mass noun such as *water* can be divided and we can still refer to the resulting entity as *water*. The same criterion can be used to differentiate events from processes.

Each of the five situation types is discussed in detail in the following section based on Smith (1997).

2.3.1 Activities

As it was mentioned earlier, activities include processes primarily of physical or mental activity. They are dynamic, durative and atelic. Activities cannot be completed because they are atelic but they can terminate or stop. The part whole relation also applies to activities and they have a homogenous nature in the sense that what applies to ‘part of the activity’ applies to the whole as well. This relation is characterized through the entailment pattern of activities: if an activity holds true at a time ‘T’ then it also holds true for the sub-intervals of ‘T’. However, the sub-internal couldn’t be too small as it has it needs to exemplify the process – take running for example, the mere acting of lifting one’s foot cannot count as running. Activities can be time bound explicitly if used with time adverbials like ‘for one hour’ and ‘from 9 a.m. to 6p.m.’. When used with such time

adverbials activities become telic. Moreover, Smith (1997) points out that if an imperfective activity sentence is true for a time interval than a perfective activity sentence is also true for the same interval. If '*he was writing'* is true than '*he has written'* is true. This is true because activities are atelic and durative.

Activities can be further sub-divided to: *i*. unlimited processes like sleep, laugh, push; *ii*. have many internal stages as in eating grapes and; *iii*. derived or shifted activities. If degree predicates are used in a way that expresses the increase or decrease of the property, they also present activity events (but not when a degree predicates present an absolute presence or absence of a property, they are termed as 'vague predicates' by Dowty, 1979 cited in Smith, 1997). Derived activities include multiple event activities: '*she coughed for an hour'* include multiple events of coughing. In activities like 'revolve for an hour' the sub-events are cyclic. Some derived activities focus on some internal stage like 'keep on' and 'continue', as in the sentence '*she kept on walking to the gym'* the focus is on the 'walking to the gym' and not on the entire activity of 'walking' (Smith, 1997).

Activities sentences are formed by atelic verbs with complements or atelic verbs with mass nouns (eat mangoes, for example). There are forms that turn telic verbs to atelic verbs: *read a book* is telic but '*read in a book'* is atelic. Smith (1997) further contends that inceptive verbs also have the same characteristics as activities like 'begin to run' because they seem to be atelic unless there is information to point that there is end-goal. Activities with perfective aspect express situation as implicitly bound and with arbitrary endpoints whereas with imperfective aspect, the activities are presented as unbound and continuing.

2.3.2 Accomplishments

Accomplishments are similar to activities in that they also involve processes but they have a goal – an outcome or an end state. Thus, accomplishments include a change of state which lead to the end or completion of the process. They are telic, durative, and dynamic and comprise successive stages which lead to an outcome or an endpoint after which the process doesn't continue. The idea of completion is essential to accomplishments so unlike activities which can have an arbitrary endpoint (or termination point), they have natural endpoint – that are a natural outcome of the process. Moreover, accomplishments need to be necessarily viewed as processes which expand over a duration of time thus a 'person climbs a tree' and it takes time, if, on the other hand, someone to magically appear

on the top of the tree' we wouldn't be categorizing it as an accomplishment. This is known as 'non-detachability' of the process and outcome (after Dowty, 1977 cited in Smith, 1997).

The entailment pattern for accomplishments is different from that of activities, if an event occurs at a time interval 'T', then the process making up for it occur at the (internal) sub-intervals of that time interval 'T'. Moreover, not all accomplishments result in completion which is usually indicated by the use of progressive forms – specifically when the non-completion of the accomplishments needs to be emphasized. Smith (1997) argues that since accomplishments need some time to be completed, it is not possible to perceive them indirectly; hence we can only say that she crossed the road once the person starts from across the road and walks through it to the other end.

However, the outcome of an event cannot be inferred by just the process although it might be associated with it: '*I am writing a letter'* doesn't mean '*I have written a letter',* nonetheless the former does entail the latter. This phenomenon is referred to as Dowty's Imperfective Paradox in literature. For Dowty (1979), when the progressive is used with activities, it entails completion (or culmination): *Miriam was reading* implies that *Miriam read*. But when in the case of telic situations this does not hold as *Miriam was reading a book* does not imply that *Miriam read the book.*

For Dowty (1979), we could resolve this issue by taking into account the intentions of the agent to complete/accomplish a task or to bring about a state. However, this too leads to complications as it is possible to use the progressive without any salient agent such as *the rains are destroying the crops but perhaps they will stop before the corps are destroyed* (Dowty, 1979, p. 134). The same can be observed with some achievement verbs which don't usually occur with progressive: *Sam was dying* does not imply *Sam dies* (*Sam was dying but the doctor saved him*).

Parsons (1990), proposed a non-modal theory where the progressive changes the situation type from telic to atelic and thus we don't have a telic V that culminates at a particular time interval but rather an atelic situation that merely holds true at t. This approach doesn't say anything about the completion/non-completion but it does entail that the situation is incomplete. Hence Sam was reading *Syntactic Structures* implies that there was an event of Sam reading *Syntactic Structures* but he may not have finished it for some reason (or its completion is not relevant to the discourse).

Since accomplishments require a change of state, they may involve the experiencer (amaze people) or the object: the object can be affected (bend a wire), or constructed (write a poem), or consume it (drink milk). Accomplishments can also have a path-goal semantics like *waking from home to the hospital* or *teaching from 8 a.m. to 2 p.m*. These properties affect the way accomplishments combine with verb complements which usually adds information about the outcome of the process as in *'he bent the wire into a conical shape'*. Accomplishments can be derived by adding explicit bounds on to processes which makes the process into a telic event as they have specific endpoint but they are also different from telic events in the sense that they don't result in a change of state *' I walked on the bridge for two hours'* has a definite endpoint but this situation doesn't involve a change of state (in comparison to *'I walked to the bridge'*). However, Smith (1997) emphasizes that the difference is conceptual in terms of as when one covers some space one's location changes but the same is not assumed for time which gives rise to this difference.

Accomplishment sentences can be derived from atelic verbs and telic adverbs like '*he danced the waltz in ten minutes'*. The use of the adverb 'almost' makes the accomplishment sentences ambiguous because they involve a process leading to an outcome. So *'I almost answered the phone'* is ambiguous between two readings: I got to the phone and stopped or I didn't get to the phone at all. Smith (1997) adds that this type of ambiguity is specific to durative and explicitly bound sentences. The entailment pattern for accomplishments is similar to that of activities: if the sentence with a perfective viewpoint is true at interval 'T' then the same sentence is true with the imperfective viewpoint at the same time interval 'T': *I read War and Peace last month* entails *that I was reading War and Peace last month*. But the opposite entailment pattern doesn't hold for accomplishment: *I was reading War and Peace last month* does not imply that *I read War and Peace month* (there is an implication of completion with the perfective form, if the speakers uses it and they haven't in fact completely read War and Peace it would be pragmatically infelicitous). Indirect accomplishments occur in cases where an inceptive is used which express the initial stage of the process like 'I began to walk to the hospital'.

2.3.3 Semelfactives

Semelfactives are events with just one stage and no outcome. They are dynamic but not-durative, instantaneous and atelic (Smith, 1997). These events can be thought of as simple because they consist only in the occurrence of the event without any duration like

'knocking', bodily events as 'blinking' and 'hiccupping', internal events like 'flickering' (the light flickered), and actions like 'tapping', 'pecking', 'scratching' and 'kicking'. Because they just have one stage, they are bounded. The very term 'semel' means 'once' in Latin and comes from the use of this term to refer to the suffix marking a single event in Slavic. Although, semelfactives do take some time (no matter how small a period it is), they are perceived as instantaneous.

As semelfactives are instantaneous, they have a repetitive or iterative meaning with temporal adverbials like *for two hours*. Semelfactives have a limited distribution and are rarely used with imperfective viewpoint and adverbs of duration. However, sentences with semelfactives and adverbs of duration with imperfective aspect are not ungrammatical – they are interpreted as activities with multiple events. Smith (1997) observes that semelfactives are good with punctual adverbs and adverbs of indirect duration. But with the adverbs of indirect duration and with inceptive they express an ingressive meaning as the following sentences illustrate:

- She knocked on the door at noon. (punctual adverb)
- The bomb exploded in an hour. (ingressive reading)
- She slowly knocked on the door. (indirect duration)

2.3.4 Achievements

Achievements are telic evets which are dynamic and instantaneous. They also result in a change of state but this change of state is not considered as part of the event although the outcome or change of the state may be naturally associated with the event (Smith, 1997). Achievements are perceived as single-state events, thus an achievement sentence is true only for the moment of achievement: so *Miriam won the race at 2 'o' clock* does not entail that *Miriam was winning the race at 2 'o' clock* which can only be true the moment before Miriam won. The change of state in achievements is either very instantaneous as in the verbs 'find', 'break' or the lexical span of an achievement can be an outcome on the causal chain (see Figure 2) 'reach the destination', 'arrive at the airport', and 'recognize the suspect' (Smith, 1997). Achievements result in same outcomes as accomplishments and can affect the object (break a mug), construct an object (imagine a kingdom), consume an object (explode a bomb), affect an experiencer (see a ghost) and can present path-goal relation (reach the summit or arrive in Brazil).

Achievements need a preliminary stage in some but not all cases just like accomplishments do although they differ in terms of durativity as in the sentence 'reach the summit', the stage of actually scaling or climbing the mountain is a prerequisite instead of, for instance, being dropped at the summit by a chopper. It is unusual and not common to use adverbs associated with agentivity with achievements like *he deliberately found his wallet* seems odd. But this oddness arises from the fact that although achievements are controlled by the agent, the agent cannot control the end point: *looking for a watch* can be deliberate but *its finding* is not under the control of the agent. But Smith (1997) contends that this applies to only some of the achievements because it is completely grammatical and felicitous to say that *Miriam deliberately hit the tree.*

2.3.5 Statives

States are situation which occupy some duration but are not dynamic i.e. they are durative and static. Common examples of statives include 'own', 'be' and 'believe'. Statives are durative even when the property holds true for a little while, for example, *the temperature is 35 degree and it is rising* (Smith, 1997). Statives don't have an internal structure and require external agency to be changed. The intervals before and after the state are not part of the state. The intuition behind this is that states don't take time; because if a state holds for a particular time period, it must hold for the entire time period – if a state holds for time interval 'T', it holds true for every sub-interval in 'T'.

States include holding of concrete as well as abstract properties like 'possession', 'location', 'beliefs' and 'dispositions'. For Smith (1997), private predicates which include verbs like 'believe that …', 'hope that ….' and 'know that ….' are also statives, although 'think about …' is dynamic and hence an activity. Some predicates are individual-level predicates as 'be extinct' or 'be a human being' but other are stage-level which express transitory properties like 'be angry'. Derived statives are also individual-level predicates used for generic predication, as they express properties that are true of a certain class or kind, for example: *omnivores eat both plants and animal*. Habitual sentences also present derived statives as they express a pattern of events that holds consistently over a period of time. However, the stative interpretation of the habitual depends on the pattern of occurrence and a frequency adverb is mostly used as in *Anne drinks a cup of chamomile tea every night*. Habitual sentences based on derived statives differ from 'dispositional statements' in that they can be paraphrased with modals or by using specific dispositional

verbs: *Dan plays football* can be paraphrased as *Dan can play* football or *Dan likes to play football*. Habituals can be expressed by a morphological marker as in Navajo which has a habitual morpheme or through an aspectual viewpoint as in French where imperfective is used for habitual sentences.

Smith (1997) observes that language may differ in the use of viewpoint aspects with statives. In English, for instance, progressive is not generally used with states but in French all viewpoint aspects can be used with stative as well as non-stative situations. When the state is presented directly the lexical focus is on the state but states can be presented indirectly by the use of an inchoative, for example, which implies that the resulting stage continues as in the following sentences: *I became angry, She got tired.* Inchoativity can also be expressed by a suffix in many languages. In English it is expressed by the suffix *-en* and a zero variant like *whitened* and *yellowed*.

The property of 'dynamism' is expressed linguistically through agents which serve as source of energy or volition. As states are not dynamic, they don't have agents. Correspondingly, states don't allow imperative construction as one cannot say *Know French* and state cannot also be used with verbs like *command* or *persuade*. Moreover, adverbs of manner and instrument are not used with states as they are only compatible with event, for instance see the following examples from Smith (1997, p. 40)

*****Miriam carefully knew English.

*****The door was opened with a key.

States also don't occur in pseudo-cleft constructions with a pro-verb *do*so the sentence *What Jon did was know English* seems odd. Smith (1997) adds that the use of statives with adverbs of indirect duration like *slowly* as in the sentence *Mary was slowly sick* (p. 47). Similarly, inceptives are also incompatible with statives as they involve a change of state so we can't say that *Miriam began to be angry*.

2.3.6 States, Actions, Processes and Events

Another classification for situation types has been proposed by Lyons (1977 cited in Declerck, Reed & Cappelle, 2006). This classification is based on the realization of different kinds of verbs in relation to the entire verb phrase and subject of the clause. While based on the somewhat similar characterization as Vendler's, this classification lays emphasis on the semantic roles of the subjects as well in relation to verbs/verb phrases.

Lyons's classification is briefly discussed in this section as most of the categories correspond to Vendler's classification and the account here is intended to make the reader about the terminology essentially. Situations are divided into actions, processes, events and states in this classification.

Actions, processes and events are all dynamic situations – in that they constitute a number of stages and have an internal temporal structure. Actions differ from processes and events because they need an agent's active participation and are controlled by an agent. Events are not controlled by an agent in the same sense as actions do. *Aalia grilled the sandwich is an action* whereas *Ali slipped from the stairs* is an event. Processes don't require an agent as well but they are always durative and are realized in an incremental fashion. The incremental change in processes can be conceived as happening along a scale. *Change* and *develop* are typical examples of process verbs which signify change on an implicit scale. The category of states in Lyon's classification in similar to the statives discussed in the preceding section and correspond to situation types which are non-agentive and homogenous.

2.4 Aspectual Roles and Argument Structure

Aspectual properties affect how thematic structure and syntactic argument structure are mapped. Correspondingly, the interface between aspectual roles and argument structure is discussed in this section. Event are limited by the constraints imposed by various aspectual properties in relation to direct and indirect internal arguments and external arguments in syntactic structure (Tenny, 1994). The mapping of thematic structure and argument structure sheds light on syntax and lexical semantics interact – although only a few aspectual properties are relevant in this regard.

Tenny (1994) argues that *delimitedness* is one of the crucial aspectual properties in this regard. *Delimitedness* is another term used for *culmination* and alternately *telicity* with a few differences in the properties ascribed to them in different proposals by various authors. Both of these notions have already been discussed in detail in the preceding sections. Delimitedness is a property of predicates to have a distinct, specific and natural endpoint intime. *Ali ate a mango* is delimited as the event of consuming the mango requires a specific amount of time and has a clearly defined endpoint. *Ali ran*, on the other hand, is not a delimited event as the running event could have continued for an unspecified amount

of time. The various types of eventuality types have already been discussed in quite some detail in the preceding sections so various eventuality types are not discussed here although they are relevant to argument structure.

Argument structure plays a vital role in the interface of syntax and lexical semantics. The term 'argument structure' has been linked to varied definitions in literature but a common assumption in all is that every predicate has distinct lexical and syntactic representation which goes beyond lexical semantics (Tenny, 1994). Most of the predicates across languages comprise verbs. Verbs take specific types of arguments and lexical information encoded with the verb also includes the number of arguments it requires along with the semantic information about the arguments and the possible structure they allow when they combine with the arguments. Thematic roles which are also referred to as theta roles, therefore, are crucial in this regard as the semantic information included in theta roles (agent, theme, location, goal, etc.) specify the way in which argument will combine or link with an event. Thematic roles are, therefore, part of the semantic information associated with arguments.

A verb can have three types of arguments: external, direct internal and indirect internal. The term *external argument* refers to the noun-phrase (NP) argument of a verb projected outside the maximal projection of the verb phrase (VP). *External argument* of a verb receives a theta role from the verb through predication. The external argument of a verb becomes the subject in the syntactic tree. The internal arguments receive their theta roles from the verb. The *direct internal argument* is the NP governed by the verb at the deep-structure (D-structure). The *direct internal argument* is called direct because it receives its theta role directly from the verb. *Indirect internal arguments* get their theta role from a preposition or a case marker or from both the verb and the preposition. However, *indirect internal arguments* don't receive their theta role directly from the verb. All the NPs in a VP other than the *direct internal argument* are considered *indirect internal arguments*. The distinction drawn between these three arguments is entirely syntactic as it is based on theta role assignment and government relation in relation to phrase structure (at the level of D-Structure). Several aspectual roles in relation to each of the argument types are discussed in the following sections.

2.4.1 Direct Internal Arguments

Tenny (1994) provides an extensive discussion on how direct internal arguments interact with aspectual roles. Out of all the three argument types the direct internal argument is specifically fundamental in relation to aspectual information as it directly *measures-out* the eventuality expressed by the verb. *Measuring-out* is a term used to signify how the argument affect the temporal termination of an eventuality. Measuring-out has two components: one is a scale that measures the event in relation to the internal argument and the other is the temporal restriction of the event itself which we are referring to here as delimitedness. Measuring-out necessarily entails delimitedness but the reverse is not true.

There are three *measuring-out* constraints on direct internal arguments.

a) Direct internal arguments of verbs are constrained in such a way that any change in the simple verb has to be a measured-out event in time.

b) Only the direct internal arguments of a verb can measure-out an event.

c) A verb can be measured out only once for any event expressed by the verb.

In relation to aspectual properties, measuring-out as a semantic property is more easily associated with simple verbs in contrast to complex verb. Simple verbs, in this context, are verbs that take noun phrases (NPs) as arguments. Complex verbs on the other hand, can have propositions or clauses as arguments and thus associating measuring-out with these verbs becomes complex (Tenny, 1994).

The constraint of internal change expressed in (a) above issignificant in this regard in relation to the direct internal argument. For example, in the sentence *Ali gobbled up the soup in a minute*, the state of soup changes necessarily and in entirety although Ali also changes as a result of *gobbling up the soup*. Direct internal arguments are, therefore, necessarily constrained by this requirement of change. The second constraint imposed on internal arguments is that the event needs to be delimited – that is, have a defined endpoint. Lastly, the requirement to not-have more than one *direct internal argument* only constraints the verb from being measured out by another argument so the verb can have more internal arguments but they cannot measure-out the verb.

The first constraint on direct internal argument allows verbs to not express a measured-out event as well. If the verb does not undergo internal change, then it is not constrained by the measuring-out restriction. The property of delimitedness is relevant here

as is the stative/non-stative distinction. The non-delimiting verbs don't require change so the internal argument does not have to be measured-out. Following are some example of stative and non-stative delimiting verbs:

Direct Internal Arguments with Delimiting and Non-delimiting Verbs

Delimiting Verbs	**Non-Delimiting Verbs**
Non-stative Delimiting Verbs	***Non-Stative Non-Delimiting Verbs***
− Ahmed built a robot (in a day/*for a day)	− Ali knocked on the door (*in an hour/for an hour)
− Sara washed the car (in an hour/for an hour[4])	− Sam studied Persian (*in a month/for a month)
− The gelatin set (in an hour/*for an hour)	− Maria drove the car (*in an hour/for an hour)
	Stative Non-Delimiting Verbs
	− Aliya likes chocolate.
	− The lights blink.
	− I know French.

The *in x time/for x time* is used as a test to assess the delimitedness or non-delimitedness of events. *In x time* phrase can only be used with delimited events whereas the use of *for x time* entails that the event is non-delimited. Non stative verbs can change their class depending on the internal argument they combine with. Delimitedness, therefore, is a property not of verbs but of entire predicates so the verb phrase (VP) which includes the verb and the internal argument determines whether the predicate is delimited or non-delimited.

Examples in Table 2 illustrate how events measure-out internal arguments. The stative verbs, do not require that there in an internal change and lack an internal temporal constitution so the arguments of these verbs cannot be measured-out. The arguments of non-stative and non-delimiting verbs *knock* and *study* do not require change or motion of the object in the literal sense. The internal argument of the verb *drove* when used without a spatial limitation also does not undergo any internal change – although motion is involved certainly. We can see that the non-stative delimited verbs are delimited by their internal argument. A distinct change occurs in the state of robot and the gelatin which marks the end of the events of *building* and *setting* respectively.

[4] *She washed the car in an hour* has a delimited reading as it entails that the car was washed completely by the end o of an hour. *She washed the car for an hour* has a non-delimited reading as the car-washing might not have been completed.

Tenny (1994) elaborates that direct internal arguments can measure-out events in three ways corresponding to the type of verbs they are associated with: incremental theme verbs, change-of-state verbs and route verbs requiring path objects. Verbs of creation and consumption take incremental themes:

- I ate an avocado.
- He built this robot in an hour.

In both the above sentences the avocado and the robot are incremental themes as the event progresses as the nature of internal argument changes until the avocado is consumed fully and the robot is built entirely. Both the eating and building events in the sentences above are incremental as some quantity of avocado is consumed during each of the sub-internal of the event and the building also involves accomplishment of successive stage during the sub-intervals. When the avocado is completely consumed the eating events is also complete, similarly the building event is over when the robot is built completely.

The second form of verbs change-of-state verbs also involve measuring out of the event by the internal arguments. The meaning of resultant change of state is part of the lexical meaning of tehse verbs. Examples of change-of-state verbs include *ripe, crack* and *explode*. Tenny (1994) gives the example of *ripen the fruit* which illustrates how the event of ripening of the fruit is measured out according to the change in the state of the fruit becoming riper and riper and finally being ripe – acquiring the property of ripeness. The verbs explode and crack are also change-of-state verbs because when a thing *x* explodes or cracks there is an essential change in the state of *x*. The *exploded x* or *cracked x* marks the end of the exploding and cracking event although the events are not durative in the similar way as the event of ripening is – they are nonetheless delimited. The direct internal arguments of change-of-state verbs are measuring arguments although the measuring happens over a relatively shorter duration of time. With incremental-theme verbs, the event moves forth through the argument and eventually culminates. In the case of change-of-state verbs, the event is measured out by incremental change in some property associated with the verb.

Measuring-out is most apparent in incremental-theme and change-of-state verbs but the third type of verbs the route verbs requiring path objects also exhibit measuring-out. The internal objects of route verbs do not involve change in the same way as the other two types of verbs already discussed. See the example below:

a) Sara hiked Trail 5.

b) Ali climbed the tree.

The measuring out of the event in the above sentences occurs by the length of the hiking trail and the tree. Reaching the end of Trail 5 and the top of the tree mark the end of the hiking and the climbing events respectively. We can see that the internal arguments is this case do not undergo change the internal arguments of incremental-theme and change-of-state verbs do.

2.4.2 Indirect Internal Arguments

Only the direct internal argument an both measure out and delimit the event. Indirect internal argument, while they cannot measure out the event, do contribute aspectual information by expressing a temporal terminus (terminal point in time) for the event. Any indirect internal argument that participates in the aspectual structure is constrained by the following conditions:

a) In order to participate in the aspectual structure, an indirect internal argument need to specify a terminus for the event. This terminus delimits the event.

b) In order to have a terminus, an event also needs to have a path through which the terminal point in time is reaches – it can be apparent or implicit.

c) An event can only have one terminal point.

It should be noted here that both the notion of terminus and path are founded on the measuring-out semantics. Tenny (1994) asserts that only one type of indirect internal arguments can provide the event terminus for events namely *the goal*. The path object verbs discussed in the preceding section illustrate this notion because they are ambiguous between a delimited and non-delimited reading unless specified by a delimited adverbial phrase. See the examples below:

- Hike the trail for an hour/in an hour
- Climb the tree for an hour/in an hour
- Act the play for an hour/in an hour

Measuring out is optional with these verbs and is determined in part by the arguments. The presence of a goal, however, had a delimiting effect on the predicate and it disambiguates the predicate by clearly specifying a terminus:

- Hike the trail to its end in an hour /* for an hour
- Climb the tree to the top in an hour / *for an hour
- Act the play to the end in an hour / *for an hour

The unacceptability of the above predicates with for an hour phrase substantiates the delimitedness of predicates in these sentences. In the above sentence the paths along with the terminus measure out the event. 'Paths', therefore, can have externally imposed terminus which is different from measures which have natural end points. In Contrast when we look at the following sentences corresponding to the sentences mentioned above: *hike the trail in an hour, climb the tree in an hour* and *act the play in an hour*. In these sentences the terminus is embedded and not apparent. We need to assume an end point for the trail, the tree and the play. There is an entailment that the trail was hiked to its end, the tree climbed to its top, and the play performed till its ending. Hence, path-object verbs have a path argument which is apparent and an implicit terminus. The path is essentially one-dimensional which can be covered in a span of time. The terminus signifies the end of this path.

2.4.3 External Arguments

External arguments are different from both direct and indirect internal arguments because they are not directly a part of the aspectual structure. External arguments have a non-measuring constraint which stipulates that external arguments cannot delimit an event and an external argument cannot function as a measure, terminus or a path. Verbs specify what happens to the internal argument but verbs cannot specify how the external argument in affected by the event. Even when there is a change in the activity or properties of the external argument, it may not be completely determined by the verb.

Furthermore, any possible change in external argument cannot measure out the event as the internal arguments do. As external arguments are outside the aspectual structure, they are not constrained in the same way as internal arguments are. External argument can have a wide variety of theta roles consequently. In the sentence *Sara cut onions*, the onions might have been cut with a salad cutter, a kitchen knife or something else. The predicate cannot specify that the external argument Sara use a particular method. The internal arguments don't have similar properties – there is a considerable difference between onion that are not-cut and onions that are cut. We cannot claim the same for the external argument. Even

when there is an apparent change in the external argument, we can see that the external argument does not delimit the events as internal arguments do. See the example below:

- Maria inherited a farm.
- Sara sold her belongings quickly.

The first sentence involving inheritance of a farm requires possession of an entity that previously did not belon to the external argument Maria. Similarly, the selling event in the second sentence is qualified by the adverb quickly implying that the event of selling happened in a relatively shorter span of time and by the end of the selling event Sara was not in possession of her belongings. In both these sentences, at the outset it appears that the external argument is undergoing a change as a result of participating in the events expressed by the verbs. However, can be understood both as an agent and as a goal as she has come to possess the farm, but we cannot say there is change in the external argument in a single parameter. Same is true for *Sara*; although quickly may indicate that the selling eventuality comprised of actions which were performed rapidly, we cannot specify the change in the external argument *Sara* on the basis on a single parameter.

2.5 Syntax of Tense

Time is incorporated in the syntax in a number of ways as we need to see how tense conflates with event structure. As Guéronand, Lecarme and Lecarme (2004) remark events have a complicated spatiotemporal structure that's closely associated with 'agentivity' whereas times are unidirectional. In a syntactic tree, eventualities are defined in VP whereas the tense is higher in the tree in the tense node TP. We can posit a simpler structure where events are predicated on time but this approach leads to many complications, because tenses don't configure uniformly – the present tense is mostly phonologically null and future tense is derived from modals or mood morphemes. Further, as it was pointed out in the previous section, sometimes tense merges with aspect (the perfective/past and imperfective past in Classical Arabic, for instance). Moreover, the mapping of tense is dependent on lexical aspect and grammatical aspect (viewpoint aspect). Grammatical aspect is determined by verbal morphology whereas lexical aspect is not solely dependent on the verb class and depends on how the verb root combines with its complements including various particles or adpositions (Guéron, Lecarme & Lecarme, 2004).

Guéron et al. (2004) assert that the focus of aspect is on the event itself and it puts the event either inside a time interval (as in the case of the imperfective) or at the boundary of a time interval (the perfective). The authors also point out 'aspect' is located too high in the tree to affect the internal structure of the event so the syntax substantiate the need for a distinction between lexical aspect (aktionsart) and viewpoint. In recent proposals, a separate projection for aspect has been posited on the functional spine. But, Guéron et al. (2004) contend that functional projection in the minimalist framework are motivated by the checking of grammatical features of lexical items but there is no reason for positing an aspectual functional projection right above the VP if there are no matching morphological features on the verb – specifically with reference to lexical aspect. Functional projections for grammatical aspect, although they may seem less problematic, can't explain the cases where tense and aspect can't be differentiated (as in the case of Classical Arabic and French imperfective).

2.5.1 Tense as a Two Place Predicate

In this section I review Stowell's (2007) account of the syntax of tense based on Zagona's work (1990 cited in Stowell, 2007) on tenses as two place or dyadic predicates. For Zagona, tenses take external and internal arguments which denote the UT (utterance time) and time of the eventuality tied to the verb (ET[5]). Stowell claims that the semantics of tense is determined by independent principles of syntactic theory. Tenses are temporal ordering predicates that take two arguments denoting time with one of the arguments denoting reference time (RT) which is covert and the eventuality argument (ET) which has the verb phrase. Stowell accounts for the RT argument denotation on the basis of control theory[6]. In a mono-clausal sentence, the RT corresponds to the time of utterance (UT) but

[5] ET is the same as TSit

[6] Control is the phenomenon in which the understood subject of a predicate is determined by context co-text or discourse context. In sentence *I want to go to Paris*, the subject of the embedded non-finite clause is a phonetically null element PRO. Control concerns the distributional and referential properties of PRO. Control can be obligatory (OC which is essentially an antecedent relation and subject to binding conditions A and B) or non-obligatory (NOC, arbitrary control). Obligatory control can be subject control or object control but, in both cases, the subordinate clause has a null-subject known as the PRO (pronounced as the big PRO as opposed to the small 'pro' which corresponds to null-pronouns):

- I want PRO to go to Paris. (Obligatory Subject control: PRO = I)
- Sid wanted Sam (PRO) to give the speech. (Obligatory object control: PRO = Sam)
- (pro) going there is a mistake. (Non-Obligatory Control – also known as arbitrary control – reference of 'pro' is determined by the context). See Landau (2013) for details.

it would vary bi-clausal sentences. Temporal ordering for the RT and ET is determined by the tense.

Stowell (2007) contends that tenses – as temporal ordering predicates – differ from one another because of the inherent meaning content of the predicate they express. Hence, the difference between past and future is somewhat like the difference between the prepositions 'before' and 'after', and the present tense encode simultaneity as the preposition *at, while* or *as.* So, the past tense puts the ET before the UT, future tense orders the ET after UT and lastly the presents tense puts the UT wither within the ET or at it. The ultimate interpretation of tense can, however, be affected by the aspectual meaning of the verb and the tense morphology on it.

Eventive verbs show a different behavior from stative verbs; stative verbs can be used with present tense but non-habitual eventive verbs are not generally used with the present tense. But eventive verbs behave similar to stative verbs if used in a habitual sense. The verb *live* presents one such case: *he lives in a car* has habitual meaning but *he lived in a car* has an eventive interpretation.

Traditional accounts of tense had presented it as a subordinate modifier of the verb phrase but Stowell (2007) argues that tense is, in fact, the highest predicate in a clause. The author asserts that the alignment of UT and ET is compatible with the syntactic account of Tense as a functional head which then selects for a functional category with the VP (known as the little *v* which takes VP as its complement.

Stowell (2007) introduces a new syntactic category ZP to account for UT and ET after German *zelti* which means time. The author contends that ET and UT also require a distinct category like the DP and VP and hence he introduces the ZP. Its structure is similar to a DP in that it also has a head Z, it selects a complement VP or a projection of VP (which is usually an aspectual category). Languages can vary regarding whether they allow the DP to be vague in terms of definiteness (English doesn't generally have ambiguous DPs), so

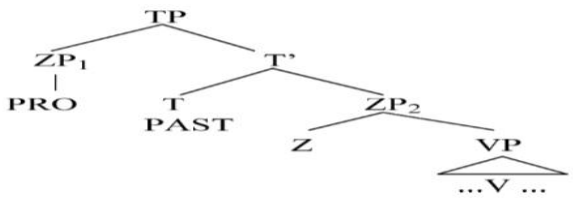

Figure 2. The ZP Phrase

they also vary in terms of whether the ZP can or cannot be ambiguous – with the default interpretation being that of indefinite but this would be an event reference and not a time reference. Furthermore, just like the DP, the ZP can also be phonetically null. The structure then would look something like:

The Position occupied by PRO in the spec-ZP is usually the position for the sentence subject DP but Stowell assumes that the subject DP raises directly from the vP[7] to a higher position/higher projection and bypasses the TP. Stowell argues that, although he adopts the term ET for the internal argument of a tense, it should be understood more as Klein's idea of Topic Time (which has been discussed earlier in this chapter). Klein's TT accounts for the time linked to the main verb or the highest aspectual auxiliary which is complement of T. For instance, consider the sentence *I was reading a book*. In this sentence the PAST's internal argument (TT or ET) is PROG which expresses a sub-interval of the actual event of reading and the past tense locates this sub-interval in relation to UT.

Based on Kratzer (1988 as cited in Stowell, 2007), the author argues that the syntactic structure of a clause has a position for the temporal argument of the verb – this argument is similar to the 'event argument' of the verb. As this argument is the most external argument of the verb, it resides in the Spec-IP position. For Stowell, however, this event argument of the verb is in the Specifier of the highest VP (the *v*P is lower than this VP). This VP then merges with the Z of the ZP. The ET in the main clause is determined in relation to the UT, in subordinate clause the ET in the main clause determined the ET in the subordinate clause (which is known as relative or dependent tense discussed in earlier section of the chapter). Stowell remarks that the relation between the dependent interpretation of tense in a subordinate clause can be explained on the basis of general syntactic rules. As pronouns are syntactically free in main clauses but become dependent (or subject to binding conditions) in subordinate clauses, so the ET in subordinate clauses becomes dependent on the ET in the main clause. Hence there is no different in free PAST and dependent PAST in terms of lexical semantics.

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[7] The little '*v*' hypothesis?

VP internal subjects

2.6 Syntax of Aspect

Aspectual information (related to both viewpoint aspect and lexical aspect) is encoded through a verb and its arguments which affect the syntactic structure. The main interest in this regard is how much information about the aspectual meaning is due to the syntactic structure itself and how much of it can be attributed to the lexical content of the verb (Erteschik-Shir & Rappaport, 2005). This issue has led to the proposition of two kind of approaches: the syntax based and the lexicon based. The lexicon-based approaches espouse that the meaning of the verb come from the lexicon which leads to the projection of different syntactic frames. The difference in structure is due to the differences in meaning of the verb or verb constellation. The syntax-based approaches posit the opposite: the meaning of the verb results from the syntactic structure. Hovav and Levin (2002) state that in the syntax-driven accounts of argument structure two approaches have become prevalent: *i.* argument projection is aspectually determined (Borer, 1994, 1998 & 2003) and; *ii*. Argument expression is not lexically determined. Both of these approaches, however, are compatible to each other and have been merged in many recent works.

Demirdache, and Uribe-Etxebarria (2000) propose a restrictive theory which aims to provide a uniform explanation of how tense and aspect interacts across languages. The authors base their theory on Klein's account (discussed earlier in this chapter) of tense and aspect both relating two time intervals. Their proposal is similar in many ways to Stowell's and Zagona's thesis propounding that tense as well aspect is a dyadic predicate (discussed in the previous section). Tense and aspect both have maximal projections in TP and AspP which have time expressing arguments. Moreover, tense and aspect has a spatiotemporal ordering – which is substantiated by the use of propositions, locatives, postural verbs, directional and stance verbs in many languages for expressing temporal and aspectual relations.

Demirdache and Uribe-Etxebarria's (2000) account aims to provide a uniform system of structural primitives that can be applied to both tense and aspect. Klein (1994) already reduces tense and aspect to the same semantic primitive: tense relates speech time to assertion time and aspect relates event time to assertion time. Demirdache and Uribe-Etxebarria argue that, in the same vein, syntactically tense and aspect can be reduced to the same syntactic primitives: tense has a maximal projection TP that takes two time-denoting argument so do aspect which has a separate projection AspP with a head which also takes

two arguments. The authors propose that AspP acts as a dyadic predicate with a spatiotemporal ordering requirement and thus it links two time bearing arguments. The external argument of AspP is a reference time AST-T and the internal argument is the VP which contains the EV-T (event time). The external argument of AspP is actually the same as the internal argument of Tense (TP) i.e. AST-T (reference time):

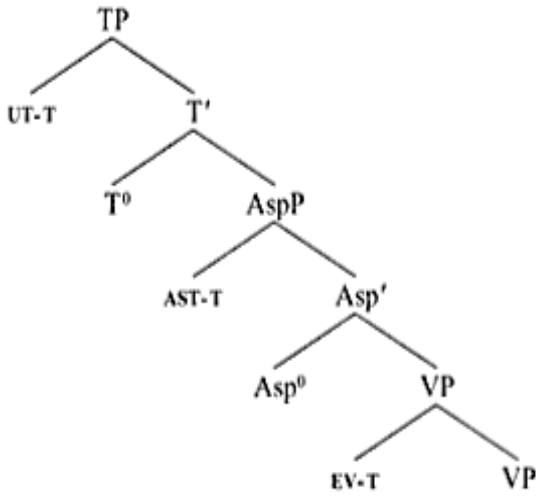


Figure 3. Syntactic Representation of Aspect

Aspect encodes the time interval that characterizes the temporal nature of the event expressed by a sentence, but it also focuses on the assertion time (referred to as the Topic Time by Klein) as Asp0 (the head of AspP) sets a spatiotemporal ordering between topic time and event time. One of the salient proposals made by Demirdache, and Uribe-Etxebarria (2000) is that the heads of tense and aspect phrases have heads with dual syntactic functions: that of lexical heads and functional heads. Lexical heads project lexical roots which carry lexical information corresponding to content words like nouns, verbs and functional heads project roots and features that establish relations with other heads in the derivation – functional heads are mostly required to fulfill derivation requirements: tense, negation and v are some common functional heads. The lexical heads are projected into the syntax and the functional head are responsible for feature checking and if tense and aspect do indeed have dual syntactic functions, they can have multiple specifier positions. The inner specTP, for instance can be the site for external temporal argument of TP and the outer specifier can be the site for the phrase requiring checking by Tense.

2.7 Temporal Adverbials

We have seen that temporal adverbials interact with different situations to obtain different temporal meaning. Temporal adverbials are utilized by languages across the world to specify temporal reference in various ways. Rathert (2012) elaborates on six different types of temporal adverbials according to their morphosyntactic properties. These are as follows:

1. Before Independence Day,
2. Four days ago
3. Every week, last month
4. Before he left
5. Now, then
6. Earlier, later

The first type comprises adverbials that have an NP and an adposition (as in 1 and 2 above). In (1) we have a proposition that is functioning as a spatial preposition. The second type, as in (3), is an NP functioning as an adverbial. The third type is a temporal adverbial clause (4) with in detail in section 3. The last two types are adverbs and adjectives functioning as adverbials. Temporal adverbials can function in three significant syntactic positions: as the subject of the sentence as in the sentence *Last night was difficult*, they can be predicative as *the event was last night*, and lastly, they can function as NP modifiers as in *the event last night was a disaster*. On semantic basis temporal adverbials can be classified into the following categories:

- positional adverbials
    i. anaphoric adverbials: three weeks ago, afterward
    ii. deictic adverbials: yesterday, tomorrow
    iii. clock-calendar adverbials: on August 20, 2020
- quantificational adverbials: once, twice, often, seldom, sometimes
- adverbials of duration: until, since, in, for
- Extended-Now adverbials: ever since (Rathert, 2012, p. 238)

Positional adverbials provide us with a specific point or interval of time at which something took place. Clock-calendar names like on August 20, 2002 or indexicals are positional adverbials. The indexicals can have a deictic or anaphoric function but they are both are context dependent and we need to relate them to the utterance time to interpret them e.g. yesterday, last Monday etc. we have to rely on some reference time provided by the context. In the case of clock-calendar adverbials, it should be noted that they are not precise in many cases. In many cases, they only specify a part of the conventional time system, for example *in the fall*. These adverbials are also termed as 'imprecise adverbials'. Rathert (2012) writes that:

> …consider the meaning of yesterday or tomorrow. It is plausible to assume that these adverbials denote the whole day and not an interval of the respective day… one could come up with both denotations in principle:

(10) Gestern hat er gehustet

yesterday has he coughed

" Yesterday, he coughed"

(11) Gestern hat es geregnet

yesterday has it rained

"Yesterday, it rained."

The coughing could be a singular event in yesterday, as the raining could just last for some hours of yesterday. In these cases, one could imagine that yesterday denotes some time in yesterday. Let us call these readings existential readings (e-readings). But imagine the person in (10) is ill and really coughs constantly the whole day over, or imagine the day at issue in (11) is a day with rain from 0 a.m. to12 p.m. – then yesterday could denote the whole day. Let us call these readings universal readings (u-readings). Maybe yesterday is ambiguous between these two readings. But one would not want such a simple adverbial to show lexical ambiguity if more elegant solutions were available. And indeed, such a solution is available. Note that you can insert quantificational adverbs to make the e-readings perfectly clear:

(12) Gestern hat er oft/einmal gehustet

yesterday has he often/once coughed

" Yesterday, he coughed often/once."

(13) Gestern hat es oft/einmal geregnet

yesterday has it often/once rained

"Yesterday, it rained often/once." (Rathert, 2012, pp. 238-239)

Adverbials can be inserted in a sentence in various ways which effects the meaning they obtain (Klein & Li, 2009). Consider the following examples:

i. At 4 a.m., Aaliya woke up.

ii. Aaliya woke up at 4 a.m.

iii. At 4 a.m., Aaliya had woken up.

iv. Aaliya had woken up at 4 a.m.

v. At 4 a.m., Aaliyaa has woke up.

vi. Aaliya has woken up at 4 a.m.

The difference between (i) and (ii)n is not apparent outrightly. In both of the sentences, the adverbial *at 4 a.m.* specifies the exact time at which Aaliya woke up. The same adverbial has different meaning in (iii) and (iv). When the adverbial is in the initial position the sentence entails a post state expressing that Aaliya had woken up before 4 a.m. The adverbial in (iv) obtain both the meaning that the waking up happened exactly at 4 a.m. and the post-state meaning depending on the intonation. If stress is laid on *at 4 a.m.* then the adverbial specifies the exact time at which Aalia woke up. On the other hand, if the adverbial in (iv) is de-stressed then it lends a post state meaning. The adverbial is unexpectable in (v) and (vi) because the past time adverbial is not compatible with the present tense *has*. The unacceptability of (vi) to express the time at which Aaliya left is restricted by what is known as the *present perfect paradox* and is discussed in detail in chapter. 5 of this study. When we move on to the analysis of complex sentences like *Aaliya appeared to have planned to wake up,* we need to take into account multiple time points. There is a time at which something appears to be the case, a time at which Aaliya intended to wake up and a time when the planning was over. This complexity leads to the possibility of using an adverbial in this sentence at multiple positions:

a) At 4 a.m. Aaliya appeared to have planned to wake up.

b) Aaliya appeared at 4 a.m. to have planned to wake up.

c) Aaliya appeared to have planned at 4 a.m. to wake up.

d) Aaliya appeared to have planned to wake up at 4 a.m.

When the adverbial is used in the initial position as in (a), it gives the time of *appearing*, and can also be associated with the planning time but not the planning time. Similarly, the adverbial position in (c) links it to the appear time only and we cannot associate it with the other situations described in the sentence. Lastly, in (d) the temporal adverbial specifies the planning-time and association with other time points is excluded.

It follows from the above discussion that the position of temporal adverbials affects their interpretation specifically with reference to how a situation is located in time. Furthermore, as we have seen in addition to the position they occupy in a sentence, temporal adverbials can be linked to varied aspects of a situation if the situation has a complex structure and multiple time points are involved.

2.8 Grammatical System of Urdu

Urdu is a subject-object verb (SOV) Indo-Aryan language with subject object agreement, a fairly free word order, head finality and split ergativity. It is the national language of Pakistan but it is also spoken in parts of India (where it is one of the 22 official languages), Bangladesh, and South Africa. Urdu and Hindi have the same grammatical system but the vocabulary is different. Hindi is one of the major languages spoken in India.

Butt (1995) characterizes Urdu as a non-configurational language because it does not have a fixed phrase structure as opposed to English which is a configurational language. The word order in Urdu sentences is determined by the information structure. Moreover, Urdu is often considered as a pro-drop language (depending on the information structure; Butt & King, 1997). In pro-drop languages certain pronouns can be omitted if they are not required pragmatically or grammatically. In highly inflected languages, pronouns can be dropped mostly because the information provided by the inflected verbs or auxiliaries is enough to indicate the subject (see Butt & King, 1997 for a discussion on null elements in Urdu):

میں کل آپ کو کتابیں بھیج دوں گی

1.	Mai;n	kal	ap=ko	kitabe;n	bhaij
	1SG.NOM	tomorrow	2.PL=ACC	books.F.PL	send

duu;n-gii

give.1-FUT.F.SG

I will send you the books tomorrow.

کل آپ کو کتابیں بھیج دوں گی

2.	Kal	ap=ko	kitabe;n	bhaij	duu;n-gii
	Tomorrow	2.PL=ACC	books.F.PL	send	give-FUT.1.F.SG

(I) will send the books tomorrow.

آپ کو کل کتابیں بھیج دوں گی

3.	Ap=ko	kal	kitabe;n	bhaij	duu;n-gii
	2PL=ACC	tomorrow	books.F.PL	send	give-FUT.1.F.SG

(I) will send the books tomorrow.

The subject pronoun 'I' has been dropped in (2) and the inflection on light verb (which is a vector verb – vector verbs are discussed later in this chapter) for first person singular and for feminine gender on the auxiliary provides sufficient information to identify the subject. Moreover, the word order is different (slightly) in (2) and (3): the focus in (2) is more on the time hence the adverb of time is fronted but in (3) the focus is more on the books so adverb follows the object. All nouns in Urdu belong to one of two genders and if the nouns is not marked, the gender has to be learned: *larka* (boy, singular, masculine) is marked with the suffix -a serving as a masculine marker (the feminine marker is -ie for common nouns) but *Kitab* (book, singular, feminine) is not marked. Urdu pronouns and case system is briefly discussed below.

2.8.1 Pronouns

Urdu does not have masculine and feminine distinction for pronouns and verb phrase (inflections on verb, light verb/s and auxiliaries) provide information about the gender of the subject. The third person pronouns, however, are different to indicate proximity 'ye' (same singular and plural form in nominative case) – meaning this, and 'vo' (same singular and plural form in nominative case) – meaning that. The first and second-person plural pronouns can be used to indicate number or respect (*hum* – we & *ap* – you). The noun 'log' literally people can be added with personal pronouns to indicate plurality in which case the verb phrase is marked masculine (because *log* is a masculine noun): *ap*

log chale jaien (you people should leave). Urdu pronoun declensions are as follows (based on Schmidt, 1999):

Table 4
Urdu Pronoun Declensions

	English Pronoun	**Nominative**	**Oblique**
Singular			
1st Person	I	mai;n میں	mujhe/mujh (ko[8]) مجھ/مجھے
2nd Person	you	tuu (derogatory or used poetically) تُو	tujhe/tujh تجھ/تجھے
	you	tum (when there is familiarity) تم	tumhein/tum تم/تمہیں
	you	aap آپ (formal, respect) آپ	aap آپ
3rd Person	he, she, it	vh وہ (distant)	Unhe;n/us (distant) اُس/اُنہیں
	he, she, it	ye یہ (proximal)	Inhe;n/is (proximal) اِس/اِنہیں
Plural			
1st Person	we	Ham ہم	Hame;n/hum ہم/ہمیں
2nd Person	you	tum (when there is familiarity) تم	Tumhe;n/tum تم/تمہیں
	you	ap (formal, respect) آپ	ap ko آپ کو
3rd Person	they	vo (distant) وہ	Unhe;n/un (distant) اُن/اُنہیں
	they	ye (proximal) یہ	Inhe;n/in (proximal) اِن/اِنہیں

The noun ‘log’ literally people can be added with personal pronouns to indicate plurality in which case the verb phrase is marked masculine (because *log* is a masculine noun): *ap log chale jaien* (you people should leave).

2.8.2 Case System in Urdu

Case in Urdu is realized morphologically through inflected verb stem, postpositions and case clitics. The nominative is phonetically null in Urdu. Nominative stem forms and

[8] ‘Ko’ here is not part of the oblique form but a clitic case marker for accusative/dative case but it is only used with the stem and the inflected ‘mujhe’ does not take ‘ko’

direct arguments don't inflect in Urdu. When the noun occurs with a case clitic the oblique form of the stem is used. Nouns functioning as locatives are also used with oblique form of the stem. Urdu has been characterized as a split-ergativity language with the ergative case marking perfective tense and aspect. Ergative subjects usually occur with transitive verbs with perfective aspect. In all other aspects, subjects are in nominative case. The case clitics in Urdu are as follow:

Table 5
Urdu Case Clitics

Nominative	Φ (null)
Ergative	ne
Accusative	ko
Dative	ko
Instrumental	se
Genitive	Kaa (M), kii(F), ke(Obl)
Locative (in)	mein
Locative (on, at)	Par
Locative (till)	tak

In Ergative languages, the subjects corresponding to intransitive verbs pattern with objects of transitive verbs. Ergativity is expressed either through morphological marking (case marking in Urdu) resulting in morphological ergativity or through a different syntactic structure leading to syntactic ergativity. Ergative languages contrast with accusative languages in which subjects of transitive verbs pattern with subjects of intransitive verbs and there is no specific morphological marking or syntactic structure that distinguishes the two. In accusative languages, case marking is linked to the position of the subject and object in the sentence structure. Ergative languages are challenging for earlier theories in the generative tradition (the Government-Binding theory, for example) because initial work in UG relied on accusative languages like English and Romance.

Ergative system is posited to be the reverse of accusative system and most of the ergative languages show split-ergativity instead of compete ergativity (Butt, 1995). Ergativity is determined by agentivity, aspect and variation in forms of NPs. As it was mentioned earlier in Urdu split ergativity has been associated with transitivity and perfectivity. Butt (1995) argues that Urdu ergatives don't pattern with objects and ergative case in Urdu corresponds to semantic content. Correspondingly, according to Butt and King (1991, 2004) ergativity in Urdu is related to volitionality as opposed to the perfective aspect. Evidence for this argument comes from the occurrence of ergative case in Urdu with intransitive verbs which should, otherwise, occur in nominative case. See the

following examples which express the same event with ergatively marked subject and nominative subject:

علی نے کھانسا۔

a) Ali=ne .khans-aa

Ali=ERG cough-PFV.M.SG

Ali coughed.

علی کھانسا۔

b) Ali .khans-aa

Ali.NOM cough-PFV.M.SG

Ali coughed.

The occurrence of ergative with a intransitive verb is not a case of lexical exception as the same incident of coughing can be reported with nominative case. The difference between the sentence with ergatively marked subject and nominative subject is that the sentence with the ergative in (a) shows volitionality on the part of the subject – that is Ali coughed and sentence makes Ali's agentivity explicit, whereas the sentence in (b) only expresses that there was an event of Ali coughing. Moreover, ergative in Urdu is not limited to perfective verb and can occur even with infinitives:

علی کو بازار جانا ہے۔

c) Ali=ko bazaar ja-na hai

Ali=DAT market go.INF be.PRS.SG

Ali has to go to the market.

علی نے بازار جانا ہے۔

d) Ali=ne bazaar ja-na hai

Ali=ERG market go.INF be.PRS.SG

Ali is going to go to the market (Ali intends to go to the market).

The sentence with *ko* has a meaning that there is some sort of external obligation on Ali to go to the market whereas with *ne* we get the meaning that Ali has an intention of going to the market. Although, it should be noted here that there are sentences where the subject is marked with the ergative case but we have a non-volitional action expressed in the perfective. Transitive-perfectives, however, rarely express non-volitional actions and dative is associated with non-volitionality in Urdu. Therefore, it can be argued that in Urdu ergative is not associated entirely with transitivity and perfectivity and also carries a clear meaning of volitionality on the part of the subject. Ergative acts a grammatical marker in relation to the transitivity paradigm and as a marker of volitionality as well semantically.

2.8.3 Verbal System in Urdu

For tense and aspect marking in Urdu, either there is inflectional marking on the verb or tense/aspect is marked through inflecting auxiliaries (Butt & Ramchand, 2005). In Urdu suffixes are added to the root of the verb to mark tense/aspect as well as gender/number agreement. The infinitive is formed by adding the suffix – nă نا to the verb root. Tense in Urdu is marked through inflections on the auxiliary verb "hona ہونا" to be. Butt and Rizvi (2010) contend that Urdu has real present tense only for the verb "hona". "Hona" is also used as a main verb in Urdu and as a main verb it has the same meaning as "happen". See the examples below:

Us=se	buukhar	ho	ga-yaa	hai
3.SG=ACC	fever	be	go-PFV.M.SG	be.PRS.SG

He has got a fever.

Table 6
Conjugation of Urdu "Honă": To Be

		Singular		**Plural**	
		Masculine	Feminine	Masculine	Feminine
Present	**1st person**	Hun ہوں	Hun ہوں	Hain ہیں	Hain ہیں
	2nd person	Ha ہے	Ha ہے	Ho/hai;n[9] (respect) ہیں/ہو	Ho/hai;n (respect) ہیں/ہو
	3rd person	Ha ہے	Ha ہے	Hai;n ہیں	Hai;n ہیں
Past	**1st person**	tha تھا	Thi تھی	Thai تھے	Thei;n تھیں
	2nd person	tha تھا	Thi تھی	Thai تھے	Thei;n تھیں
	3rd person	Tha تھا	Thi تھی	Thai تھے	Thei;n تھیں
Future	**1st person**	Huu;n-ga ہوں گا	Huun-gii ہوں گی	Huu;n-ge ہوں گے	Huu;n-gii ہوں گی
	2nd person	Ho-ga ہوں گا	Ho-gii ہوں گی	Huu;n-ge ہوں گے	Huu;n-gii ہوں گی
	3rd person	Ho-ga ہو گا	Ho-gii ہو گی	Huu;n-ge ہوں گے	Huu;n-gii ہوں گی
Subjunctive	**1st person**	Huu;n ہوں	Huu;n ہوں	Huu;n ہوں	Huu;n ہوں
	2nd person	Ho ہو	Ho ہو	Ho/Huu;n ہوں/ہو	Ho/Huu;n ہوں/ہو
	3rd person	Ho ہو	Ho ہو	Hon ہوں	Hon ہوں

Perfective Participle

Perfective participle is formed by adding the suffix **-ă** to the verb root and it inflects for number and gender (Schmidt,1999).

Table 7
Perfective Participle forming suffix 'ă'

	Masculine	Feminine
Singular	ă	i
Plural	ăe	ien

Continuous Tense and Progressive Aspect

Continuous tenses in Urdu are formed by adding the auxiliary verb **rahă** to the verb root. **Rahă** is the perfective participle of 'rahnă' (to stay/remain) and according to Schmidt (1999) it has been delexicalized to function as the continuous participle. **Rahă** inflects for

[9] In order to mark respect, the plural form of the verb is used with the second person plural pronoun *Ap*

number and gender, and is followed by the inflected form of 'hona' to show agreement for tense, number and gender.

Table 8
Continuous Participle Rahă

	Masculine	Feminine
Singular	Rahă	rahi
Plural	Rahăe	rahien

Habitual Suffix 'tă'/Imperfective Participle

For habitual tenses the suffix **tă** is added to the verb root and it inflects for number and gender. **For future the 't' is dropped and verb has the same form as past simple followed by future suffix.** Habituals can also be formed by adding the root of **karnă 'to do', kar** to the root of the verb. Kar also inflects for number and gender (Abdul Haq, 2012).

Table 9
Habitual Suffix tă

	Masculine	Feminine
Singular	Tă	ti
Plural	Tăe	ti

Table 10
Habitual with 'Karna'

	Masculine	Feminine
Singular	kartă	karti
Plural	kartăe	karti
Causative/Singular	karătă	karăti
Causative/Plural	karătey	karătien
Double Causative/Singular	karwătă	karwăti
Double Causative/Plural	karwrătey	karwătien

Future Suffix gă

The future is the only tense in Urdu which is formed purely inflectionally and which applies regularly across the verbal inventory (Butt, 2003). The future marking suffix **gă** is added to the subjunctive form of the verb. Gă is adjectival and agrees with noun/pronoun for gender and number (Schmidt, 1999).

Table 11 *Future Suffix gă*		
	Masculine	Feminine
Singular	gă	gi
Plural	găe	gien

Realization of Past, Present and Future with Different Aspectual Combinations

The following tables show the realization of present, past and future tense in Urdu with different aspectual values.

Table 12
Realization of Present Tense in Urdu

Present Simple (Habitual)	میں سکول جاتی ہوں۔ Mai;n skuul ja-tii huu;n 1.SG school go.IPFV.F.SG be.PRS.1.SG I go to school.
Present Continuous	میں سکول جا رہی ہوں۔ Mai;n skuul ja rah-ii huu;n 1.SG school go stay.PROG.F.SG be.PRS.1.SG I am going to school/ I am leaving for school.
Present Perfect	میں نے اپنی پڑھائی ختم کر لی ہے۔ Mai;n=ne apni pa.rha-ii .katam kar l-ii 1.SG=ERG mine.F studies finish do take.PFV.F.SG hai be.PRS.SG I have completed my studies.

Table 13
Realization of Past Tense in Urdu

Past Simple	میں کل سکول گئی۔ Mai;n kal skuul ga'ii 1.SG.NOM yesterday school go.PFV.F.SG I went to school yesterday
Past Habitual	میں سکول جاتی تھی۔ Mai;n skuul ja-tii th-ii 1.SG.NOM school go.IPFV.F.SG be.PST.F.SG I used to go to school.
Past Continuous	میں کل سکول جا رہی تھی۔ Mai;n kal skuul ja rah-ii 1.SG.NOM yesterday school go stay.PROG.F.SG th-ii be.PST.F.SG I was going to school.
Past Perfective	میں کل سکول ٹائم پہ پہنچ گئی تھی۔ Mai;n kal skuul tai'm pa phnc ga'y-ii 1.SG.NOM yesterday school time on reach go.PFV.F.SG th-ii be.PST.F.SG I reached school on time yesterday.
Past Perfect (Pluperfect)	میں سکول پہنچ چکی تھی۔ Mai;n skuul phnc cuk-ii th-ii 1.SG.NOM school reach finish-PFV.F.SG be.PST.F.SG I had reached school (when you called)

Table 14
Realization of Future Tense in Urdu

Future Simple	میں کل سکول جاؤں گی۔ Mai;n kal skuul jauu;n-gi 1.SG.NOM yesterday school go.PFV.F.SG I will go to school tomorrow.
Future Continuous	میں کل سکول جارہی ہوں گی۔ Mai;n kal skuul ja rah-ii 1.SG.NOM yesterday school go sta-PROG huu;n-gi be.1-FUT.F.SG I will be going to school tomorrow.
Future Perfect	میں کل تک سکول جاچکی ہوں گی۔ Mai;n kal tak skuul ja 1.SG.NOM yesterday till school go cuk-ii huu;n-gi finish.PFV.F.SG be.1-FUT.F.SG I will have left by tomorrow.
Future (Habitual)	وہ آپ کے گھر ہر روز آئے گا۔ Vo ap=ka ghar har-roz ay-e-ga 3 2=DAT house every-day come-OBL-FUT.M.SG He will come to your house every day.

Possibilities for Present Perfect

They are three possibilities of saying 'I have eaten (food)'. It should be noted that all of these sentences have the present tense morphology and perfective aspect.

میں نے کھانا کھایا ہے۔

a) Mai;n=ne khana kha-yaa hai.
1SG=ERG food.M eat.PFV.M.SG be.PRS.SG

میں نے کھانا کھا لیا ہے۔

b) Mai;n=ne khana kha li-yaa hai.
1SG=ERG food.M eat take.PFV.M.SG be.PRS.SG

میں کھانا کھا چکا ہوں۔

c) Mai'n khana kha cukaa huu;n
1.SG.NOM food.M eat finish.PFV.M.SG be.PRS.1.SG

Passives

Passives in Urdu are formed with the verb (auxiliary) 'jană' 'to go' and the participle agrees with the subject in gender and number.

اُن کو علاج کے لیے ہسپتال لے جایا گیا۔

a) Un=ko ilaaj=ka lia haspataal le
2=ACC treatment=DAT for hospital take
ja-yaa ga-ya
cause to go-PFV.M.SG go.PFV.M.SG
He was taken to the hospital for treatment.

سب کی بات سنی گئی۔

b) Sab=ki baat sun-ii ga-ii.
All=DAT saying hear-PFV.F.SG go.PFV.F.SG
Lit = Everyone was heard to

Light verbs in Urdu

Urdu has quite a lot of light verbs, out of which twenty-four are found in common usage (Butt, 1994). Some of the most common light verbs are discussed in this section. Absolute Completion is expressed through 'Cukna چکنا: The Urdu modal verb 'chuknă' 'already' corresponds to the English pluperfect. Chuknă is intransitive but it affects agreement in the sentences and 'chuknă'. However, it also marks absolute completion of an action.

وہ جا چکا ہے۔

a) Vo ja cuk-aa hai
3 go finish.PFV.M.SG be.PRS.SG
Lit = he has left (he left for sure)

Iterative Rahna رہنا: The intransitive 'rahna' 'to stay/remain' is used to show the continuation or repetition of an action or state. It is used as a progressive marked on the same lines as the -ing suffix in English. However, it is also used as a light verb to express continuity.

وہ ہر وقت گاتا رہتا ہے۔

b) Vo har vaqt ga-ta rah-taa hai
3 all time sing-IPFV.M.SG stay.IPFV.M.SG be.PRS.SG
He sings all the time.

Progression جانا: 'The intransitive 'jana' 'to go' is used to show either a deliberate continuation of an action or a progression of a condition resulting in a change.

وقت گھٹتا جا تا ہے۔

c) Vaqt ghat-ta ja-ta hai
Time lessen-IPFV.M.SG go.IPFV.M.SG be.PRS.SG
Time keeps on slipping.

Cukna, *rahna* and *jana* all inflect for gender and number. They agree with the subject and the ergative marking clitic 'ne' is not used even when the verb root belongs to a transitive verb.

In addition to the light verbs discussed above, a number of light verbs in Urdu have been classified as Vector verbs in Urdu (Schmidt, 1999). These are termed as vector verbs because they show direction of the action towards or away from the action and there is a possibility to use alternatives depending on the perspective of the speaker. See the following example for two most commonly used vector verbs lena (لینا, lit= to take) which show direction towards the subject and dena (دینا, lit = to give) which shows direction towards the object:

میں نے اسے سمجھا لیا ہے۔

a) Mai;n=ne us-e samjha li-yaa
1.SG=ERG 2.PL.OBL cause to understand take.PFV.M.SG
hai
be.PRS.SG
I have made him/her understand

میں نے اسے سمجھا دیا ہے۔

b) Mai;n=ne us-e samjha di-yaa
1.SG=ERG 2.PL.OBL cause to understand give.PFV.M.SG
hai
be.PRS.SG
I have made him/her understand

These two sentences differ mainly in the role of the agent. In the first sentence with *li-yaa* the agent is benefiting from the act of understanding whereas in the second sentence with *di-yaa* the patient is benefiting.

2.8.4 Verb Constructions in Urdu

Urdu has a complex verbal system and verbs combine with other content verbs, light verbs and auxiliaries to express a variety of meaning. Based on the content of the verb and their semantic contribution, verb combinations in Urdu are classified into four types which are discussed below:

Serial Verb Constructions (VV)

Two content verbs are used in these constructions which equally contribute to the meaning of the sentences in order to make a serial verb construction. *V* (capital V) is used hereon for content verbs which convey substantial meaning; and *v* (small 'v') is used for light verbs which effect the meaning and interpretation of content verbs, and are dependent on Vs. The verbs in the series each express an action. The resulting construction formed with a number of independent verbs is monoclausal. The term compound verb is also used for the same constructions by some authors. Altakhaineh and Zibin (2018) argue that serial verb constructions and compound verb construction may exist on a continuum. According to Aikhenvald (2006) serial verb constructions are formed by two or more verb phrases which act as a unit. The actions represented by the two verbs are closely related and therefore the serial verb construction refers to one complex event. Similarly, Haspelmath (2016) proposes that serial verb constructions are monoclausal constructions with multiple independent verbs without any linking element joining the two verbs. A typical VV construction in Urdu is as follows:

اس نے پہلے سوچا سمجھا۔

a) Us=ne pahl-e soca samjh-aa
   3=ERG before think.PFV.M.SG understand.PFV.M.SG
   She first delibertaed about it.

آگے بڑھے چلو۔

b) Aage b.arh-e cal-o
   Forward grow-OBL.PFV.M.SG go-IMP.SG
   Keep moving forward.

Both of verbs can share the same external and internal argument. Hussain (2015) asserts that both the verbs in VV constructions are not asyndetic coordinates[10]. Asyndetic coordinates in Urdu require that the verbs being coordinated inflect. In addition, only some specific verbs can be used in serial verb construction (and they usually have related meaning). Whereas any two verbs can be used in asyndetic coordinates.

Content Verb + Semantically Bleached Verb (Light Verb) Constructions (Vv)

In Vv construction the first verb functions as a content verb and contributes it full semantic meaning. The second verb that combines with it is semantically bleached. Only a number of verbs can be used in this position and these verbs are referred to by a number of terms including light verbs, vector verbs and explicator verb (Butt & Geuder, 2011). They are termed as 'semantically bleached' because their semantic contribution to the predicate is relatively weak as compared to the main verb 'V' which precedes the light verb. Vv constructions have been analyzed in detail in chapter 6 as light verbs are crucial for expressing perfectivity in Urdu. Consider the following example:

علی نے گاڑی گیراج میں کھڑی کر دی۔

a) Ali=ne ga.rii geraaj me;n kha.r-i kar d-ii
Ali=ERG car garage in stand.F do give.PFV.F.SG
Ali parked the car in the garage

In *Vv* constructions, we don't have a straightforward coordination of the main verb and the light verb. In contrast to the example above, we have the following two alternatives as well:

علی نے گاڑی گیراج میں کھڑی کر لی۔

b) Ali=ne ga.rii geraaj me;n kha.r-i kar l-ii
Ali=ERG car garage in stand.F do take.PFV.F.SG
Ali parked the car in the garage

علی نے گاڑی گیراج میں کھڑی کی۔

c) Ali=ne ga.rii geraaj me;n kha.r-i k-ii
Ali=ERG car garage in stand.F do.PFV.F.SG
Ali parked the car in the garage

[10] Asyndetic coordination is a type of coordination in which conjunctions are not used. The conjuncts are jointed without the use of *and* in English, for instance. A famous example is *I came, I saw, I conquered.*

The sentence given in (a) shows that Ali parked the car for someone whereas (b) emphasizes that Ali completed the action of parking the car. Whereas (c) only expresses that the car was parked without any additional information about the manner in which the car was parked. We have another alternative available for the above sentences:

علی گاڑی گیراج میں کھڑی کر چکا۔

d)	Ali	ga.rii	geraaj	me;n	kha.r-i	kar	cuk-a
	Ali	car	garage	in	stand.F	do	finish.PFV.M.SG

Ali has (already) parked the car in the garage.

The sentence in (d) marks absolute completion of the action and *cuka* is used to express the certainty as well as anteriority of the action.

Semantically bleached Verb + Semantically bleached Verb Constructions (vv)

Two verbs can also occur in semantically bleached sense in Urdu to make up a vv construction. Usually, we see that vv's are used in passives where the second v is jaa (lit = go) which is used a passivizing auxiliary verb. The two semantically bleached verbs occur between the main verb being used in the passive and the auxiliary:

دروازہ کھولا جا چکا تھا۔

Darvaza	khol-aa	jaa	cuk-aa	thaa
Door	open-PFV.M.SG	go	finish-PFV.M.SG	be.PST.M.SG

The door had been opened.

Semantically Bleached Verb + Content Verb Constructions (vV)

Constructions in which the semantically bleached verb is used before the main verb are less common but they are used to express emphasis. These constructions have been termed as *reverse complex predicates* because of the reversal of the position of content verb and semantically bleached verb.

علی نے احمد کو مکا دے مارا۔

Ali=ne	Ahmed=ko	mukkaa	de	maar-aa
Ali=ERG	Ahmed.M.SG=DAT	punch.M.SG	give	hit-PFV.M.SG

2.9 Conclusion to Chapter 2

This chapter aimed to provide a comprehensive overview of the theoretical accounts of the meaning contribution of tense and aspect, and related concepts. Tenses can be absolute or relative. Absolute tenses are deictic and relate time of eventualities to the time

of speech. Relative tenses get their reference from the context and relate this reference to the time of the eventuality. Grammatical aspect corresponds to the point of view according to which eventualities are expressed: in entirety through perfective aspect or as being continuous through the imperfective aspect. Situation or eventualities can have varied inherent temporal features which is known as lexical aspect. On the basis of lexical aspect, we have five major classes of situations: activities, accomplishments, achievements, semelfactives and statives. Lastly the syntactic expression of tense and aspect was discussed in this chapter. Except the Tense Phrase (TP) tense and aspect are not overtly represented in the syntax so various nodes are introduced in the metalanguage to account for the relation between time of utterance and time of the reference (or topic time TT) in the case of tense, and Aspect phrase (AspP) is introduced to link the time of the situation to the reference time (TT). For the present study the interaction of lexical aspect with grammatical aspect reviewed in section 2.3 is crucial as it provides the theoretical basis for the main semantic issues that will be addressed with reference to Urdu in the analyses chapter 5 to 7. As it is evident from the review of existing studies on aspectual system of various languages in section 2.2.7 of this chapter, a lot of work has been carried out on grammatical aspect and various semantic issues related to aspect as well as cross-linguistic comparisons of aspectual systems of various languages – including book length studies and doctoral dissertations. However, there is a dearth of research when it comes to the aspectual system of Urdu. This study aims to bridge this gap by providing a comprehensive account of aspectual system in Urdu and addressing the main semantic issues associated with perfect, perfective and imperfective aspectual values.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter provides the methodology utilized to carry out the present study. The first section elaborates the research design and the data selection process. The second and third sections provide details on how the Urdu examples were transcribed and glossed. The fourth section outlines the theoretical foundations on which the discussion in thesis and the past work reviewed is based. This study assumes a basic Generative Grammar framework in the Universal Grammar tradition. Correspondingly, the main tenets of Universal Grammar are discussed in the fourth section. This section also sheds light on how the syntax and semantic components of language faculty interact through the syntax-semantics interface. In the last section, several linguistic diagnostics for temporal features of situations are discussed. These diagnostic tests correspond to the theoretical assumptions underlying the analysis in the sense that the diagnostic tests used to assess the presence or absence of a given aspectual feature can elucidate the conceptual grounding on the basis of which we understand the temporal constituency of these features and therefore we evaluate linguistic expressions by using these as criteria in order to assess the values of aspectual features associated with them.

3.1 Research Design and Data Selection

This study is qualitative and descriptive. Descriptive research aims to explore a given phenomenon as a step towards theory development (Monsen & Van Horn, 2007). The present research is also exploratory as its main focus is to analyze Urdu and compare it to English to develop theoretical propositions regarding parameterization of grammatical aspect in Urdu and highlight the constraints on aspectual reference in Urdu. The descriptive part of this study aims to layout the aspectual system of Urdu as only a few studies provide a comprehensive and expansive account of aspect in Urdu. The descriptive section is grounded in the basic tenets of generative framework under which different morphological means of aspectual realization are taken to be an instance of parameterization (the parameterization of aspect is discussed in section 3.4.2). The exploratory part of this study aims to highlight firstly any semantic puzzles associated with the distinct properties of

aspectual system in Urdu. Secondly, this study also aims to analyze these semantic puzzles including the non-perfectivity of Urdu perfects, the compatibility of Urdu perfects with past-oriented adverbs, the necessity for Urdu light verbs to express absolute completion/termination and the patterning of Urdu habituals with counterfactuals.

The data analyzed in this study comprises researcher's own sentences, examples from standard Urdu grammars (including most importantly Schmidt, 1999), and web sources (which are cited in footnotes where ever relevant). A total of 255 Urdu and English sentneces have been analyzed in this study: 67 in chapter 4, 88 in chapter 2 and 100 in chapter 3. Out of 255 sentences, 167 are Urdu which have been glossed as well as translated. The translations have been verified by a specicaist and a certificate of verification is attached in Appendix C of this thesis.

I have relied mostly on my own sentences because the semantic issues focused on in this thesis pertain to specific grammatical forms and structures, and the interaction of specific tense-aspect forms with various semantic properties, situation types and other elements in the syntax. In Syntax and Semantics research, the standard method for data selection has been researcher's own intuitions about the grammaticality/acceptability of the sentences (Gibson & Fedorenko, 2013) – provided the language in question is the native language of the researcher. In a study carried out specifically on this subject Sprouse and Almeida (2013) demonstrate the reliability of the traditional method used by semanticists and syntacticians of relying on their own judgment. Sprouse and Almeida (2013) analyzed syntax textbooks and articles from the prestigious journal *Linguistic Inquiry* during the course of ten years from 2001 to 2010. The authors show that sentences presented as grammatical in the data were rated better than the sentences labelled as ungrammatical with a replication rate of 95%. They conclude that the reliance of syntacticians on the traditional method has not resulted in unreliable data.

In this backdrop, I could either take examples from grammars verbatim or get examples from web sources with specific morphological markers. Considering that I had to take into account situation types in relation to tense and aspect variations, and tense-aspect interaction in addition to the use of specific temporal adverbials, I couldn't rely solely on purposive sampling from grammars and web sources. All the grammatical variations expressed as acceptable in Urdu without any semantic or syntactic oddities in this thesis are based on the grammatical structure of tense-aspect variation given in prominent Urdu grammars (Schmidt, 1999; Abdul Haq, 2012 & Sihab, 2017). For semantic

and syntactic oddities, I have verified with two native speakers of Urdu to ascertain that the sentences are not acceptable in addition to my own intuitions about the sentences. Where needed, to ensure the authenticity of a point in consideration multiple translations and back translations of the sentence variations were verified by native Urdu speakers.

3.2 Transliteration of Urdu Sentences

Urdu sentences included in this study have been transliterated on the basis of modified Velthius script (adapted from Hussain, (2015)). The Velthius script is a system of transliteration developed initially for Sanskrit language for transliteration to and from Devanagari script. Velthius is an ASCII (American Standard Code for Information Interchange) transliteration system which is preferred to ITANS because of excessive capitalization. Velthius relies on the sounds essentially so the reader is advised to attempt to relate the transliterations to IPA sounds. I have adapted the Velthius script used by Hussain (2015) for the transliteration of Urdu sentences. Appendix A contains the list of transcription keys used in the script in correspondence to the IPA sounds.

3.3 Glossing of Urdu Sentences

For glossing of Urdu sentence, I have relied on Leipzig Glossing Rules which are developed by Max Plank's Institute of Evolutionary Anthropology and the University of Leipzig. Leipzig glossing rules include conventions for morpheme by morpheme glosses (Comrie, Haspelmath & Bickel, 2008). Leipzig glossing rules provide guidelines for interlinear morpheme-by-morpheme glossing and includes ten rules for interlinear glosses for syntax and semantics. Most of the abbreviation required for linguistic glossing are provided but it is not an exhaustive list and the rules correspond to the common usage in the linguistic community. Some of the main rules followed for glossing in this thesis from Leipzing glossing are given below (for further details see Comrie, Haspelmath & Bickel, 2008):

1. Glosses are aligned word by word with left-alignment:

   Mai;n aa-yaa
   I came

2. Where possible morphemes are separated by hyphens. Interlinear morpheme-by-morpheme is intended to provide meanings of words as well as their parts. Number of hyphens in the examples correspond to the number of hyphens in the gloss:

   Mai;n aa ga-yaa

I come go-PFV

I came.

Case marking and clitics are marked by an equal sign in both the example and the gloss:

Ali=ne	us=ko	khana	khila-yaa
Ali=ERG	3=ACC	food	cause to eat-PFV

Ali took him/her out for food.

3. Grammatical morphemes are expressed in the glosses by abbreviated label of the grammatical category they express. A list of these abbreviation has been given in the prefatory pages of this thesis.
4. Different grammatical features expressed by the same morpheme are separated by periods in the glosses.

Ho-ga

be-FUT.M.SG

5. Non-overt elements which are not expressed overtly are indicated by Φ in the gloss if the discussion requires that the element is specified in the example and gloss.

Mai;n=Φ	aa-yaa
I=NOM	came-PFV.M.SG

3.4 Theoretical Underpinnings: Generative Grammar

This study is conceptually based on the tenets of universal grammar and assumes a generative framework. *Universal grammar* (UG) takes a cognitive approach to the study of language which itself is a cognitive ability of humans. Founded on Chomsky's seminal work on syntactic structures, the term Universal Grammar was first used by Chomsky to refer to the innate language faculty in humans. Since the late 1950s the theory has evolved considerably and continues to do so. The term *Generative Grammar* is used as a cover term for Transformational Grammar, Standard Theory, Government and Binding Theory (GB), Principles and Parameters Approach and most recently the Minimalist Program (MP). All of these terms correspond to the various developments in Universal Grammar (Carnie, 2012). A detailed discussion of all these approaches is far beyond the scope of this section but a brief overview of the basic theoretical foundations of UG is provided here which can

be asserted to form the common conceptual grounds across all the various approaches that fall under *Generative Grammar*.

UG assumes that because human have an innate language ability, the structural base of all the languages is the same. These structures or rules are termed as Universal Grammar by Chomsky that the native speakers of a language know about their native language. UG is conceived as a modular system which interacts with other subsystems or parts of the mind. UG is also termed as the Internalized language or the I-language by Chomsky (Radford, 2004). The I-language has a perfect design (it terms of how efficiently in interacts with other systems in the mind) and it interfaces with other components in the mind namely the speech faculty and the thought system. This is referred to as the T-Model in UG and is often represented as follow (from Lakshmanan, 1994):

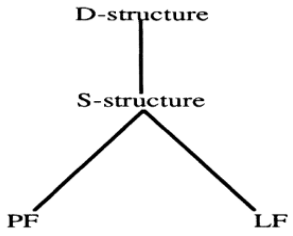


Figure 4. The T-Model in Universal Grammar

This model shows that sentences get different representations at different interfaces of the UG. D-structure corresponds to Deep Structure, S-Structure to Surface Structure, LF to Logical Form (which corresponds to the thought system) and PF to Phonetic Form (which corresponds to the speech system). At the D-structure the lexicon and the phrase structure interact to form the basic structure of a sentence of the base component which is then sent to the S-Structure. At this level words are merged (combined) and basic phrase structure is defined. At the S-structure the surface structure of the sentence is formed with movement of phrases (wh-movement to make questions, for example). D-structure and S-structure comprise the Syntax module of I-language. The syntactic component is then sent to the Phonological component (PF) where phonological rules apply and the logical component (LF) which controls how the meanings are represented through grammatical structure.

3.4.1 Principles and Parameters

The different modules of the I-language constrain the well-formedness of linguistic expression at a number of levels and these structures and restrictive processes as well as

principle are unique to the human species. Correspondingly, some of these principles are common across all languages and known as UG principle (principle of Universal Grammar). However, we also need to account for the vast variation in the structure of languages across the globe. UG principles can be seen as a blue-print which can be realized variously across languages and termed as *parameters* – this is known as the *principle and parameters approach*.

X-bar theory imposes a constraint on all languages at the D-structure, that phrases need to have a head – a UG principle. The term *head* is used in syntax to refer to the word which determines the nature of the entire phrase it is part of. In the phrase *daughters of eve* daughters is the head word and because it is plural the entire NP is plural and thus the agreement patterns with the verb correspond to the plurality of the NP. The position of the head in phrases varies from language to language and thus each language has its own *parameterization* of UG principles termed as the *Head Position Parameter*. English is a head-first language whereas Japanese is head final. In head first languages complements follow verbs and prepositions while it is the opposite in head-final languages.

Similarly, movement patterns vary across languages. Wh-movment is a type of movement in syntax where the wh-word or wh/like word is moved to the beginning of the sentence. In English, for instance, UG principle of movement is parametrized in a way that wh-movement is allowed only at the level of syntax. On the other hand, in Chinese movement rules apply at the LF (the logical form level) and not at D-structure or S-structure. Therefore, Chinese is said to be a *wh in situ* language because the wh/wh-like word does not move anywhere in the sentence and remains in place. Variation in wh-movement patterns, thus, corresponds to the wh-parameter which characterizes if the wh-expression would be moved or not moved in a language.

On the basis of the type of data exposure, a child learns to construct the grammar of his/her native language on the base line of UG principles. This construction essentially corresponds to the setting of parameters of the UG principles according to the parameterization of UG principles in the child's native language. The values of UG principle i.e. the parameters are learned on the basis of positive evidence. Positive evidence includes the observation of particular phenomenon and its underlying patterns. Universal Grammarians believe that children learn only a little through direct negative evidence which in most cases involves correction by adult speakers in a child's environment. Indirect

negative evidence, however, does affect the acquisition of grammar as children learn to set the parameters on the basis of absence of evidence as well. The child experience makes up for the input which activate the language faculty and results in the acquisition of the grammar of language the child is being exposed to (Radford, 2004).

3.4.2 Aspect as a Parameter

Smith (1997) argues that aspectual categories/values have a parameterized structure. Universal grammar provides the basic categories pertaining to various temporal properties. The aspectual value of completion and telicity, for instance, is available in all language. However, it is expressed through different morphological means (c.f. discussion in section 2.2.7). The aspectual values associated with grammatical aspect and lexical aspect exist in all languages (Smith, 1997).

Evidence for the parameterization of aspect comes from a number of studies carried on language acquisition. Children are capable of making aspectual distinction without any explicit instruction. Li and Bowerman (1998) carried out experimental study on the acquisition of Mandarin Chinese by children and showed that children are sensitive to the association between atelic verbs and imperfective aspect markers *zai, zhe* and *ne.* Similarly, Johnson and Fey's (2006) study concluded that while acquiring the morphology of language, children are aware of lexical aspect. Furthermore, Zhou and Zhan (2014) investigated how children identified information regarding grammatical aspect and event recognition during online sentence comprehension. They concluded that young children are able to identify temporal information encoded through aspectual markers as quickly as adults which is required for event recognition.

3.4.3 The Syntax-Semantics Interface and Compositional Semantics

Formal semantics deals with the assigning of denotation to entities by the semantic component. The input to the semantic component comprises the phrase structure trees. The phrase trees are generated by the syntactic component. Kratzer and Heim (1998) elaborate that in the phrase structure tress that are fed to the semantic component were thought to be generated at the Deep structure level (the D-level mentioned in the preceding section). However, in the more modern generative approach the input to semantic interpretation are taken to be Logical Forms which are in turn an output of syntax after transformational

derivations. Syntax only needs to provide the semantic component with the well-formed phrase structure trees which are then assigned denotations.

The most recent work in Generative Semantics is based on Montague grammar which assumed that syntax only produces those trees which can be assigned denotations by the semantic component. However, this notion was based on work on formal languages and a complete interpretability between the syntactic and sematic components can be hardly posited for natural languages (Kratzer & Heim, 1998). Humans don't acquire grammar in a way that only the well-formed expressions are acquired in opposition to all the linguistic expressions that are deemed ill-formed according to the grammar of the language. It is worth mentioning here that sentences can be interpreted on the basis of a number of criterion and grammatically well-formed sentences can be judged as ungrammatical by native speakers.

The formalization in Generative Semantics is based on Fregian system according to which 'all non-trivial semantic composition is functional application' (Kratzer & Heim, 1998, p.43). In Mathematics functions or mapping corresponds to the linking of one member of a set to members of another set. The details of how functions are used in Formal Semantics to formalize semantic interpretation or Logical Forms (LFs) will not be discussed here as extensive formalization has not been used in this study (for details see Kratzer & Heim, 1998 for an elaborate introduction of Extensional Semantics). Consequently, at the LF level the interpretation of linguistic expressions is constrained by the principle of interpretability which states that phrase structures sent to the LF must be in the domain of the interpretation function.

Semantic notions like scope and anaphoric linking apply on phrase trees at the LF. Lexical meaning is assigned to words on the basis of their Semantic types which correspond to syntactic categories. Noun phrases (NPs), for example, have certain constraints on them in terms of distribution – NPs are only allowed in certain slots of the clause either as a subject, as object or prepositional object. The semantic type of NPs is that of individuals. Correspondingly, VPs are interpreted as functions from individuals onto truth value. Semantic composition is type driven; we have to find a function and an argument on which the function can be applied. The types need to match therefore. If the types don't match either we require a type shifting rule or some other mechanism to combine phrases – otherwise the combination is rendered semantically uninterpretable.

Direct Compositionality

In close association to the syntax-semantics interface, compositional semantics aims to come up with models that can help us understand how speaker of a language compute meaning from smaller elements of a larger linguistic expression. Formalization of meaning is another one of the main concerns of compositional semantics. A commonly held belief amongst semanticists is that we compute meaning of linguistic expression on the basis of the smaller parts that make up a given linguistic expression – we understand meaning in a compositional way. This approach was most staunchly adopted by Montague and is known as *Direct Compositionality* (Jacobson, 2014). Most of the formal semantic accounts based on syntactic theories of phrase structure in the generative tradition subscribe to Montague grammar.

One of the central theoretical assumptions of *Direct compositionality* is that every natural language has a system of rules according to which well-formed sentences are characterized. This system is known as grammar and corresponds to a set rules for well-formed structures (syntax) and a set of rules that links these structures to meaning (semantics). The *Direct compositionality* approach works with one main hypothesis which states that both the systems i.e. syntax and semantics function in conjunction to each other and interact with each other. Every syntactic structure that fits the well-formedness criterion of the syntactic rules of a given language is paired with semantics which assigns meaning to the expression.

As a consequence, well-formed linguistic expressions have meanings. The well-formedness applies to the constituent parts of larger linguistic expressions as well – not only the well-formed structures have meaning but the constituents that make up a sentence have meaning as well. However, to understand the paring of syntax with semantics one needs to establish how syntactic structures are formulate first and then we need to establish what counts as meaning in natural languages.

Model-Theoretic Semantics

As it was mentioned earlier, meanings assigned to linguistic expression are termed as Logical Form (LF). Initially Logical Forms were understood as symbolic representations and one of the main issues of concern for semanticists was to study if these symbolic representations affect how grammar of a language links meaning to linguistic expressions.

Meaning are not only symbolic in nature and no matter how abstract they are, they correspond to actual objects in the real world in one way or the other. Meaning, thus, can be taken as objects that form parts of a model which in turn is an abstract representation of the world. This approach of understanding meaning in relation to objects is known as the *model-theoretic approach* or the *Model Theory* alternately. Objects corresponding to meanings in the Model theory are expressed through various symbols in semantic analysis.

The idea of grammars mapping linguistic expressions to symbolic representations does not make for an adequate semantics theory as it essentially means that we are mapping one language to another. Language expresses the reality of the world and we draw inferences from linguistic expressions based on their meaning and understand what is true accordingly. Therefore, semantics has to be a system that links linguistic expression to entities in the actual world. Model theoretic objects are entities that are out there in the world and these include individuals, events, times and possibilities. Model theory relies on a small number of primitive objects out of which complex objects can be constructed (individuals for examples are a semantic primitive).

The Model Theory and most of the generative approaches to compositional semantics rely on truth-conditional semantics. It is often asserted that in order to know the meaning of a sentence, we have to know what makes the sentence true (Jacobson, 2014). This is used as a fundamental criterion in generative semantics according to which meanings of linguistic expressions are analyzed in relation to their structure. Declarative sentences can be either true of false but never both. Speakers of a language generally assume that when they hear a sentence, it is true (unless indicated otherwise by the context and their knowledge of the world – which happens rarely). As a consequence of the assumed truth of the linguistic expressions they hear (or read), speakers construct their knowledge of the world.

Truth values of sentences are an essential part of the meaning of a linguistic expression. Based on their knowledge of the world, speakers have intuitions about the truth values of linguistic expressions in a similar way as native speakers know about well-formed structures of their native language. Judgements of native speakers about the truth values of sentences are used, therefore, to tests the adequacy of semantic theories. Following the tradition in logic the numbers 1 and 0 are used to express that a sentence is true or false respectively. There are certain conventions that need to be established, of course, to

evaluate the truth conditions of a sentence. We cannot generalize, for instance, that all declarative sentences are either true or false. Certain sentences require to be uttered by appropriate speakers with appropriate authority and contextual appropriateness in required for other to be true. Someone saying that *I am the Mayor of this city* does not make the sentence true. However, to take care of these issues certain aspects associated with linguistic expression including time of utterance and the reality of the speaker are assumed to be appropriate for semantic analysis.

Correspondingly, a number of parameters are taken to be fixed to derive the truth values of sentences. These include the pronouns like I, you, he, she etc. and determiners like everyone, each of and all of which take their reference from the context and don't have a fixed reference assigned to them in the lexicon – although they have meaning. A related issue for semantic that relies on computing the truth conditions is that we can know the meaning of sentences without being sure that the sentence is true. Consider the following sentence, for example (quoted from Jacobson, 2014):

– The tallest man alive anywhere on January 1, 2010 had pomegranate juice for breakfast.

Although we know what the above sentence means, we cannot assign a truth value to the sentnce according to our knowledge of the world. The main concern, therefore, is not to assign 1 or 0 to sentences. The idea of knowing what makes a sentence true can be understood in terms of knowing the *possibilities* that make a sentence true. This relates to the *set of possible worlds* in Model-theoretic semantics. Therefore, to know the meaning of a sentence one needs to know the conditions that need to be met in the real world for the sentence to be true. The meaning of sentences, is then, a function that relates the possible world to values 1 and 0 both of which make up a set {1, 0}.

Limiting semantic interpretation to a set of possible world makes assigning meaning to linguistic expressions possible without knowing the actual truth corresponding to a particular linguistic expression. We don't even know exactly everything about the world we live in and when we hear a sentence, we evaluate it according to a possible world in relation that sentence can be interpreted. We draw entailments from sentences based on the possible world narrowing as well. Consider the following sentences:

a) Maira killed the spider on the window.
b) The spider on the window is dead.

The sentence in (b) above is an entailment of the sentence in (a). The first sentence can only entail the second if in every world in which the first sentence is true, the second sentence is true as well. In formal terms this translates as that the set of worlds in which (a) is true is a subset of the worlds in which (b) is true. The reverse can not be asserted as the spider could have been killed by a bird or someone else in the vicinity. Two sentences are synonymous if they entail each other and have the same truth conditions. (a) and (b) are not synonymous.

The mapping of possible world to truth values should be understood in a rather flexible way as we can't simply say that all the true sentences have the same meaning. Truth values of sentences can be understood in the same way we make sense about mathematical facts: these facts are not dependent on the condition unraveling at a given moment in the actual world of the speaker. The sentences *two is less than three* and *three is less than four* have the same truth value i.e. these are true but we know that they have different meaning.

The set of possible worlds does not only include mathematically possible worlds, however. The set of possible worlds correspond to all the worlds that a speaker of a given language can think of – set of all the imaginable worlds in other words. The function relating to possible worlds are termed as *intensions* in model theoretic semantics in contrast to extensions. *Extensions* are values associated with expressions. The idea of possible worlds enriches the semantic theory in one other aspect. Natural languages make references to worlds which are different from the actual worlds all the time. Counterfactuals, for example, can only be understood in relation to possible worlds. Even when we cannot determine the truth value of sentence according to our knowledge of the world, e do understand its truth conditions and these truth conditions can be stated precisely by relying on the ide of possible worlds.

Lastly, in order to fully account for the truth conditions of a linguistic expression, intensions need to include *possible times* as well. Truth conditions of sentences are also time dependent in the same way as they are dependent on the conditions of the world. For example, the sentence *the king of France is dead* needs to meet the possible time requirement as well in addition to the possible world requirement. Possible worlds and

possible times are independent of each other but we need both to interpret sentences. The revised definition of *intensions* is thus that *intensions* are functions from world-time pairs to truth values. The type of times is of essential importance for the interpretation of tense and aspect as they are expressed by linguistic expressions whose meanings combine with object that are time dependent (tense-marking morphemes, for example).

3.5 Diagnostic Tests for Aspectual Features

Aspectual properties of situations can be determined and characterized on the basis of a number of features that can be tested through various linguistic structures. In this section, some of the tests used to gauge various temporal features associated with both grammatical as well as lexical aspects are discussed which are used frequently in the discussion in analyses chapters. These tests are particularly relevant to aspectual features. A single test cannot be used as the only criterion to assess the aspectual class of a situation but in conjunction with other tests they can shed considerable light on the aspectual properties of a situation.

3.5.1 Conjunctions

In order to test the compatibility of two assertions the conjunction test is used. A situation can be closed or open. Correspondingly, open assertions are compatible with assertion that express that the situation continues or was terminated without culmination. If a sentence is compatible with such an assertion, it shows that the situation is an open situation. See the following example:

1. Ali was running the marathon but he didn't get to finish it.
2. Ali was running the marathon and he is still running.

In both of the above sentences, the second clause substantiate that the imperfective in the first clause lends an open reading. In comparison to the above sentence, perfective aspect is not compatible with assertion of continuity:

3. #Ali ran the marathon but he didn't get to finish it.
4. #Ali ran the marathon and he is still running.

The incompatibility of perfective with assertion of continuity in the above sentences show that perfective is not compatible with assertions of continuation of incompleteness. Both the perfective and the imperfective aspect are, however, compatible with assertions of completion but they shed light on different temporal features:

5. Ali was running the marathon and the marathon just ended.
6. Ali ran the marathon and the marathon just ended.

Although both of these sentences are grammatically correct, we can see that the sentence in (6) is a bit odd semantically because the assertion in the first clause in the sentence already expresses the meaning of culmination of the marathon so the second clause seems redundant in this case.

3.5.2 Temporal Clauses

Temporal clauses are helpful in assessing assertions in relation to each other. The temporal relation established between clauses depend on whether the situation is expressed with an endpoint or without it. *Before* and *after* clauses, for example, require that the assertions are interpreted sequentially. Therefore, temporal clauses starting with *before* and *after* impose a restriction on the sentence that the endpoint of a situation is apparent semantically – the main clause needs to have a closed reading when used with these clauses. Consider the example below:

7. Ali left after I called you.
8. Ali left before I called you.
9. *Ali was leaving before/after I called you.

The ungrammaticality of (9) shows that temporal clauses are not suitable with imperfective aspect in the main clause and thus can be used as a diagnostic to determine whether the situation in the main clause renders a closed reading or not.

3.5.3 Questions

Questions can be used to test the semantic meaning associated with an linguistic expressions as well as they delimit the meaning of a sentence. We can only pose a question about the continuation of an eventuality if it is an open situation according to the discourse context in which the question is uttered. Hence, questions of continuation of a situation are

incompatible following a perfective assertion about the same situation. Consider the following sentences:

10. I took a cab to the university.
11. I was taking a cab to the university.
12. Did you get to the university in time?

The question in (12) is acceptable only with the imperfective construction in (11). (10) asserts that the speaker in fact did reach the university so the question in (12) is odd and unreasonable.

3.5.4 Punctuality

The *at x time* expression can be used to mark the punctuality of an expression as it locates a given situation at an exact moment in time (S. Rothstein, 2008). This test is different from other diagnostic tests because both statives and achievements pattern the same with this test. Consider the examples below:

13. At that moment, I was happy. (stative)
14. Maria was sad at 8 o' clock in the morning. (stative)
15. Maria walked at 8 a.m. (activity)
16. The delegates reached the embassy at 2 p.m. (achievement)
17. Maria walked two miles at midnight. (accomplishment)

Statives have a homogenous temporal constitution so they hold for time spans as well time intervals which constitute the time span for the stative last. Therefore, statives are compatible with *at x time*. Achievements are also instantaneous and are realized in a comparatively shorter span of time so they are also compatible with the *at x time*. With activities *at x time* impose an inchoative reading entailing that the activity began at the x time and hence the meaning imparted by the expression is totally different from what we have seen with statives and achievements. Accomplishments don't allow this expression at all because they are durative and spread over a time span and thus cannot be said to completely hold at single moment in time.

3.5.5 Tests for Telicity

Telicity is generally assumed to be as property of situations to have an endpoint. However, situations may or may not endpoints in the real world but linguistic descriptions of events can be delimited by the assignment of a designated endpoint to the situation. Adverbials of the form *for x amount of time* and *in x amount of time* serve as a characterizing diagnostic tests to assess whether a situation is aspectually presented as telic or atelic. The *in x time* adverbial can only be used with telic situations whereas the *for x time* adverbials are compatible with atelic situation only. See the following sentences:

18. Sakina reached the bookstore in two hours.
19. *Sakina reached the bookstore for two hours.
20. *I drove around in two hours.
21. I drove around for two hours.

The situation of reaching the bookstore has an endpoint – the speaker getting the physical space defined as the bookstore so only the in two hours adverbial in compatible with this sentence. Correspondingly driving around as a situation does not have a defined endpoint so the situation is incompatible with in two hours adverbial but perfectly acceptable with for two hours adverbial. Telicity can also be tested through conjunctions. Conjunct clauses with and when used with atelic are ambiguous but with telic there is no ambiguity:

22. Maria walked in the park on Monday and Tuesday.
23. Maria walked a mile on Monday and Tuesday.

(23) is ambiguous we can't exactly be sure for how long Maria walked on both days – she could have walked in the park all day on both Monday and Tuesday without stopping in which case we are talking about one event or she could have gone for a twenty-minute walk on each of the two days. This ambiguity arises because the predicate *walk in the park* is atelic. We could clarify this ambiguity by adding another on before Tuesday so that sentence becomes: *Maria walked in the park on Monday and on Tuesday*. On the other hand, we don't observe any ambiguity in (24) because owing to the telic nature of the predicate we know that there were two distinct events of walking on both Monday and Tuesday with definitive endpoint which was reached when Maria had walked one mile.

Telic situations obtain different logical inferences in contrast to atelic situations when used with the progressive. When telic are used with the past progressive, we cannot associate a simple past form with the telic situation as naturally following from the progressive predicate. With atelic situations, on the other hand, progressive does not impose similar restriction:

24. Maria was walking in the park ⊨ Maria walked in the park
25. Maria was running the Marathon ⊭ Maria ran the Marathon

3.5.6 Finish vs Stop

The verb *finish* can be used only with telic eventualities which are dynamic and have the stage property and is not compatible with statives. Telic eventuality that can occur with the verb *finish* need to be durative -otherwise the use of *finish* is not licensed. The verb *stop* on the other hand is compatible with eventualities that don't have the stage property including activities and statives. The verb *Stop* can also be used with accomplishments but the entailment is that the action was interrupted and the action didn't reach its end point. Achievements don't allow both *stop* and *finish* as they occur in a very short interval of time and are complete as soon as they are started. The following examples illustrate this pattern:

26. Maria stopped/*finished being happy.
27. Maria stopped/*finished running.
28. Maria stopped/finished drawing the picture. (stop= interrupted, finish = drew the picture completely)
29. *Maria stopped/finished arriving.
30. *Maria stopped/finished reaching the hilltop.

All of these tests are not compatible with all grammatical aspect and lexical aspect variations and are applied only where relevant to tease out aspectual meaning of linguistic expressions.

3.6 Conclusion to Chapter 3

This chapter aimed to provide details and process of data selection, as well as the transcription and glossing method used for Urdu Sentences. In the third section, the rudimentary theoretical background is discussed, on which this study is based including

generative grammar and the syntax-semantics interface. Generative grammar takes a cognitive approach to the study of language. The human language faculty is innate and the term Universal Grammar is used to refer to the ability all humans have to acquire the grammatical structure of a language they are exposed to in childhood. This language faculty is modular in that different functions are performed by different segments of the Universal Grammar. The syntax produces well-formed structures which are then paired with meaning through semantics. This is referred to as the syntax-semantics interface. Some diagnostic tests used for determining the presence of particular temporal features were also mentioned in the last section as that have been applied in the analysis section.

CHAPTER 4

IS IT PERFECT OR PAST?

> Languages, like old people, have a liking for the past. They prefer, or rather their speakers prefer, to elaborate categories for what is done and over.
>
> (Klein, 1994, p. 114)

The aim of this chapter is to present an analysis of present perfect with a focus on characterizing the realization of present perfect in Urdu language[11] in comparison to English language and the major semantic issues associated with present perfect. *Perfect* if not specified refers to 'Present Perfect' in this chapter. All other types of 'perfect' are specified. Correspondingly, different aspects of the meaning of perfect, including how perfect constructions compete with past constructions and the related semantic implications are discussed. The goal of the discussion is to account for the similarities and differences in Urdu and English perfect constructions in terms of their meaning contribution. The following major relevant topics associated with perfect are explored in this chapter:

- Defining characteristics of *perfect*
- Realization of perfect through different morpho-syntactic features/elements and different types of *perfect*
- Viewpoint aspect, lexical Aspect and present perfect
- Temporal adverbials with *perfect*
- Stativity of *perfect*
- Present perfect usage in English narratives

English has a distinct *perfect* construction which is formed with the periphrastic 'have' and its inflected forms. Periphrasis refers to the use of multiple words in place of affixes to express grammatical meaning. The typical pattern is the use of a content word with a function word instead of using derivational/inflectional morphemes. Perfect and passive construction in English are examples of periphrases (Anderson, 1997). However, there is a lot of crosslinguistic variation in how perfect is realized; in Chinese, for example, perfects are formed with the aspectual marker *'guo'* (Smith, 1997, p. 106). Similarly,

[11] For simplicity, hereon I use Urdu and English in place of Urdu Language and English language respectively.

German present perfect is formed with a past participle and a present tense auxiliary (Rothstein, 2008). Urdu present perfect is also formed on the similar lines with perfective participle and present tense auxiliary (Schmidt, 1997).

The present perfect connects past to the present. As a tense it is often compared to the simple past tense, because the present perfect locates the time of eventuality before the time of speech as does the simple past. In addition, present perfect requires a present tense auxiliary. As a composite tense, perfect mediates between the time for which an assertion is being made and the actual time for which the eventuality holds in the actual world. Thus, present perfect is morphologically in competition with both the simple present and simple past, and in many Indo-European languages perfect requires present tense morphology (Grønn & von Stechow, 2017). Throughout this chapter, the delineation of present perfect and past constructions in terms of their semantic meaning will be a main concern.

4.1 What is Perfect?

To draw a comparison between Urdu and English perfect constructions, I have relied on the existing literature on English[12] and other languages. One of the main issues still under debate regarding 'perfect' is whether it is a tense or an aspect. On the aspectual interpretation espoused by Klein (1994), perfect links a reference time to an event time (TT to TSit[13]). However, this is problematic as progressive – which is most definitely an aspect – can be embedded under perfect as *he has been running since 2 0' clock* is both perfect and progressive. Currently, the most commonly accepted semantics of perfect under the generative framework subscribe to the relative-tense interpretation of perfect on the lines of *Extended-Now theory* (Alexiadou, Rathert & von Stechow, 2003; Iatridou, Anagnostopoulou & Izvorski, 2001; Rothstein, 2008). According to the *Extended-Now theory* the present perfect expresses a time span with the starting point at some point in the past and links it to the moment of speech/utterance (Rathert, 2001). The term *Extended Now* was introduced by McCord (1978) to express the observation that present perfect links the present time – the now – to a moment in the past. Perfect behaves as a relative-tense

[12] some of the complexities of what we call "perfect" have already been discussed in chapter 2, c.f. section: 2.2.4.
[13] In Klein's (1994) system aspect relates TT to TSit, whereas tense relates TT to TU.

because it relates the reference time to some time-point in the past. The present perfect is characterized in English by a number of features which are as follows:

i. The situation expressed/asserted through perfect occurs before the reference time or TT[14]. Klein (1994) discusses it in terms of the notion of 'post time'. In the case of the perfect, the TT completely falls into the post time of the situation whereas in 'perfective' the TT is partially included in post time.

ii. There is a resultant stative value associated with the *perfect*. Both perfect and perfective express a change in the 'stative value' in the sense that there is a time point when the situation does not hold and then there is a time point after it when the situation expressed by the verb with the perfect/perfective does hold and this change encoded in the meaning of 'the perfect'. This is sometimes referred to as the 'post-state theory'.

iii. In relation to the above-mentioned change in state, the subject is ascribed a particular property in the 'present' due to the subject's participation in a previous situation – hence present perfect constructions have a 'stative value' in addition to the temporal meaning.

iv. Perfect expresses an eventuality as 'closed' or in other words the viewpoint is 'perfective' with the exception of universal perfect. Smith (1997), in particular, asserts that this is a feature of perfect constructions but other authors don't seem to emphasize it. However, this cannot be ascribed as a true feature of perfect especially on the relative-tense approach as tenses don't have a specified aspectual value associated with them.

v. Although perfect expresses anteriority, adverbs expressing anteriority like *yesterday* are not compatible with present perfect in English – this is famously labelled as the *present perfect puzzle* by Klein (1994). These adverbs are also referred to as *positional adverbs* in literature because they assert a specific position/point on the time axis. Iatridou et al. (2001) argue that 'anteriority' is not included in the meaning of 'perfect participle'. Present perfect in English is, however, compatible with adverbs expressing 'recency' – thus 'recency' is deemed to be part of its meaning.

[14] TT = Topic Time or time for which an assertion is made by a particular utterance. TSit = the time interval for which the eventuality holds in the actual world (c.f. section 2.1.2 for details).

vi. The notion of ‘present relevance’ is associated with ‘perfect’ but it cannot be a defining criterion for perfect; a situation expressed in simple past can also have relevance for the present (Chung, 2012). In Portuguese, for instance, a past incident with present relevance can only be expressed by simple past if the habituality and continuation of the eventuality are not to be emphasized. Thus, *I have studied Portuguese* and *I studied Portuguese* both translate to *eu estudei Portugues* in Portuguese (Comrie, 1987, p. 81).

vii. The main semantic contribution of the present perfect is the introduction of a “perfect time span” (PTS hereon). The left boundary (LB) of the PTS is fixed by temporal adverbial and the right boundary (RB) is the time of utterance (TU) expressed by the present tense auxiliary. For perfects without temporal adverbials, the LB of the PTS is asserted to be somewhere in the past and thus unspecified. This is a reformulation of the *Extended-Now Theory* discussed earlier and sometimes referred to as ‘XN’ in literature (Alexiadou et al., 2003; Rothstein, 2008). The term PTS was first introduced by Iatridou et al. (2001) and it has become a preferred term because it can be generalized for all types of perfects in contrast to *Extended Now* which only refers to present perfect. For the purpose of analysis in this chapter, the setting of PTS is considered as a defining feature for present perfect constructions in English and Urdu.

4.2 The Morphosyntactic Realization of Present Perfect

In English, the present perfect is realized periphrastically with the auxiliary ‘have’ and perfect participle as in the sentence: *I have read Anna Karenina*. In most Urdu grammars, a three-way distinction is made for past tense: ‘past indefinite’, ‘near past’ and ‘distant past’ (Sihab, 2017, p. 86). The past indefinite or simple past in Urdu is formed by adding perfective suffix ‘ă’ to the end of the verb root. The simplest present perfect sentences in Urdu are formed by the addition of the inflected auxiliary verb *hona* ہونا which means *to be* with present tense marking to perfective participle (c.f. section: 4.2 for conjugation of *hona*). Distant past is formed in a similar way with the perfective participle and past auxiliary *tha* تھا. English present perfect most nearly corresponds to Urdu near past constructions. The Urdu present perfect is also a periphrastic tense as it is realized through a present tense auxiliary and a perfective participle. Consider the following examples:

1. I read Anna Karenina. (Simple Past/Aorist)

میں نے عینہ کیرینینہ پڑھی.

Mai;n=ne	Anna Karenina	p.rh-ii.	
1.SG=ERG	Anna Karenina	read-PFV.F.SG	

2. I read Anna Karenina. (Distant Past)

میں نے عینہ کیرینینہ پڑھی تھی [15]

Mai;n=ne	Anna Karenina	p.rh-ii	th-ii.
1.SG=ERG	Anna Karenina	read-PFV.F.SG	be.PST.F.SG

3. I have read Anna Karenina. (Near Past/Present Perfect)

میں نے عینہ کیرینینہ پڑھی ہے۔

Mai;n=ne	Anna Karenina	p.rh-ii	hai.
1.SG=ERG	Anna Karenina	read-PFV.F.SG	be.PRS.SG

Both past indefinite and the so called distant past sentences in Urdu correspond to the English *simple past* and the discourse context determines which of these two is used. Both *simple past* and *recent past* in Urdu don't assert that the eventuality holds at any specific time in the past and although anteriority is part of their meaning, they are both indefinite. However, the present perfect construction in Urdu does set up a PTS: the LB of the eventuality is asserted to be at some point in the past and the RB of the eventuality coincides with the time of speech (TU) marked by the present tense auxiliary verb *hona* ہونا (in present tense). The anteriority part is contributed by the participle and the present tense auxiliary connects the eventuality to the TU – creating a sense of recency or present relevance.

Although, both simple past and present perfect locate eventuality before the TU, they both achieve it in different ways. With simple past sentences, we see that there is a bit of distance between the eventuality and the moment of speech. Perfect on the other hand, locates the event much closer to the moment of speech and thus creates a sense of recency

[15] Most of the Urdu sentences are my own. Citations for examples from other sources are given either in-text or in footnotes.

– by setting up the PTS. In addition, the meaning of present perfect is mediated by both the tense marking auxiliary and the participle which shifts the focus from anteriority to content.

In English, present perfect has four major types: universal perfect, experiential perfect, perfect of result and perfect of recent past (Comire, 1967; Iatridou et al., 2001; Klein, 1994). The universal perfect (referred to as the U-perfect/U-reading hereon) is used to denote an eventuality that continues from some point in the past to the present moment. English perfect constructions (regardless of the tense) are unusual in the sense that both the perfective and progressive perfects are formed by the auxiliary 'have'. This seems to be an exception rather than the norm (Smith, 1997). U-perfects are possible only with homogeneous eventualities (Matthewson, Quinn & Talagi, 2015). A crucial requirement for universal perfect is that it requires unboundedness – which means that the eventuality has not reached its end point and is still going on at the moment of utterance. In most languages, unboundedness is realized through progressive or imperfective morphology. English universal perfects can also be formed without the progressive morphology: *I have lived in this town for five years*. U-perfects obligatorily require a temporal adverbial. English U-perfects without temporal adverbials are ambiguous between a U-perfect and E-perfect reading and the context determines which reading is more likely. A typical example of English universal perfect is as follow:

4. We have been living here since 1969.

In (4) the eventuality of 'living' still holds at the time of utterance which is the RB, and the LB is set at particular point in time by the adverbial i.e. 1969. As Iatridou et al. (2001) assert, U-perfect is not considered a central use of perfect because it is a language specific quirk and whether or not the U-perfect is available in a language depends on the elements that contribute in the realization of present perfect. In Urdu, the perfect participle is formed from a perfective stem and thus U-perfects are not possible with the perfect participle. The availability of the universal reading depends on whether a language has non-perfective participles. Urdu does not have universal perfects because perfect in Urdu is formed with a perfective participle which does not allow a continuative and unbounded reading. In Urdu, the equivalents of English universal perfect constructions are realized morpho-syntactically through progressive morphology (with the exceptions of states which don't allow progressive morphology), temporal adverbials and postpositions added to present continuous:

ہم یہاں ۲۰۱۰ سے رہ رہے ہیں۔

5. Ham yahaa;n 2010 se rh rah-e hai;n
   1.PL here 2010 since stay stay-PFV.M.PL be.PRS.PL
   We have been living here since 2010. (activity, unbounded, progressive morphology)

علی ایک ہفتے سے بیمار ہے۔

6. Ali ek haf.te se bemar hai.
   Ali one week since sick be.PRS.SG
   Ali has been sick for a week. (state, unbounded, non-progressive morphology)

The use of progressive morphology is tied to the semantic similarities between present progressive tense and universal perfect in terms of the temporal information they both encode. In universal perfect, the eventuality continues at the utterance time and this makes the universal perfect quite similar to the present continuous semantically. The sentences in (5) carries a universal perfect like meaning because the eventuality of 'living' starts at a time-point in past i.e. the year 2010 and continues till the moment of speech (TU) and thus a PTS is set up. U-perfects with statives don't allow progressive morphology in English. Similarly, in Urdu progressive morphology cannot be used as statives as illustrated in (6) because statives don't have initial and final endpoints.

In English the universal perfect reading is obligatory with some adverbials and possible with others. This does not seem to be the case in Urdu. Universal perfect like meaning can only be asserted in Urdu through a temporal adverbial with the postposition *se* (سے , literally = from) which sets up the left boundary of the PTS.

Experiential perfect is used to show that a person has had a certain experience. Example (3) given earlier is experiential perfect. Indefiniteness of past time is also a feature of English experiential perfect and simple past constructions: *I have lived in Lahore* vs *I lived in Lahore*. Although there does not seem to be much difference in both these sentences in terms of their semantics, in the former the eventuality of 'living' is somehow relevant to the present and is, thus, made salient by the use of present perfect instead of simple past.

Perfect of result is possible only with telic eventualities and can be used only if the effects of the eventuality still hold. See, for example, the following examples:

7. I have caught the butterfly.

میں نے تتلی پکڑ لی ہے۔

Mai;n=ne	ttl-ii	pakar	l-ii	hai
1.SG.=ERG	butterfly.F.SG	catch	take.PFV.F.SG	be.PRS.SG

In the above example, the *resultative perfect* can only be used in English language if the butterfly remains 'caught' (and it couldn't be true if the butterfly were to escape/fly again). The Urdu equivalent of this sentence (as mentioned above), however, requires a light verb and, although, it is possible to make experiential perfect in Urdu without a light verb, the realization of resultative perfect seems to need a light verb – marking completion/telicity. This entails that completion/telicity in Urdu is expressed explicitly through light verbs and the perfective participle is not the sole contributor of aspectual information in this regard. It is then arguable that the participle labeled as 'perfective' in Urdu Grammars (Schmidt, 1997 in particular) needs to be called 'aorist' if we were to retain the distinction.

میں نے تتلی پکڑ لی ہے۔

8.

Mai;n=ne	ttl-ii	pakar	l-ii	hai
1.SG.=ERG	butterfly.F.SG	catch	take.PFV.F.SG	be.PRS.SG

(I have caught the butterfly.)

میں نے تتلی پکڑی مگر وہ پھر اڑ گئ۔

9.

Mai;n=ne	ttl-ii	pakar-ii	magar	vo
1.SG.=ERG	butterfly.F.SG	catch-PFV.F.SG	but	3
phir	ur	ga'ii.		
again	fly	go.PFV.F.SG		

*I caught the butterfly but it flew away again

میں نے تتلی پکڑ لی ہے مگر وہ پھر اڑ گئ*

10.

*Mai;n=ne	ttl-ii	pakar	l-ii	
1.SG.=ERG	butterfly.F.SG	catch	take.PFV.F.SG	
hai	magar	vo	phir	ur	ga'ii.
be. PRS.SG	but	3	again	fly	go.PFV.F.SG

*I have caught the butterfly but it flew away again.

The Urdu sentence is (9) is acceptable with only the perfective participle and the assertion in conjunction clause affirms that the perfective participle doesn't assert the

meaning of absolute culmination as the English simple past does. Urdu resultative perfects thus need a light verb and this further substantiates that perfect does not behave essentially like an aspect. Interestingly as Rothstein (2008, p.12) elucidates, German resultative perfects are quite different from English resultative perfects in the sense that present perfect can be used in German even when the eventuality asserted by present perfect does not hold at the present moment although it did at some point in the past:

11. Ich habe meine Brille verloren und heute
    I have my glasses lost and today
    Morgen erst wieder gefunden.
    morning particle again found
    'I lost my glasses and didn't find them until this morning.'

The last type of perfect i.e. *perfect of recent past* needs an adverb that marks 'recency' in both English and Urdu as shown in the following sentences:

12. I have just read Anna Karenina.

میں نے ابھی ابھی عینہ کرینینہ پڑھی ہے

13. Mai;n=ne abhi abhi Anna Karenina p.rh-ii hai.
    1.SG=ERG now.EMPH Anna Karenina read-PFV.F.SG be.PRS.SG
    (I have read Anna Karenina just now (very recently))

The last three types are sometimes collectively referred to as 'existential perfect' (E-perfect/E-reading hereon). Urdu E-perfects don't allow a continuative reading because they are formed from the perfective participle. However, Urdu E-perfects without a light verb unlike English E-perfects don't seem to assert 'closed eventualities'.

In addition to the above-mentioned types, English also allows unmodified perfects (perfects that can give an either existential or universal reading). Unmodified perfects in English are ambiguous between U-reading and E-reading. Consider the following examples:

14. She has been sad (for a while). U-reading
15. She has been sad (and she hasn't talked to her friends much). E-reading

In (14), it is possible to get a U-reading where the state of 'sadness' continue till the moment of utterance (i.e. the present) in which case there is a covert temporal adverbial that is assumed but not explicitly asserted. This reading could be cancelled, however: *she*

has been sad but she isn't anymore. Iatridou et al. (2001) assert that unmodified perfects in English are, in fact, perfects of recent past and not universal perfects as there is a covert adverb with the meaning *lately* in these sentences which is inferred from the context.

Unmodified perfects are used when the speaker is not sure if the eventuality still holds at the time of utterance and thus universal perfect readings are possible but unlikely. This is substantiated by the data from Urdu as in Urdu, unmodified perfects with ambiguous E/U-perfect readings are not possible. In case the state still persists then it would be expressed through simple present with the assertion that the state continues till the speech time and if the speaker is not sure if the state does or doesn't persist any more, then it can only be expressed through past:

وہ بیمار ہے (آج کل)

16. Vo	bimaar	hai	(aaj	kal).	
3	sick	be. PRS.SG	today	tomorrow	

Literally: She has been sick (these days). Simple present

وہ بیمار تھی (لیکن اب نہیں ہے)

17. Vo	bimaar	th-ii	(lekin	ab	nahii'n	hai).
3	sick	be.PST.F.SG	(but	now	not	be.PRS.SG)

Literally: She was sick (but isn't anymore). Simple past

It follows from the above discussion that perfects have different types. From a semantic perspective, a crucial issue is to formulate a uniform semantics that would account for the various types of perfects. The PTS can account for the apparent polysemy in different forms of perfect. Although perfect has different types, one feature is common across all these types which is the linking of a past time point to the moment of speech – the setting of PTS. Variations in perfect arise because the perfect eventuality might have occurred during the PTS leading to E-perfect reading or lasts for the entire PTS resulting in U-perfect – provided the language allows progressive morphology with perfect morphology. As we have seen that Urdu-perfects differ from English perfect in not allowing for U-perfect readings firstly owning to the morphological elements that enter into the formation of perfects in Urdu. However, although perfects in Urdu are formed with the help of perfective participle, they still need light verbs to express absolute culmination which indicates that the behavior of Urdu perfects differ considerably from their English counterparts. Moreover, Urdu doesn't allow unmodified perfects and specific reference to past or present through tense marking is required.

4.2.1 Perfect and Event Structure

The polysemy of perfect entails that perfects have different event structures according to the situation type the perfect combines with. Kiparsky (2002) argues that we can account for the variations in the meaning of perfect by positing an event structure that maps in different ways according to the parameters of temporal relations. Types of perfect can therefore correspond to a different alignment between temporal parameters and event structure resulting in different properties.

Activities and states have a simple event structure owing to their homogeneity. Telic predicates have a complex event structure as they comprise of an activity part and a change of state part. All verbal predicates require an event argument ε, and complex event arguments are composed of two simple events the activity part *e* and the state part *r*. Event arguments of verbs are mapped to three temporal parameters TSit, TT and TU (I adopt Klein's terminology instead of the Reichenbachian terminology used by Kiparsky, 2002).

Relation between temporal parameters include temporal precedence expressed A – B which is read as A precedes B, and temporal inclusion expressed as A ⊆ B which is read as A is included in B. Verbs that are not marked for tense and aspect have the following default inclusion relations between temporal parameters:

a) TU ⊆ TT
b) TSit ⊆ TT

The above relations entail that present tense is an unmarked tense as for the present tense the TU and TSit are included in TT. Tense and markings functions to change these default relations between temporal parameters. Tense does so by establishing precedence between TU and TT, aspect established relations of inclusion between TSit and TT. TSit of not inherently linked to TU and they can only be linked by TT. How past tense and present perfect link temporal parameters can be expressed as follows:

Past: $\mathbf{TSit}$ $\downarrow$ $\mathbf{TT - TU}$

Present Perfect: $\begin{matrix} TU \\ \downarrow \\ TSit - TT \end{matrix}$

Different types of perfect can be distinguished on the basis of how the event structure is related to the temporal relations between TSit and TT. Perfects obtain

existential readings (E-perfects) when the situation expressed by the predicate is either atelic or iterative telic and the situation is contained in the TSit:

TSit – TT, TU

↑

ε

Existential perfect assert that an event happened during the PTS and it could have happened one or more times during the perfect time span. However, the situation does not have to extend over the entire time span TSit extending to TT. In fact, with existential perfects, there is an implicature that the situation does not extend over the entire PTS. *Ali has fought in the World War* only entails that Ali fought at least once in the war (he could have fought multiple time during) but we don't get the entailment that he fought during the entire World War. Furthermore, E-perfects presuppose that there is a possibility of the recurrence of the situation expressed by the perfect predicate. If there is no possibility of the situation occurring again, the past form is more felicitous. If there is no possibility of Ali fighting (in a war or some similar situation) the past form *Ali fought in the war* would be used. The use of present perfect construction in this scenario entails that Ali' participation in the war at a past time makes him suitable for a present context that might require some skill relevant to fighting in war if the sentence is uttered in a context when there is no imminent war. This becomes even more clear when we compare another form of perfect like perfect of recent past e.g. *Ali has just fought in the war* which does not have the same presuppositions as the existential perfect.

Universal perfect readings obtain when an atelic or iterative telic situation expressed by the perfect predicate is co-extensive with the TSit and have the following temporal relations:

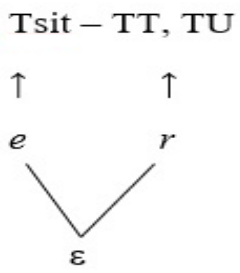
TSit – TT, TU

|

ε

The arrowless line is used to express that the situation lasts for the entire duration of the PTS till the TT. *I have been working since 2014* asserts the situation extends over the entire duration starting at some point in the 2014 and extending till the moment of utterance of the sentence.

Lastly, the resultative reading of perfects which is also termed as the state reading is obtained by accomplishments and achievements. Both achievements and accomplishments include the meaning of change of form in their lexical semantic meaning. An accomplishment like *catch* consists of an activity part and a state part that is obtained after the activity terminates. Similar is the case with achievements like arrive consist of a change in state. We get the resultative reading of perfect when the accomplishment or achievement predicate is located between TSit and TT on the PTS. This is expressed as follow:



Change of state for accomplishments is located at the TT so the activity part occurs before the TT. For example, in the predicate *catching a butterfly* the activity of pursuing the butterfly must precede the TT and the result state which occurs when the butterfly is caught is located at the TT. As perfects establish an inclusion relation between time of utterance and reference time i.e. TU ⊆ TT. Achievement perfect predicate have the same event structure and the change of state is located at the TT but differ from accomplishment in that the activity part does not precede the TT. The perfects of recent past have the same event structure as the resultative perfects as in the change of state expressed by perfects of recent past is also located at the TT. Therefore, the difference in how events are mapped to various temporal relations and parameters leads to the differences in meanings of various types of perfect.

4.3 Aspect in Present Perfect Constructions

Viewpoint aspect or grammatical aspect is expressed through the semantic and syntactic features of the verb that are retained in the perfect participle. The elements/features that enter into the semantics of present perfect (and in setting up the PTS) include the auxiliary, the tense marking on auxiliary and the perfect/perfective participle. The perfect itself does not carry the feature "un/boundedness" and the element below the perfect contributes this information. The perfect is just a time span which asserts the presence of an eventuality in the PTS which can be bounded or unbounded. The bounded/unbounded distinction correspond to the culmination/non-culmination feature of eventualities. Languages vary in terms of which aktionsart/lexical aspect can combine with which viewpoint aspect. The clausal representation of perfect is as follow (from Pancheva, 2013):

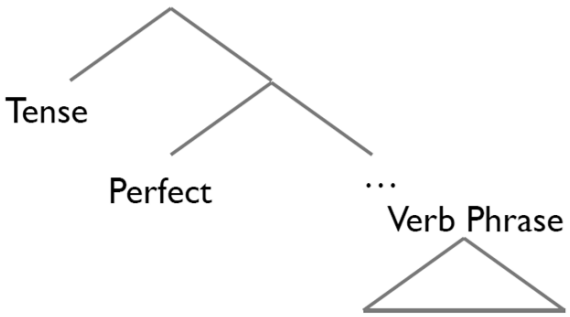


Figure 2. Syntactic Representation of Perfect

The type of perfect obtained in a sentence is dependent on the viewpoint aspect, lexical aspect (type of eventuality) of the perfect participle and the temporal adverbial. PTS approach to perfect entails a uniform semantics for present perfect and the differences in interpretation are ascribed to how the adverbials are interpreted specifically in relation to the scope of the adverb. Scope refers to extent to which the adverbial modifies the predicate: it can modify the entire predicate, part of the participle or the entire sentence (thus in English we have sentence-level adverbs too).

Temporal adverbial can have two types of interpretation: durative and inclusive. On the durative interpretation the predicate holds at every sub-interval of the PTS. Durative adverbial act as universal quantifiers: they quantify over all the sub-intervals of the time span (PTS) asserted by the perfect and both the LB and the RB boundaries are part of the PTS. Duratives lead to U-perfect readings. Inclusive adverbials, on the other hand, act as

existential quantifiers and are totally contained within the PTS and neither the LB nor the RB is asserted to be part of the PTS. E-perfect readings require inclusive adverbials. Some adverbials like *since* are both durative and inclusive and their interpretation depends on whether the predicate has a sub-interval property or not.

Durative adverbials: since, for, ever since, at least since, always

Inclusive adverbials: since, once, twice, from x to y

In Urdu, constructions similar to English U-perfect are compatible with adverbial phrase made with the postposition *se* سے (literally = from). In addition, the postposition *tak* تک (literally = till) which express from *x* to *y* like meaning can also be used. The E-perfects in Urdu require only the temporal adverbials and the postposition is not required. Adverbs in Urdu E-perfects specify a time point in past – the LB and RB is established by the auxiliary. Consider the following sentences:

علی ۲۰۰۹ سے نسٹ میں پڑھ رہا ہے۔

18. Ali 2009 se NUST me;n parh rah-a hai
    Ali 2009 since NUST in study stay.PFV.M.SG be.PRS.SG
    (Ali has been studying at NUST since 2009)

علی اور سارہ انہیں روز صبح ۹ بجے سے ۱۰ بجے تک پڑھا رہے ہیں

19. Ali aur Sara unhai;n roz subh 9 baje se
    Ali and Sara they.3.PL.OBL=ACC everyday morning 9 o'clock since
    10 baje tak p.rh-aa rah-e hai;n
    10 o'clock till cause to.study stay-PFV.M.PL be.PRS.PL
    Ali and Sara have been teaching them every day from 9 a.m. to 10 a.m.

علی نے آج صبح ۹ بجے درخواست دی ہے۔

20. Ali-ne aaj subh 9 baje dr.khvast d-ii
    Ali=ERG today morning 9 o'clock application give.PFV.F.SG
    hai
    be.PRS.SG
    (Ali has submitted the application at 9 a.m. in the morning today.)

Experiential perfects in English can be made with almost all types of eventualities and with both perfective and imperfective view points; universal and resultative perfects on the other hand are not compatible with all aspects. It is possible in English to get a universal reading with bounded feature (perfective reading), without progressive

morphology in case of activities but a bounded and universal reading with telic predicates without progressive is not possible. States in English when used with the progressive can result in either a U-perfect or an E-perfect reading. See the following examples:

21. I have worked since Monday. (activity)
    U-reading: bounded, durative interpretation of since
    E-reading: bounded, inclusive interpretation of since
22. I have written a letter since Monday. (accomplishment)
    U-reading: not possible
    E- reading: bounded, inclusive use of since.
23. Aliya has been sick since Tuesday. (stative)
    U-reading: Aliya became sick on Tuesday and is still sick. (since: durative reading)
    E- reading: Aliya was sick at some time during Tuesday and the moment of utterance of the sentence. (since: inclusive reading)

Correspondingly, un/boundedness is dependent on how perfect combines with viewpoint aspect and lexical aspect. If the predicate is telic (accomplishments and achievements are telic, see section 2.3 for a detailed discussion), with the E-perfect we should get a closed reading which is the case in English:

24. I have built the house. (bounded accomplishment)
25. She has reached the finish-line. (bounded achievement)

Hence, English E-perfects with telic eventualities only allow for perfective viewpoint as: *I have read Anna Karenina but not finished it* is semantically odd. As it was discussed earlier, Urdu perfects are formed with what has been termed as the *perfective participle* (Schmidt, 1997). Schmidt (1997) categorizes Urdu present perfect and simple past under perfective tenses: "the immediate past tense, also called the present perfect describes an action or state which is completed, but which still affects the present situation. Very often it refers to events which have recently been completed" (p. 126). Perfectivity, however, doesn't seem to be a characteristic of Urdu existential perfects across all types of eventualities. Telic eventualities, particularly in the case of sentences without light verbs do not seem to assert perfectivity. Perfectivity is also not asserted by the perfective participle in the simple past Urdu constructions:

میں نے عینہ کرینینہ پڑھی ہے لیکن پوری نہیں۔[16]

26. Mai;n= ne Anna Karenina p.rh-ii hai

1.SG=ERG Anna Karenina read-PFV.F.SG be.PRS.SG

laikin porii nahii;n

but complete.F not.

Literally: *I have read Anna Karenina but didn't read the entire book. (accomplishment, present perfect, unbounded)

میں نے عینہ کرینینہ پڑھی لیکن پوری نہیں۔

27. Mai;n= ne Anna Karenina p.rh-ii laikin porii

1.SG=ERG Anna Karenina read-PFV.F.SG but complete.F

nahii;n

not

Literally: *I read Anna Karenina but didn't read the entire book.

(accomplishment, simple past/aorist, unbounded)

Frame adverbial can be used to check whether a predicate is telic or atelic and they can also turn a predicate into a telic or atelic eventuality. *In x time* adverbials are possible only with telic eventualities whereas *for x time* adverbials express atelic eventuality. The frame adverbial tests when applied to Urdu E-perfect activities like *ser karna* سیر کرنا literally = to walk show that Urdu E-perfects with for x time are acceptable for activities but the *in x time* is not good with E-perfects and require that the auxiliary is dropped.

میں نے آج صبح دو گھنٹے پارک میں سیر کی ہے۔

28. Mai;n=ne aaj do ghanta park me'n ser

1.SG=ERG today two hours park walk in walk

k-ii hai

do.PFV.F.SG be. PRS.SG

[16] Through-out this study conjunct clauses are used to ascertain the aspectual value of the first clause of example sentences. Clauses with closed aspectual value are not compatible with clauses that negate the closed aspectual value of the first clause and therefore render the sentence ungrammatical. Reader is advised to see chapter 3, c.f. section 3.3 for diagnostic tests used to tease out the aspectual value of linguistic expressions.

Today, I walked in the park for two hours in the morning – atelic

میں نے آج صبح دو گھنٹے میں پارک کی سیر کی ہے۔

29. Mai;n=ne aaj do ghanta me;n park=kii ser
    1.SG=ERG today two hours in park.M.SG=GEN walk
    k-ii hai
    do.PFV.F.SG be. PRS.SG
    Today, I walked the (entire) park in two hours. – telic

With achievements, the perfective participle, however, asserts that the eventuality has achieved the end point:

اس نے میچ جیتا

30. Us=ne match jiit-a.
    3=ERG match win-PFV.M.SG
    She won the match. (achievement, simple past).

اس نے میچ جیتا ہے

31. Us=ne match jiit-a hai
    3=ERG match win-PFV.M.SG be.PRS.SG
    She has won the match. (achievement, present perfect).

One possible explanation for this is that what has been termed as ‘perfective participle’ in Urdu to make simple past and formed with the perfective suffix ‘ă’ is in fact aorist and not a true perfective. The term ‘aorist’ has been used interchangeably for the perfective for Indo-European Languages including Hindi/Urdu. According to Hewson and Bubenik (1997) in Indo-European languages aorist marks completion and generally an opposition is drawn between an aorist and imperfect: interpreted as past perfective vs. past imperfective. Aorist used to be very common in ancient Indo-European languages but now it has survived in only a few (Modern Greek has an aorist). The authors, however, don’t elaborate on the notion of completeness and don’t take a position on using the term aorist instead of ‘perfective’ (Hewson & Bubenik,1997).

Aorist has often been asserted to carry a grammatical aspectual meaning only, with no bearing on the durative quality of the eventuality (Montaut, 2016). In Greek grammatical theory, from which the term comes, aorist is contrasted with both the tenses that indicate completion (perfects) and tenses conveying duration (imperfects). Platts and Kellogg (who

were one of the first grammarians of Urdu and Hindi respectively, cited in Montaut, 2016) use the term ‘indefinite perfect’ for the perfective participle ‘ă’ which forms aorist in Hind/Urdu. Kellogg and Platt’s use of ‘indefinite’ is related to ‘indefinite perfects’ vs ‘indefinite imperfects’ opposition. Indefinite imperfects are formed by the addition of ‘-t’ to the verb root (see section 4.2.3. for details on imperfective participle in Urdu).

Montaut (2016) argues that the perfective/imperfective distinction has been borrowed from Slavonic languages and their meanings when applied to other languages can lead to multiple interpretations of the terms – especially when it comes to Hindi/Urdu. In Urdu perfects, as we have seen, the telic eventuality is not asserted as bounded or ‘perfective’ through the perfective participle. Furthermore, the remote past construction in Urdu, formed by the addition of *tha* *تھا* has been traditionally interpreted as a pluperfect (which is a relative tense), but as Montaut (2001) demonstrates, it can also function as an absolute tense and doesn’t have to assert remote past meaning necessarily:

وہ ابھی تو آیا تھا۔

32.	vo	abhii-to	aay-aa	th-a
	3	now-EMPH	come.PFV.M.SG	be.PST.M.SG

He just came.

This is further substantiated by how Schmidt (1997) differentiates between simple past and remote past in Urdu. For Schmidt, Urdu simple past constructions are used when the mere mention of the eventuality is intended and remote past constructions are used when the temporal context (the pastness of the eventuality) is important. See the following example given by Schmidt (1997, p. 127):

کل بارش ہوئی تھی۔

33.	Kal	bari.s	hoii	thii. (remote past)
	Yesterday	rain	be.PFV.F.SG	be.PST.F.SG

It rained yesterday.

کل بارش ہوئی۔

34.	Kal	bari.sh	hoii (simple past)
	Yesterday	rain	be.PFV.F.SG

It rained yesterday.

Correspondingly, ‘perfective participle’ in Urdu is not perfective in the sense of lending the meaning of ‘un/boundedness’ to the predicates it combines with. This is further substantiated by the existence of truly ‘perfective forms’ of the V+v nature in Urdu, requiring a light verb with the participle (which are discussed in detail in the next chapter). Thus, it can be argued that the perfective participle in Urdu should be labelled as *aorist*. The temporal interpretation of aorist is dependent on the syntactic and discourse context, entailing that it is in fact ‘indefinite’ (a well-known feature of the aorist). However, this poses no contradiction to the PTS (or extended-now approach) as PTS doesn’t entail that there is a specific aspectual value associated with the ‘perfect’ and neither is perfect considered as a tense-aspect combination. The meaning of completion is not contributed by perfect itself; the feature bounded/unbounded is contributed by the elements embedded below the perfect.

Therefore, locating events in the past is not the main function of perfect. The primary temporal meaning of perfect includes locating an event that has occurred before the reference time in correspondence to the reference time – which is the moment of utterance in case of present perfect. The meaning of ‘present relevance’ for present perfect is accomplished by the PTS by linking the moment of utterance to a past time span.

4.4 The Present Perfect Puzzle

English perfects are not compatible with past-oriented adverbs expressing ‘anteriority’ and thus exhibit the *present perfect puzzle* (PPP hereon). Hence, **he has arrived yesterday* is semantically odd. The oddness is only because of the adverbial and as soon as we take the adverbial out the sentence becomes fine. Portner (2003) asserts that the PPP only exists with definite positional adverbials in English and perfects with indefinite positional adverbials are fine. Thus, *I have attended this meeting on a Saturday many times* is fine. The puzzle does not extend to English pluperfect construction which are compatible with past-oriented adverbials. PPP is only shown by present perfect in some languages and Urdu is not one of these. It is possible to use temporal adverbials expressing anteriority with present perfect in Urdu:

میں کل پہنچی ہوں۔

35. Mai;n kal phnc-ii huu;n.

1.SG=NOM yesterday reach-PFV.F.SG be.PRS.1.SG

I arrived yesterday.

یہ خط پچھلے مہینے آیا ہے۔

36. Yh .kht pichle mahene ayea hai.

This letter last month come.PFV.M.SG be.PRS.SG

This letter arrived last month.

ابھی کل ہی تو بارش ہوئی ہے۔

37. Abhi Kal-hii-to barish hoii hai

Now yesterday-EMPH rain be.PFV.F.SG be.PRS.SG

It just rained yesterday.

Most semantic accounts of PPP attribute the incompatibility of present perfect and positional adverbials in English to the nature of 'present tense' in English – in English the present construction can only be used to express the present and is thus 'temporal'. Rothstein (2008) asserts that in some languages, like German, present tense is 'atemporal' i.e. the present tense construction can be used to refer to the past as well as the future. Portner (2003) discusses a somewhat similar phenomena in Italian. In Italian sentences marked with present tense are in fact tenseless – they only show the absence of past which is interpreted as the present. As present perfect is formed in English with a present auxiliary, with a temporal present tense the possibility of past oriented adverbs is limited whereas in languages with atemporal present tense there is no presupposition against past oriented adverbs.

This line of explanation, however, leads to many issues. Firstly, many past oriented adverbs like 'before', 'lately' and 'recently' are still compatible with the English present perfect. Secondly, the atemporal present must be able to replace future or past construction in any case but this is not the case[17]. Narrative present is used in historical texts to relate past events but its usage creates a sense of directness/recency – if present did not have any particular meaning this usage wouldn't have been possible. Thirdly, PPP can be observed even in languages with a flexible 'present tense' – Swedish, for instance (Rothstein, 2008). Lastly, if the presence of present tense restricts adverbials then we should be able to use the same adverbials with both the simple present and the present perfect but this is not the

[17] Rothstein (2008, p. 57) gives this example from German:

*Gestern reist er nach Washington.

yesterday travels he to Washington

case. This line of argument is substantiated by the Urdu data. Urdu does not have a flexible simple present tense; the simple present tense cannot be used to express past and future eventualities. Only the present continuous in Urdu can be used to express future eventualities (mostly scheduled ones):

سعودی وزیر خارجہ انتہائی اہم دورے پر کل پاکستان پہنچ رہے ہیں[18]

38. Saudi vaziir-i-.kharja intehaii ahem dore
    Saudi Minister for Foreign Affairs extremely important visit
    par kal Pakistan pohanc rah-e hai.
    on tomorrow Pakistan reach stay-PFV.M.PL be.PRS.SG
    (The Saudi Minister for Foreign Affairs is arriving in Pakistan tomorrow for an important visit.)

The presence or the absence of the PPP is linked to the differences in the syntactic structure of perfect in different languages and not to any semantic difference. The possibility of using positional temporal adverbials with pluperfects in English entails that the meaning of past participle in present perfect and past perfect is different, which is not likely. Both present perfect and pluperfect in English pattern in the same way and the meaning contribution of the past participle remains the same across all types. We observe the same in Urdu. See the following examples:

39. a. I have always liked Gogol.
    b. I had always liked Gogol.
40. a. I have run the marathon two times.
    b. I had run the marathon two times.
41. a. I have just heard the news.
    b. I had just heard the news.
42. a. I have caught the butterfly.
    b. I had caught the butterfly.
43. a. *He has arrived on Monday.
    b. He had arrived on Monday.

مجھے ہمیشہ سے ہی گوگل پسند ہے۔

44. a. Mujh-e hme.sh se hi Gogol pasand hai.

[18] https://www.humnews.pk/pakistan/221951/

1.OBL.SG=ACC always since hi Gogol like be.PRS.SG

مجھے ہمیشہ سے ہی گوگل پسند تھا

b. Mujh-e hme.sh se hi Gogol pasand th-a

1.OBL.SG=ACC always since Gogol like be.PST.M.SG

میں نے دو دفعہ میراتھان میں حصہ لیا ہے۔

45. a. Mai;n=ne do dafah merathon me;n hisah li-yaa

1.SG=ERG two times marathon in part take.PFV.M.SG

hai

be.PRS.SG

میں نے دو دفعہ میراتھان میں حصہ لیا تھا۔

b. Mai;n=ne do dafah merathon me;n hisah li-yaa

1.SG=ERG two times marathon in part take.PFV.M.SG

th-a

be.PST.M.S

مجھے ابھی ابھی خبر ملی ہے۔

46. a. Mujh-e abhi abhi khabar mil-ii hai

1.OBL.SG=ACC now.EMPH news find-PFV.F.SG be.PRS.SG

مجھے ابھی ابھی خبر ملی تھی۔

b. Mujh-e abhi abhi khabar mil-ii th-ii

1.OBL.SG=ACC now.EMPH news find-PFV.F.SG be.PST.F.SG

میں نے تتلی پکڑ لی ہے۔

47. a. Mai;n=ne ttl-ii paka.r l-ii hai

1.SG.=ERG butterfly.F.SG catch take.PFV.F.SG be.PRS.SG

میں نے تتلی پکڑ لی تھی

b. Mai;n=ne ttl-ii paka.r l-ii th-ii

1.SG.=ERG butterfly.F.SG catch take.PFV.F.SG be.PST.F.SG

وہ پیر کو پہنچا ہے۔

48. a. Vo piir=ko phnc-a hai.

3 Monday=LOC reach.PFV.M.SG be.PRS.SG

وہ پیر کو پہنچا تھا۔

b. Vo piir=ko phnc-a th-a.

3 Monday=LOC reach.PFV.M.SG be.PST.M.SG

Therefore, the incompatibility of present perfect in English with past-oriented adverbs cannot be attributed to the meaning of past participle, and as it was discussed earlier

neither the present tense auxiliary. PTS has been claimed to be a defining characteristic of perfect constructions to account for the various cross-linguistic differences in perfect. Pancheva and von Stechow (2004) argue that the PPP arises because of the differences in how the PTS is set by perfect predicates in various languages. English shows the PPP because time of speech is included in the PTS by assertion in English. They argue that the perfect competes with a more semantically formative form of the 'PAST' which asserts the past more strongly than the perfect. The present tense in English introduces a time that is coextensive with the time of speech. Thus, the inclusion of the time of speech is essential, leading to the restriction of adverbial. The same is not true for German because the German present has a different meaning. The PTS in German does not necessarily include the speech time. Pancheva and von Stechow (2004, p. 476) cite the following example:

Ich	habe	hier	immer	gewohnt…	bis	vor kurzem
I	have	here	always	lived…	until	recently

*I have always lived here … until recently.

The above example shows that even in the case of German universal perfect the speech time is not included in the time interval set up by the perfect i.e. the PTS. In contrast, English universal perfects set the PTS in a way that the moment of speech is included in the PTS and consequently the sentence is ungrammatical with *until recently*. This line of argument, however, is difficult to apply on Urdu perfects because Urdu does not have a universal perfect. The present continuous morphology used in Urdu to convey U-perfect like meaning necessitates the inclusion of speech time by assertion (see example 5). Hence a flexible PTS cannot account for the absence of PPP in Urdu.

A cross-linguistic difference in the syntactic structure of the perfect can also be posited to account for the PPP. It has been argued by Musan (2002) that the past participle and the auxiliary in perfect form a constituent on some level, and she proposes the following structure for English:

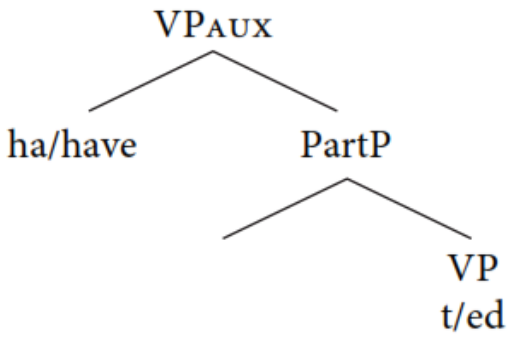


Figure 5. Perfect as a constituent in English

PartP in the above figure stands for the past participle. The perfect as shown in the above forms a biclausal structure containing a VP_{AUX} and a PartP. The past participle is a-symmetrically c-commanded by the auxiliary in English. Scope is the semantic spell out of c-command so the auxiliary has scope over the past participle in English. In English, the past participle carries/embodies the meaning of 'anteriority' and due to its c-commanding position it can restrict the type of adverbial allowed with the past participle included in a particular perfect construction. If we assume that the adverbial is restricted by the auxiliary and the finite tense because of their syntactic position, then the PPP can be explained on the basis of the structure proposed above. The pluperfect in English is compatible with the positional adverbials because the past tense doesn't restrict their selection.

In languages with no PPP the perfect is assumed to have a verb cluster structure as follow:

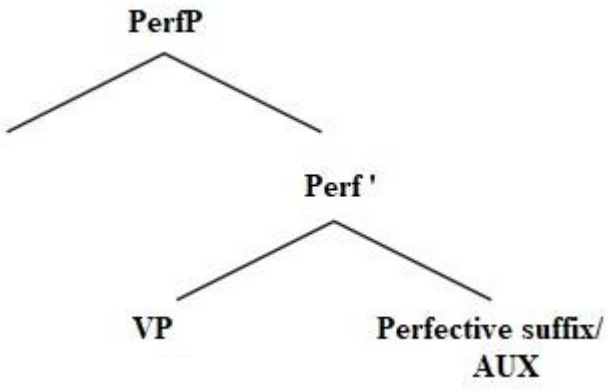


Figure 6. Perfect verb cluster in non-PPP Languages

In the above structure the auxiliary does not a-symmetrically c-command the VP and there is a symmetrical c-command relation between the auxiliary and the participle. Correspondingly, the adverbial selection is not restricted by the auxiliary as the adverbial is c-commanded by the participle. This structure can, thus, be posited for Urdu where the

adverbial selection is not restricted by the present tense auxiliary and the following structure is plausible:

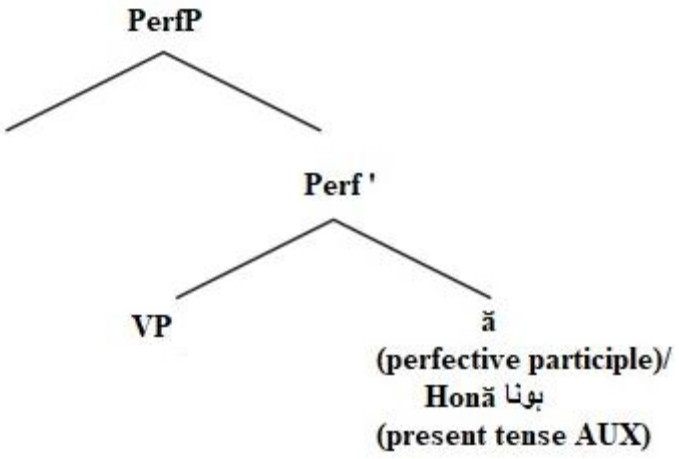


Figure 7. Perfect Participle in Urdu

Therefore, English and Urdu perfect constructions differ in their adverbial selection because of the differences in the syntactic structures of the perfect predicate. A syntax of perfect in Urdu based on the structure proposed by Musan (2002) is posited which can account for the adverbial selection in perfect constructions. The c-command relation of the auxiliary to the VP determines which types of adverbial can be used in perfects in languages with the present perfect puzzle. The presence of verb cluster in Urdu with the auxiliary not c-commanding the adverbial can account for the lack of adverbial selection in the language.

4.5 The Perfect State

One of the key features associated with present perfect is that it has a stative value. Perfect predicates share the same distribution in some ways as stative predicates, and perfect predicates show a behavior similar to statives in comparison to event predicates. States are situations with a homogenous internal temporal structure, as they are durative and static. States require external agency for change and, the initial and final end points are not part of a state. States have a present orientation and appear naturally with present tense. Events, on the other hand, have a past orientation (Katz, 2003). Newspaper headlines, in particular, underscore this property of states and events. *Residents of the city fear a price-hike* has a present orientation in comparison to *Woman succumbs to injuries following accident* has a past-orientation despite the use of present tense. The present tense has a limited use with events but states normally appear with the present tense.

In some languages, only some aspectual viewpoints are allowed with statives. One of the defining features of English stative predicates is the non-availability of progressive viewpoint. Thus, *he is knowing French* is ungrammatical. Urdu statives show the same limitation and the progressive auxiliary used to marking continuation *raha* is difficult to use with statives:

اسے جرمن آ رہی ہے۔

49.	*Us=e	German	aa	rah-ii	hai
	3.OBL.SG=DAT	German	come	stay-PFV.F.SG	be.PRS.SG

*He is knowing German. (he is getting the hang of German)

There are many similarities in the semantic and syntactic distribution of statives and perfect predicates (with a few dissimilarities). In addition to the properties discussed above, states have the property of being non-agentive and they carry a present-orientation. These properties can be observed in perfect predicates as well. Event predicates require an agent usually and adverbs like *intentionally* and *accidently* are used to attest that the predicate is agentive. Hence it is possible to say '*I hit the wall accidently'* [as opposed to *the hammer hit the wall accidently* in which case the hammer is agentive but the agent is simply omitted or unknown]. However, *I am accidently hungry* is semantically odd. It is nonetheless, possible to use both *accidently* and *intentionally* with perfect predicates. Katz (2003) argues that the adverbs showing agentivity are possible with perfects because they only modify the eventive part of the participle. The evidence given by Katz for this argument is that these adverbs cannot be used before 'has' as shown in (39) below:

50. I have bought this book intentionally.
51. #I intentionally have bought this book.

Urdu statives are similar to English statives in not allowing the progressive viewpoint. It is difficult to analyze Urdu perfects on similar lines. Adverbs like *danista tor par* [literally: intentionally], and *galti sae* [literally: accidently] can occur in a number of positions in an Urdu perfect sentence because of scrambling. It is possible to have these adverbs right before the object (see 52) or before the perfect predicate (53):

میں نے دانستہ طور پریہ کتاب خریدی ہے۔

52.	Mai;n=ne	danisth	tor-par ye	kitab	khriid-ii
	1.SG=ERG	intentionally	way-on this	book	buy.PFV.F.SG
	hai.				

be.PRS.SG

میں نے یہ کتاب دانستہ طور پر خریدی ہے۔

53.	Mai;n=ne	ye	kitab danisth	tor-par	khriid-ii
	1.SG=ERG	this	book intentionally	way-on	buy.PFV.F.SG
	hai				
	be.PRS.SG				

Wh-clefts and imperatives also shed light on the distinct behavior of stative and event predicates. Wh-cleft are used to show that perfects predicates are non-agentive. Wh-clefts are felicitous only with agentive sentences as the following examples show:

54. a. What I did was hit the wall.
    b. #What the hammer did was hit the wall.

Wh-clefts are appropriate with perfect predicates when the perfect is part of the wh-clause but not when the perfect is part of the matrix clause:

55. a. What I had done was hit the wall.
    b. #What I did was have hit the wall.

The wh-cleft test cannot be applied on Urdu perfects as wh-clefts in Urdu are very limited owing to Urdu being a wh-insitu language. Some authors have even claimed that Urdu does not have wh-clefts[19].

States have been categorized into two distinct categorizes: individual-level and stage-level (cited in Smith, 1997 based on Carlson, 1977 who first proposed this distinction). Individual-level state predicates hold true for individuals such as *be a doctor* and *be extinct.* Whereas stage-level predicates express transitory situations like *be happy* and *be mad*. The distinction between individual-level and stage-level stative predicates has implications for their syntax and semantic, and affects aspect as well. Individual level states are true for their referent for the entire length of their existence but stage level states are not. For example: *he is tall* is an individual level state.

Katz (2003) asserts that English present perfect denotes individual level states. Individual level states cannot be used with 'now' and we cannot talk about temporal

[19] Nonetheless, Manetta (2013) gives some example of wh-clefts in Urdu but her discussion has no bearing on the present analysis of perfects. An example of wh-cleft sentence in Urdu is:
کون ہے جو حالات بدلنے نہیں دیتا
Kaun ha jo halat badalne nahi deta
Who is it that doesn't let the circumstances get better. (https://www.samaa.tv/urdu/blogs/2017/12/983932/)

subintervals with these states. Hence: *I am tall now* is not felicitous. However, Rothstein (2008) has proposed that the perfect obtains a state that is different from individual-level states as proposed by Katz because it is possible to use 'now' with present perfect. The possibility of using *now* with perfect predicates entails that temporal subinterval can be picked out by perfect predicates but not for individual level statives.

56. His flight has left now.

ٹرین بس ابھی چلی ہے۔

57. Train	bas abhii	cal-ii	hai	
Train	now-EMPH	go-PFV.F.SG	be.PRS.SG	
The train has just left.				

Another way to analyze the stative nature of perfect predicate is the use of *how long* with individual-level statives. Individual level statives cannot be used with *how long*. We can, in contrast, use 'how long' formula with present perfect in English: for example: *how long have you known him for.* Before the same construction in Urdu are discussed we need to consider the Urdu light verb *hona* ہونا and the stative construction made with it. Urdu has a distinct use of *hona* ہونا which is used as a light verb in addition to the auxiliary *hona* ہونا added at the end of the sentence as a tense auxiliary:

یہ خط کل کا یہاں پڑا ہوا ہے۔

58. Yh	kht	kal-ka	yahaa;n	p.ra	.
This	letter	yesterday-OBL	here	fall.PFV.M.SG	
huua	hai				
be.PFV.M.SG	be.PRS.SG				
This letter has been lying here since yesterday.					

علی سکول گیا ہوا ہے۔

59. Ali	skuul	ga-yaa	huua	hai
Ali	school	go.PFV.M.SG	be.PFV.M.SG	be.PRS.SG
Ali is at school. (a close translation but not a literal one).				

علی سکول گیا ہے۔

60. Ali	skuul	ga-yaa	hai
Ali	school	go.PFV.M.SG	be.PRS.SG
Ali has gone to school.			

علی سکول میں ہے۔

61. Ali	skuul	me;n	hai

Ali skuul in be.PRS.SG

Ali is at school.

علی کب کا سکول گیا ہوا ہے؟

62. Ali kab-ka skuul ga-yaa huua hai

Ali when-LOC school go.PFV.M.SG be.PFV.M.SG be.PRS.SG

How long has it been since Ali left for school?

علی سکول کب گیا؟

63. Ali skuul kab ga-yaa?

Ali school when go.PFV.M.SG

When did Ali leave for school?

(62) clearly shows that Urdu perfects allow the *how long* questions. The *huua* ہوا in (58), (59), (62) has been used to emphasize on the stativity of the predicates in these sentences. (60) is the non-stative equivalent of (59) but the use of *huua* in (59) illustrates that the sentences is expressing the state of Ali being at the school in contrast to (60) which only expresses the event of Ali leaving for school. The same is true for (62) in which the question focuses on the time span of Ali being in the state of being-at-school in comparison (63). Huaa, therefore has a durative function in sentences (59) and (62).

The sentences in (59) and (60) illustrate another feature of perfect – the similarity of perfect construction and the simple present respectively. The only difference is that (59) emphasizes the leaving event although Ali is in the same state in both the sentences. The similarity between the two sentences further substantiates the stativity of perfect.

Lastly the use of perfect presupposes an eventuality but both individual-level and stage-level states don't presuppose an eventuality:

64. Maira is famous.
65. Maira has acted in a Broadway performance.

مائرہ ذہین ہے۔

66. Maira zahiin hai

Maira intelligent be.PRS.SG

(Maira is intelligent)

مائرہ نے ایک کتاب لکھی ہے۔

67. Maira=ne aek kitab likh-ii hai

Maira=ERG one book write-PFV.F.SG be.PRS.SG

Maira has written a book.

Hence, it can be argued that the state introduced by perfect is distinct from both individual-level and stage-level states. The stative component of perfect predicate is different from the stative predicates discussed earlier because it has the sub-interval property. There is at least a time point after the eventuality asserted by the perfect at which it holds true. Therefore, the present prefect has both a stative and non-stative component.

As we have seen perfects don't inherently carry the meaning of completeness and there is no specific temporal constraint on the endpoint of the situation used with the perfect which could have reached its endpoint a long time ago. Musan (2002) proposes that the perfect-state should be understood as a resultant-state as opposed to being a target-state. Resultant-state of an event lasts for a long time whereas target-state of an eventuality is short-lived as it refers to the aim or goal (*the telos*) towards which an eventuality is directed. If I throw a ball on the roof, the target-state is reached when the ball is on the roof. On the other hand, once the ball is on the roof it is now in the resultant-state and no matter what happens afterwards the ball has been on the roof so it possesses the resultant state of being on the roof.

Therefore, the perfect-state expressed by perfect constructions can be understood as a resultant state which holds true for all the time following the time for which the perfect VP is asserted to hold. Resultant-state, however, should not be confused with the resultativity and completeness as perfect does not entail culmination of events. If *I have been washing the dishes for two hours,* I am in a resultant-state of *having washed the dishes for two hours*. I might still be *washing the dishes* but that does not affect my resultant state. For disambiguation purposes and to avoid confusion with the notion of culmination the term *post-state* is used alternately to refer to the resultant-state nature of stative property of perfect constructions.

As we saw in the discussion on perfect and its interaction with aspect, the anteriority part of the perfect comes from the participle – past participle in English and perfective participle in Urdu. However, the meaning of anteriority that perfect carries also comes from the post-state feature of perfect state. The behavior of present perfect is similar to present statives which indicates that the present tense in present perfect is not different from the simple present tense. The post-state feature of perfect-state is tied to the present tense as it entails the continuity of the state acquired through the perfect predicate (but not its culmination).

To sum up, the meaning contribution of perfect is perfect time span (PTS). PTS allows us to account for the polysemy of perfect. Perfects can differ in other meaning aspects across various types in a given language and the meaning of perfect forms vary cross linguistically as well, as we have seen through the comparison between Urdu and English perfects. The change of state meaning is also an integral part of the meaning of perfect and in both Urdu and English the change of state meaning of perfect entails a resultant state that is linked to the perfect predicate as a consequence of the situation expressed by the perfect.

4.6 Narrative Perfect

Major types of present perfect have already been discussed earlier in this chapter. English Present perfect has another distinct use in narratives. This particular type of present perfect in English has been termed as *narrative perfect* (Walker, 2011). This type of narrative perfect was not discussed earlier because as far I have searched; I couldn't find the use of Urdu present perfect on the same lines as present perfect has come to be used in English narratives. Correspondingly, this section is dedicated solely to the discussion on the use of present perfect in English narratives.

Present perfect has as distinct stative component makes which makes it different from events. One of the main differences between statives and events was not discussed in detail in the previous section. States don't move time in narrative discourse whereas events do (Katz, 2003). This property of statives is relevant to English *narrative perfect*. Consider the examples below to see the contrast in how events move time whereas statives do not:

68. Ali was sick. The weather was bad and the ambulance was on its way.
69. Ali was sick. The weather was bad but he called the ambulance and it was on the way.

In the first sentence (68) it appears that we are coming across a single moment in time and everything that the sentences are describing is happening at the same time. Whereas in (69), we see that the sentences express movement in time: Ali becomes sick and the situation of the weather being bad might have coincided with the beginning of his illness or the weather might have worsened after he became sick but we know that the calling of ambulance happened after both of these events.

Sentences with statives describe the conditions in which a situation happens and the conditions of participants in a given discourse, whereas events describe actions. Therefore, statives cannot move time as events do in narratives. Moreover, statives as well as perfect predicates (owing to their stative component) need anchors on the time-line to be interpreted and without these anchors they might lend *out of the blue interpretation*. Consider, for example, the sentence: *Ali had spent all his money*. We cannot exactly deduce when Ali spent his money and we would need a reference point, an anchor according to which we would interpret the time at which the spending happened – despite the use of past perfect. This property is also evident in the stative predicate in *the socks were lying on the floor*. There is an *in medias res* (in the middle of the action) interpretation associated with these sentences and we get the sense that we are thrown into the middle of an action. Therefore, we require a pre-established reference time to anchor both the statives and perfect predicates. Usually this reference point is provided by the surrounding text. Consider this narrative, which I have taken from a website about Tenses in English:

> Linda has just walked outside with Grandmother. She wears an apron. So far, she has finished cleaning and washing. She has also gathered seeds and crumbs.
>
> Now Linda and Grandmother are outside. Linda has just dropped some seeds on the ground to feed the birds. The birds have not come yet.
>
> Recently, Grandmother has moved in with Linda's family. She now enjoys living with them.
>
> Grandmother has already sat down on the bench. She also wears an apron. She has just finished cooking. [20]

The above story appears more like a description of a day-in-the-life of Linda and her grandmother rather than about a specific event in the lives of both. The use of present perfect in these sentences substantiates the stative nature of perfect predicates. The perfect predicates describe the conditions of the participants – the post-state after having accomplished the actions expressed by the perfect predicates. We see a sort of statis in this narrative as well and the use of present perfect corresponds the use of simple present in narratives of sports commentaries. The present relevance feature, however, is sustained in

[20] https://www.really-learn-english.com/english-grammar-tenses.html

this narrative and although the events happen on a fictional time-line, a fake present time is created by the use of present perfect.

Walker (2011) argues that the English present perfect has been evolving in terms of how it is used and the meaning we had conventionally associated with perfect might be put into question if we look at some of the recent usage of the present perfect. This usage corresponds to an association of definite past reference with present perfect and the use of past time adverbials with present perfect. Consider the following examples that Walker (2011) quotes from earlier observations of Trudgill and Quirk et al:

- Roberts has played for us last season. (from Trudgill, 1978)
- 'Have you ever seen Macbeth on stage?' 'Yes, I've seen it ages ago, when I was a child'. (from Quirk et al, 1985)

This usage of present perfect, although an apparent anomaly for the established usage of the form in English is not in contrast to the pattern we observe in other languages. As we saw earlier in this chapter Urdu allows the substitution of present perfect with simple past or distant past construction without much difference in meaning. In addition, Urdu present perfect constructions allow past-oriented adverbials as do German. This phenomenon might be an indication that the English perfect is gradually becoming in line with other languages which share the same grammatical system. This usage has been termed as an anomaly at present and although it seems to raise questions for the theoretical assumptions on which the present perfect was analyzed in the preceding sections in this chapter, it can be an interesting avenue for future research on perfect.

Walker's (2011) arguments about the evolution in the use of present perfect are based on the examples from sports narratives where sportsmen use present perfect while recounting past events. In a way this usage is quite similar to the Grandmother narrative quoted earlier because present perfect is frequently used in addition to simple present in commentaries. The recounting of a sport event by the sportsmen in the same tense/s pattern may be an indication that these narratives are told in this way to create a more happening-now sense. Consider the following excerpt from Tolson (2016) which exhibits the same usage:

> It's Stoke who are celebrating and Charlie Adam in particular Jeff. Stoke just cut through the middle of Sunderland's defence far too easily. Charlie Adam just drifted into the box with the ball at his feet and he struck the ball left footed into the bottom

> corner and **it's gone through** erm I think it was John O'Shea's legs **it's gone through** and Mennoni's got absolutely no chance **ball's gone in the side netting** and it's one all… (Tolson, 2016, p.16. Emphasis in original)

> I don't know how Celtic won it, Milan dominated for long periods, but it's no fluke (…) it's a great result, but I don't know, **he's hardly touched** the goalkeeper, and I watched it unfold and I could not believe what I was 5 seeing, at first, at first I didn't think the supporter had touched him, **he's gave him a little tickle**. Dida chases him and realises he can't take it and he goes down, and **he's stayed there**, he's off with the ice pack and the stretcher and **he's completely bluffed it**, but Celtic will 10 get absolutely hammered because of this one fool. (Tolson, 2016, p.17. Emphasis in original)

The use of present perfect in this case is used to emphasize on what the speaker thinks was a major incident during the game. We don't see any use of past-oriented temporal adverbials here and only through the context we can establish that the narrative is about a past event and not a moment-to-moment commentary of something happening at the time of speech. Both Walker (2008, 2011) and Tolson (2016) base their analysis on examples from sports. A common feature of these narratives is that the narrative perfect is used without past adverbials and are used in contexts where simple past would be used following the Standard English.

Although, on the one hand the use of present perfect to recount past events seems in contrast to the standard use of the construction, this usage is also predictable from the meaning of present perfect. 'Current relevance' is a crucial meaning component of present perfect and this feature may be a reason present perfect has been emerging in sports narratives. As past events in sports have relevance as well as consequences for present event, this usage also points to a sense of linking with the past situation. Furthermore, the meaning of recency is also emphasized by present perfect predicates and this feature is relevant to how sports personnel attempt to create a more recent event like sense for the events they are recounting with the help of present perfect.

The use of present perfect instead of past simple in the above-mentioned examples/contexts again puts into question the distinction between simple past and present which, it can be argued, is still debatable. The fact that in context where according to the Standard English we would use past simple, but instead we are coming across the use of

present perfect may be an indication that the demarcation between the two tenses has never been as clear as the grammars would assert. This points not to an evolution but rather to an evidence of the sustained ambiguity between the meaning of simple past and present perfect.

4.7 Conclusion to Chapter 4

The focus of this chapter was present perfect and its meaning contribution. The semantic contribution of present perfect in a given language depends on the morpho-syntactic features of the elements that enter into its configuration in a given language. The main temporal restrictions and constraints with reference to the realization of present perfect In Urdu in comparison to English have been analyzed in this chapter. Urdu perfects are formed in a similar way as English perfect in most cases except Universal perfects. It follows from the analysis that, Urdu does not seem to have universal perfects because Urdu perfects are formed with perfective participles. The aspectual value of perfect constructions depends on the lexical aspect of the situation and the morphological elements that make the perfect predicate. Urdu perfects are not perfective across all situation types in the same way as English perfects are. It was observed that Light verbs are required in Urdu to express boundedness. English present perfect construction are not compatible with past oriented adverbials but Urdu perfects are owing to verb-cluster structure of perfect predicates in Urdu. Perfect predicates have a distinct stative nature which can be better understood as a resultant state property of perfect predicates – the property acquired because an action has been performed, although it is not necessary that the action has reached absolute termination. Lastly, a comparatively recent use of present perfect in English narratives was discussed in this chapter which is unique to sports commentaries. Present perfect is used in sports narrative to create a sense of recency about the past events instead of past simple.

CHAPTER 5

ASCERTAINING PERFECTIVITY

"They've a temper, some of them – particularly verbs: they're the proudest – adjectives you can do anything with, but not verbs – however I can manage the whole lot of them! Impenetrability! That's what I say!"

— Lewis Carroll, *Alice's Adventures in Wonderland & Through the Looking-Glass*

This chapter deals with the exposition of the notion of perfectivity and its realization in English and Urdu. Urdu has a complex aspectual structure in comparison to English. Notions like culmination, telicity and entirety of situations which are expressed generally through the over-arching term *perfective aspect* are realized through a combination of light verbs and the perfective participle in Urdu. How these notions are expressed with respect to different situation types (lexical aspect) in both English and Urdu, and how they add various meaning to predicates and the related semantic issues are a focus of this chapter. In addition, the interaction of perfective aspect with internal arguments of verbs is also discussed. The last section of the chapter sheds light on the incompatibility of negation and present tense with perfective aspect.

5.1 Perfective Aspect and the Notion of Completion

English and Urdu differ considerably in their aspectual systems. Perfective aspect has been defined and characterized in a number of ways in literature but there is hardly a way to define *perfectivity* without encountering several semantic puzzles. Correspondingly, this section focuses on the commonly accepted perfective forms and how these forms entail or don't entail a meaning of completion of the eventuality. Perfective is often described as a grammatical aspect because it is realized grammatically through the use of suffixes, auxiliaries or a combination of the two. The notion of perfectivity is closely tied to the idea of completion or culmination of an eventuality. Thus, perfective aspect is taken to mark culmination of a situation with a focus on its result. The notion of completion, however, cannot be generalized across all types of situations (c.f. chapter 2, section: 2.2.1). Another way of looking at the perfective is that it expresses a situation in its entirety without emphasizing on and referring to the internal temporal constitution of the situation, and its

initial and final end points. Perfective aspect expresses a situation as an unanalyzable whole, so the internal temporal constitution is not part of the temporal reference of perfective predicates.

Perfective aspect is available grammatically for all situation types in English. However, the meaning of perfective aspect varies when it is combined with different situation types. Perfective aspect can be used generally to express that the situation is being viewed in its entirety with the exception of *states.* States obtain different meaning with perfective marking/form in comparison to events, because they don't have any starting point or endpoint. For example: *he believes in ghosts* has the perfective equivalent *he believed in ghosts* which entails that the subject does not believe in ghost any longer at the moment of utterance and the predicate does not carry any meaning of completion or entirety – it only asserts that the state does not exist anymore.

In addition, assertion about the endpoint of an eventuality is closely tied to the meaning contribution of *perfective* as it is often assumed to express the endpoint of a situation (Smith 1997, p. 171 in particular emphasizes on the significance of endpoint of a situation in relation to *perfective*). Activities don't have a definitive end point so the perfective marks an arbitrary end point when used with activities. Accomplishments have natural ends points and the perfective is used to assert that the end point has been reached. Achievements are not durative but they express a change in state and perfective marks this change in state. In English this view of perfective does not lead to any semantic issues:

1. I walked in the park today. (activity)
   *I walked in the park today and I am still walking.
2. Aliya wrote a letter today. (accomplishment)
   *Aliya wrote a letter today but didn't finish it.
3. Lily reached the school on time. (achievement)
   *Lily reached the school on time but couldn't find the school.
4. He sneezed. (semelfactive)
   *He sneezed but couldn't.

However, as it was pointed out in the previous chapter, the so-called perfective participle in Urdu is not always *perfective*. A uniform semantic analysis of perfective across different languages is challenging as there is a lot of variation in how languages express perfectivity. A common generalization made about perfective is that it expresses a situation

without distinguishing any internal stages and without emphasizing the duration for which the eventuality lasts unless a temporal adverbial is used (Filip, 2017). Perfective forms have an affinity for past forms but in both English and Urdu perfective is not limited to past tense (c.f. the discussion on present perfect in the previous chapter).

With reference to perfectivity, the terms completion and entirety are often used interchangeably. Both are related notions as completion entails that the situation has taken place in its entirety but not vice versa. According to the completion perspective (also referred to as the culmination perspective), the perfective predicate is viewed as a 'single whole event'. There are no sub-intervals in the situation during which the situation can be asserted to have culminated. Thus, the eventuality of *eating an appl*e cannot have any sub-interval during which *the entire apple was eaten*.

The notion of completion imposes more restrictions on predicates than the notion of entirety. The idea of completion is more suited to telic eventualities as compared to atelic eventualities. However, telicity is not an exclusive property of perfective predicates. A telic event can only yield positive truth conditions when used with the perfective if the eventuality is true at a single time interval. Atelic eventualities, on the other hand, can be true at a number of time intervals. Telic eventualities, however, do occur with verbs in imperfective aspects and atelics can be used in conjunction with perfective aspect. In Urdu, this is true for activities which are atelic and are compatible with perfective marking; through the perfective participle (see 5 below). Similarly, telics in Urdu can be used with imperfective marking, obtaining iterative reading of the culminated eventuality. See the following examples:

میں نے آج لکھا۔

5. Mai;n=ne aaj likh-aa
   1.SG=ERG today write. PFV.M.SG
   I wrote today. (activity: atelic, perfective)

وہ اُن کے گھر جاتا رہا۔

6. Vo uun=ke ghar jaa-taa rah-a
   3 3=GEN.M house go-IPFV.M.SG stay-PFV.M.SG
   He kept on going to their house. (accomplishment: telic, iterative/imperfective)

In the sentence in (5) above an activity is expressed with the perfective participle which does not entail culmination, termination or even entirety. This sentence only carries

the entailment that at some point today before the moment of speech the subject performed the action of writing. The English equivalent has the same entailments. Activities and states are durative but not telic – they don't have any natural end points. Accomplishments and achievements are both telic but only the former is durative. In English, perfective aspect does assert completion for telic eventualities. However, as it was illustrated in the previous chapter, even with accomplishments which are telic, the Urdu perfective participle does not yield the meaning of completion in both simple past and present perfect. On the other hand, with achievements the perfective participle expresses completion or attainment of the endpoint of the situation is asserted:

میں نے پارک میں سیر کی (اور ابھی بھی کر رہی ہوں)

7. Mai;n=ne park me;n ser k-ii (or abhi-bhi
   1.SG=ERG park in walk do-PFV.F.SG and now.EMPH
   ker rah-ii huu;n)
   do stay.PFV.F.SG be.PRS.1.SG
   I walked in the park [and still am (walking)]. (activity)

میں نے سیب کھایا (لیکن پورا نہیں)۔

8. Mai;n=ne saib kha-yaa [lakin pura nahii;n].
   1.SG=ERG apple eat-PFV.M.SG [but complete.F.SG not]
   I ate an apple [but didn't finish it]. (accomplishment)

وہ سکول پہنچا (لیکن اسے سکول نہیں ملا)*

9. Vo skuul pohanch-a *[lakin us=e skuul nahii;n
   3 school reach-PFV.M.SG [but 3.SG=ACC school not
   mil-aa]
   find.PFV.M.SG
   She reached the school [*but couldn't find the school] (achievement)

اس نے دروازے پہ دستک دی۔

10. Us=ne darvaze pa dastak d-ii.
    3.SG=ERG door on knock give. PFV.F.SG
    She knocked on the door. (semelfactive)

Another way of looking at perfectivity is in terms of the notion of *punctuality*. Punctual situations don't extend over a time span. Out of the telic situations, only achievements are punctual. As it can be seen in the above-mentioned Urdu sentences, the perfective participle obtains the meaning of completion only in the case of achievements,

which are punctual. As punctual situations don't last in time, they trivially satisfy the entirety notion – because they don't have any sub-intervals. Perfective comes naturally with achievements because it marks a change in state and does not assert that the end point of the eventuality per se. However, semelfactives are also punctual but perfective does not entail completion or entirety in (10). Semelfactives don't have an end state and are atelic, and thus the perfective cannot assert culmination with semelfactives. Hence, even the notion of punctuality does not adequately account for the behavior of perfective participle in Urdu as across different situations the perfective participle does not uniformly assert completion or entirety.

5.1.1 Delineating Perfectivity and Telicity

Perfectivity corresponds to a grammatical property of predicates asserting that the eventuality is being expressed in its entirety. The property of *telicity*, although, closely associated with perfectivity is a property of verbs and not a grammatical or lexical aspect. Telicity has been defined as a semantic feature that is realized by varying morphological means across languages. In Navaho, for example, verb prefix *ni-* marks that the situation described by the verb has reached a stopping point or is finished (Smith, 1996). However, perfectivity does not entail telicity and this is most clearly observable in activity verbs. Consider the following examples (modeled on the sentences discussed in Bertinetto, 2001):

11. Sakina's term paper on Medieval classics was due soon. She ***searched*** in the library for a copy of *The Divine Comedy*. She was thinking of writing her thesis on Medieval classics.
12. Sakina's term paper on Medieval classics was due soon. She ***was searching*** in the library for a copy of *The Divine Comedy*. She was thinking of writing her thesis on Medieval classics.

The verbs in bold have different aspectual values but the verb is an activity and atelic in both cases. From (12) we get the interpretation that Sakina's search in the library and her thinking about writing a thesis are happening in connection with her term paper being due. On the other hand, the temporal interpretation is different for (11) as it appears that the searching in the library is a consequence of the terms paper being due soon – the implication being that there is a sense of urgency which is absent in (12). Thus, we cannot assume that there is a natural association between telicity/perfectivity and atelicty/imperfectivity.

The most commonly accepted definitions of *telicity* express that it corresponds to the idea of a situation reaching its (natural) end point however, this get complicated when we look at how situations unfold in the real world. Borik (2006) terms this as the ontological approach to *telicity* which can be contrasted with the homogeneity approach. On the homogeneity approach, telic eventualities are described in terms of not having any sub-parts whereas atelic eventualities have homogenous subparts. Moreover, a same event can be described by a speaker in a number of ways and the semantic features associates with the verb describing the event do not primarily determine the choice of description by the speaker. The following examples show how the same situation can be express in different ways with varied aspectual readings:

13. Sakina was reading a book last night.
14. Sakina read two chapters of the book last night.
15. Sakina read for two hours last night.

All of these sentences describe the same situation that happened in the past and the semantic features and ontological properties of the situation do not limit the choice of description for the speaker. (13) and (15) correspond to a situation without any assertion of the endpoint and lend an atelic reading whereas (14) gives a telic reading. It can be argued, thus, that telicity falls-out from linguistic descriptions and therefore, a situation type cannot be strictly classified as telic or atelic. Even if a situation has ended in the real world, a speaker might not choose to use a telic description to express the situation. The situation described by the sentence *Allama Iqbal lived in Lahore* ended when Iqbal died in 1938 but the linguistic description cannot be asserted to be telic. Generally, what seems to be the case is that when a situation is described in the past tense, we associate the property of telicity with the situation without reaffirming the true course of events in the actual world.

Another way of looking at telicity is that telic descriptions presuppose that the situation has a natural end-point but that would require for an analysis of what constitutes as a natural endpoint of a given eventuality. Although, when we impose temporal restriction on a situation, the situation has a potential end point which is conveyed through the perfective aspect. Consequently, as Borik (2006) proposes, the idea of endpoints should be linked to linguistic descriptions of eventualities and not to the natural properties of eventualities. On this approach, we could argue that telic linguistic descriptions limit the interpretation of the eventuality in a way that the eventuality is asserted to have ended at the designated endpoint.

The criterion of homogeneity can also be applied to distinguish between telic eventuality descriptions and atelic ones. The dichotomy of homogenous and non-homogenous situations aligns exactly with the telic/atelic dichotomy. A predicate is said to be homogeneous if it is true for all the sub-intervals of the time *T* for which it is true. Homogeneity is a characterizing property of atelic predicates. Borik (2006) states this relation as 'a predicate is telic iff it is not homogenous' (p. 49). The distinction drawn between temporally homogenous predicates and temporally non-homogenous predicates is based on the same difference that exists between mass nouns and count nous. Therefore, a mass noun like *water* corresponds to a homogenously temporal predicate *walk*. A portion of large quantity of water is still water. Similarly, if I have walked for two hours, I have walked during every minute of that two hours. In the case of count nouns, we cannot refer to parts of the nouns. Take the example of furniture, for instance. We could be referring to a collection of one table, a bureau and two chairs in a room as furniture but the table in isolation cannot be referred to as furniture. Correspondingly, homogeneity is a feature of the linguistic description used for a given eventuality and not the nature of the eventuality in the real world.

Therefore, perfectivity should not be confused with telicity. Although both of these features tend to co-occur in linguistic descriptions one does not entail the other. Perfectivity, refers to a grammatical notion pertaining to how the speaker views a situation. On the other hand, telicity is a feature that is associated with the eventuality description in relation to whether the eventuality is ascribed an endpoint or not.

5.2 Neutral Perfective

Singh (1998) argues that in some languages, perfective can be used with verbs expressing accomplishments to indicate that the situation has reached an end point, but this end point is not necessarily the natural end point of the predicate. These languages include Chinese, Japanese and Hindi (Hindi and Urdu have the same grammatical system). Singh terms this aspectual viewpoint as the *neutral perfective*. The neutral perfective differs from the traditional notion of perfectivity because it does not assert completion and only expresses the situation in its entirety. Singh's proposal of *neutral perfective* in Hindi is based on the category of *neutral aspect* introduced by Smith (1997). Neutral aspects for Smith are vague aspects which lack a viewpoint morpheme, and express a default

viewpoint. When used in a sentence, neutral aspects lead to vague aspectual readings. Sentences with neutral aspectual viewpoint can yield both open and closed readings.

The essential difference between how English and Urdu differ with respect to perfectivity is how the natural end point of situations is expressed in both languages. The simple verb structure (SV hereon) in English expresses that the natural end point of a situation has been reached. If a situation has not reached its end point then additional explanation is added to the sentences. Therefore, the equivalent of the Urdu sentence in (8) in English would be *I ate only some of the apple* or *I almost ate the entire apple.*

In Urdu, the simple verb structure (SV) formed with the perfective participle only, without any light verb, expresses the arbitrary end point of a situation. Thus, in the case of activities and achievements, the perfective participle does not lead to any semantic oddities with conjunctions – as activities have arbitrary end points and the perfective only expresses change in state with achievements. Activities are not used commonly with complex verbs in Urdu as they don't have any natural end points. Natural end points in Urdu are expressed through complex verbs (CV) which are composed of light verbs, the perfective participle and optionally the auxiliary. There are four types of compound verb constructions in Urdu (c.f. chapter 4) but only the main verb with light verb constructions are relevant here (referred to as V*v* hereon). These have been termed as *aspectual complex predicates* by Butt (1995) and are primarily relevant to the expression of aspectual information. Butt and Ramchand (2005) argue that V*v* constructions in Urdu are monoclausal because of agreement, control and anaphora facts. The main verb and the light verb act as co-heads in the verbal complex resulting in co-predication: they form a single unit syntactically and semantically but are phonologically distinct. The following sentences illustrate the difference between SV and CV constructions in Urdu:

اِسرا نے کھانا پکایا۔

16. Isra=ne khana paka-yaa.
    Isra=ERG food cook.PFV.M.SG
    Isra cooked the meal. (SV)

اِسرا نے کھانا پکا لیا۔

17. Isra=ne khana paka li-yaa.
    Isra=ERG food cook take.PFV.M.SG
    Isra cooked the meal. (CV)

It is challenging to come up with an exact equivalent in English for Urdu compound verb constructions. The sentence in (17) can be translated with the help of an English verb-particle construction to account for the Urdu CV, the meaning of *cook up*, however does not translate the Urdu *paka lia*. *Cook up* entails that the meal was cooked quickly and the Urdu CV does not express that – it only asserts that the eventuality is absolutely complete. Therefore, it has been argued that unlike English, Urdu has a complex aspectual system (Butt, 1995; Butt & Ramchand, 2005; Husain, 2015). The semantics of compound verbs (which are also referred to as complex predicates in literature) in Urdu and their relation to aspectual reference are discussed in detail in the following section.

5.3 Aspectual Reference and Light Verbs in Urdu

Light verbs in Urdu contribute aspectual information when used in conjunction with the content verbs and the auxiliaries. Light verbs have been referred to by different terms in literature: light verbs (Butt, 1995), auxiliaries and vector verbs (Schmidt, 1999). This section aims to elucidate how aspectual information is expressed in Urdu through light verbs with respect to perfectivity.

5.3.1 Characteristics of Urdu Light Verbs

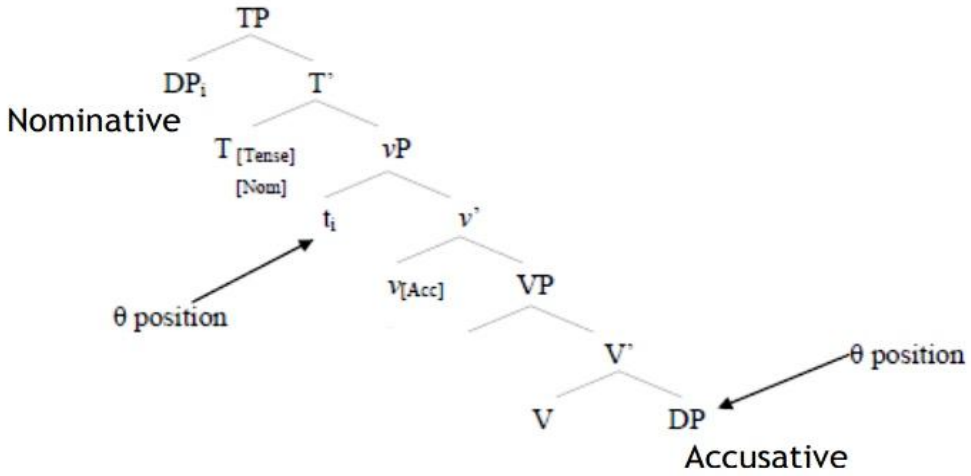


Figure 5. The Little 'v' phrase (vP)

Light verbs occupy the *v* (pronounced little-v) in the syntactic tree within the Minimalist program. First introduced by Chomsky (1995 cited in Poole, 2011), *v* is posited as a functional head in the V domain in addition to the head verb (V). The external argument of the verb is hosted by *v* in its specifier position and it assigns accusative case to the object:

The *v*-position can be occupied by auxiliaries and root modals, and is not reserved for light verbs only (Butt and Lahiri, 2013). Little *v* is a position on the functional spine in the syntactic tree and that's why light verbs have often been categorized as auxiliaries. However, Urdu has only two true auxiliaries *ho*ہو, *to be* (Butt & Ramchand, 2005 mention *tha* as the third auxiliary in Urdu, but it is a suppletive past of *ho* and not considered a distinct auxiliary in this study), and *rah* رہ (literally = stay, is used to mark progressive aspect across all tenses in Urdu). Light verbs and auxiliaries don't occupy the same position in the word order and their positions are not interchangeable. Light verbs inflect for all tenses/aspects and thus don't constitute a sub-class of tense/aspect auxiliaries. In addition, light verbs don't have defective paradigms[21] like auxiliaries (see chapter 4 for discussion on various verb combination in Urdu). Urdu verbal complexes have the following internal order:

Main Verb – Light Verb – Passive – Aspectual Auxiliary – Tense Auxiliary

The term *light verb* is more suited to the analysis in this study as it distinguishes them from main verbs and auxiliaries. I don't use the term *aspectual auxiliaries* as not all Vv constructions are the same and each light verb carries its own distinct semantic meaning including inception, volitionality, suddenness, causation and location, in addition to aspectual information. Consider the following sentences which illustrate how light verbs add nuances of meaning to verbs:

احمد نے کھانا پکا دیا۔

18. Ahmed=ne khana paka di-yaa
    Ahmed=ERG food cook give-PFV.M.SG
    Ahmed cooked the meal (for someone).

احمد نے کھانا پکا لیا۔

19. Ahmed=ne khana paka li-yaa
    Ahmed=ERG food cook take-PFV.M.SG
    Ahmed cooked the meal (for himself, emphasis on the culmination of the action)

[21] Some verbs cannot be conjugated for a certain tense, aspect or mood – the missing tense/aspect/mood form constitutes the defective paradigm. For examples, the modal verb *can* in English is a defective verb because it does not have an infinitive form, lacks future tense forms and participle/gerund forms.

احمد کھانا پکا چکا۔

20. Ahmed khana paka cuk-aa
    Ahmed food cook finish-PFV.M.SG
    Ahmed has cooked the meal (already)

احمد نے کھانا پکا ڈالا۔

21. Ahmed=ne khana paka dal-aa.
    Ahmed=ERG food cook put-PFV.M.SG
    Ahmed cooked the meal (there was some obligation difficulty involved in the task of cooking)

All of the above sentences are perfective and the eventuality of *cooking the meal* is asserted to have reached its natural end point, and is expressed in its entirety. However, in addition to expressing aspectual information each light verb in these sentences contributes additional meaning and contributes some information about how the eventuality came about. In the sentences above, (18) asserts that Ahmed cooked a meal for someone else. The light verb *lia* in (20) lays focus on the culmination of the cooking event and the action is directed towards the agent i.e. Ahmed. Although *cuka* چکا means 'already' it also effects the setting of reference time (TT). Schmidt (1999, p. 117) has labelled *cuka* چکا a modal – although she does not provide any details. Lastly *dala* ڈالا in (21) expresses that the action of cooking was accomplished in response to some obligation (it asserts deliberation on the part of the subject).

Butt's study (1995) of complex predicates in Urdu provides a detailed exposition of light verbs in Urdu but she does not take into account the aspectual facts shown in sentences (18)-(21) above. Butt has maintained (in her dissertation published in 1995 specifically; and in her more recent work: Butt & Ramchand, 2005; Butt, 2010; Butt & Lahiri, 2013) that CV complexes form single syntactic units with a single argument structure but two semantic heads. Her main argument is that light verbs are not aspectual auxiliaries and the data in sentences mentioned earlier in this section (18-16) supports that. Even if we take into account the semantic meaning of *manner* (volitionality, causality, urgency) added to the sentence by the use of light verbs in a sentence, it is not clear why the light verbs used in (18)-(21) always add the meaning of culmination.

5.3.2 Resultive Aspect

Light verbs have been analyzed as *resultive* in literature to account for their behavior. Agha (1994) argues that there is an implicature of *resultivity* associated with CV predicates in Urdu. This implicature is always there, in addition to the meaning of culmination. The lexical properties of the two verbs (main verb and light verb) participating in the CV construction play a crucial role in this regard. Although, light verbs can function as main verbs if used in isolation, their occurrence in the position after another content verb bleaches the semantic meaning associated with them. Therefore, light verbs do not encode an independent event when used in a CV construction but rather act as operators affecting interpretation of the main verb. In syntactic terminology, *operators* include determiners, interrogatives, adverbs, and negation. Operators affect a-bar movement. A-bar movement or argument' movement moves phrases to positions with no fixed grammatical function. Wh- movement is one example of A'-movement.

On this line of argumentation, the light verb in a CV construction essentially links the state or event expressed by the main verb to another state or event, and the main verb is then understood in relation to the state/event evoked by the light verb. The light verb, hence, has an indexing function. There is an underlying implicature about another state/event; and the implicature is expressed by the light verb. The state/event expressed by the main verb is a result of the presupposed event/state. Hence, the term *resultive* is used for light verbs. A specific discourse context is required to evoke the state/event implicature associated with an indexical category. An eventuality expressed with a CV construction is, therefore, understood as a result of a preceding eventuality.

اسے بخار تھا۔ اس نے دوا لی۔

22.	Us=e	buukhar	tha.	us=ne	dvaa
	3.SG=ACC	fever	be. PST.M.SG	3.SG=ERG	medicine
	li-ii.				
	take-PFV.F.SG				
	S/He had a fever. S/He took the medicine.				

اسے بخار تھا۔ اس نے دوا لے لی۔

23.	Us=e	buukhar	tha.	us=ne	dvaa
	3.SG=ACC	fever	be. PST.M.SG	3.SG=ERG	medicine
	le li-ii.				

take take-PFV.F.SG

He had a fever. (So) He took the medicine.

The above sentences show that light verbs have a temporal sequencing property as well – because of their resultive nature the eventuality expressed by the main verb is asserted to be after another eventuality (which causes it). This temporal sequencing is not implied in (22): the state of *having a fever* can be asserted to be simultaneous with the *event of taking the medicine*. However, the contextually presupposed/implicated state/event can be deduced from the discourse at large as well and doesn't have to be provided by the preceding sentence. In a situation where as person has been challenged to *cook a meal* and criticized for not being able to do it, the sentence in (21) mentioned earlier: *Ahmed na khana paka dala* would be felicitous. Hence the use of light verb is context dependent on this approach. In addition to the resultative use, light verbs can also evoke relations of causation. Consider the following:

میں نے قمیض خود سی لی ہے (اب درزی کے پاس جانے کی ضرورت نہیں۔)

24. Mai;n=ne qamiiz khuud sii li-ii hai
1.SG.=ERG shirt.F.SG myself sew take-PFV.F.SG be.PRS.SG
(ab darzi=ka pas jane=ki zarorat nahii;n)
now tailor=GEN.M near go.INF=GEN.F need not
I have sewn the shirt myself. (no need to go to a tailor).

میں نے قمیض خود سی ہے (اب درزی کے پاس جانے کی ضرورت نہیں۔*)

25. Mai;n=ne qamiiz khuud sii hai
1.SG.=ERG shirt.F.SG myself sew be.PRS.SG
(*ab darzi=ka pas jane=ki zarorat nahii;n)
now tailor=GEN.M near go.INF=GEN.F need not
I have sewn the shirt myself. (no need to go to a tailor).

The infelicity and oddity of (25) indicates that a light verb is required to assert causality in relation to the second sentence which expresses a result of the event states in the first sentence in (24) and (25). The light verb, thus, can also lead to indexical entailment in which case the light verb has a causative relation in association with the main verb. It should be noted that in place of *li* in (24), it is possible to use both دی *di* (inflected form of دینا *dena*: to give) and ڈالی *dali* (inflected form of ڈالنا *dalna:* to put). However, both دی *di* and ڈالی *dali* will still assert a relation of causality in relation to the sentence that follows, and

which of these three light verbs is used depends on the broader discourse context. Agha (1994) attributes this variation to *predicate perspectivation.* Predicate perspectivation refers to the contrasting ways of viewing a certain situation. A particular predicate can be asserted from a number of contextual view-points in Urdu with the help of light verbs, and the contrast created is somehow similar to the English *give* vs *take*, *come* vs *go* pairs.

It should be noted here that resultive construction are not the same as *resultative constructions* which most commonly occur in Germanic languages (Hussain, 2015). A typical example of English resultative is *the lake froze solid*. In this sentence *freezing* results in a change of the state of the lake. In resultive constructions on the other hand, the entire predicate/verbal complex expresses the resulting state only which is linked to a state that causes it through implicature (or entails it in which case the verbal complex is causative, see examples 19 & 20 discussed above).

Another property of light verbs is that a CV presupposes the existence of the referent of the main verb's argument. Therefore, CV constructions don't occur with arguments which don't have any referent/s in the real world.

کسی نے بھی جواب نہیں دیا۔

26.	Ksii=ne	bhii	jvaab	nahii'n	di-yaa
	someone=ERG	EMPH	answer	not	give.PFV.M.SG
	No one answered.				

کسی نے بھی جواب نہیں د ے دیا۔*

27.	*Ksii=ne	bhii	jvaab	nahii'n	de	di-yaa
	someone=ERG	EMPH	answer	not	give	give.PFV.M.SG

(dae دے: from *dena* = to give, marks culmination + direction of action away from the agent)

No one answered (definitively).

Similarly, negation is rarely permissible with CV constructions because negation in a sentence entails that the verb does not have an actual argument. It is possible to negate individual verbs in the verbal complex but the entire event cannot be negated:

اس نے دروازہ نہیں کھولا۔

28.	Us=ne	darvaza	nahii'n	khol-aa
	3.SG=ERG	door	not	open-PFV.M.SG

He didn't open the door.

*اس نے دروازہ نہیں کھول دیا۔

29. *Us=ne darvaza nahii'n khol di-yaa
3.SG=ERG door not open give-PFV.M.SG
He didn't open the door.

اس نے دروازہ کھول دیا نہیں (بند کیا)۔

30. Us=ne darvaza khol di-yaa nahii;n [band
3.SG=ERG door open give-PFV.M.SG not [close
ki-yaa.]
do-PFV.M.SG]
He didn't open the door, [(he) closed (it).]

Because the entire event is being negated, (29) is ungrammatical; but (30) is acceptable because it entails that some event has indeed occurred but it is not the *opening of the door*. Notice that even in the absence of the second clause the sentence in (30) is still acceptable because of the underlying assertion of an event having occurred. Sentences like the following with negation and a CV construction are also possible:

اس سے قبل کابینہ میں سیاست اور وزیراعلیٰ کے خلاف دھڑے بندی پر تین وزرا کی چھٹی کروا دی گئی تھی۔**ابھی تک ان وزرا کو کابینہ میں واپس نہیں لیا گیا**[22]**۔**

31. Is=se qbl kabina me;n siasat aur wazire-aalaa=ke
This=GEN before cabinet in politics and minister-chief=GEN
khilaf dharay-bundi par teen wuzra=ki chutt-i
against lobbying on three ministers=GEN leave-F
kerwa d-ii gaye thi.
cause to do give-PFV.F.SG go.PFV.F.SG be.PST.F.SG
abhi tak in vuzra=ko wapis nahii;n
now till 3.PL ministers=GEN back not
li-yaa g-yaa.
take-PFV.M.SG go.PFV.M.SG
Before this incident three ministers had been sacked from the cabinet for lobbying against the Chief Minister. **The three ministers have not been re-instated yet.**

[22] https://dailyshahbaz.com/provincial/35568/

Negation is possible in the above sentence with a CV because there is a contextual presupposition about the existence of three ministers. The necessary requirement for using negation with a CV is the existence of the argument expressed by the verbal complex. The predication can be negated as long as we can presuppose the existence of an argument. Conclusively, if light verbs serve an indexical purpose, they are not felicitous (either on the basis of causation or resultativity) if there is no event that needs to be associated with the eventuality asserted by the CV construction.

Hussain (2015) argues that light verbs also play a role in directing the focus of the sentence towards the subject or the object or the result of the action (Hussain cites Carnikova 1989 who was the first to assert this function of light verbs). Carnikova posited that if the speaker wants to emphasize on the subject, a simple verb (SV) construction is chosen; and if the result of the eventuality is to be emphasized, a complex verbal construction (CV) is used. V*v* constructions are distinct from compound verb construction in English like *believe in* and *rely on.* English compound verbs don't have specific aspectual meaning, whereas the light verb in Urdu CV constructions do. Additionally, the light verbs in the verbal complex cannot be labeled as *aspectual auxiliaries* because they contribute additional meaning, apart from the aspectual information. Carikova, thus, posits that light verbs contribute a distinct form of aspect, the *resultive aspect* to the predicates.

Correspondingly, the major semantic contribution of light verbs is that they draw attention away from both the external and internal arguments of the verbal complex and divert the focus towards the result of the eventuality. In addition, the light verbs encode semantic information about the manner in which the eventuality occurs – because the manner has a bearing on the end result of the eventuality.

احمد نے گاڑی چلائی (لیکن اس سے نہیں چلی)۔

32.	Ahmed=ne	ga.rii	calaa-ii	(lakin	us=se
	Ahmed=ERG	car	cause to go-PFV.F.S	but	3.INS.SG
	nahii'n	cal-ii)			
	not	go-PFV.F.SG			

Ahmed drove the car. (*but he couldn't)

(Ahmed tried to drive the car but he couldn't)

احمد نے گاڑی چلا لی (*لیکن اس سے نہیں چلی)

33.	Ahmed-ne	ga.rii	calaa	l-ii
	Ahmed=ERG	car	cause to go	take.PFV.F.SG

(*lakin	us=se	nahii'n	cala-ii)
but	3.INS.SG	not	cause to move-PFV.F.SG

Ahmed drove the car. / Ahmed was able to drive the car. (*but he couldn't)

Both of the above sentences are in perfective (morphologically) but (32) only reports the action of *driving the car* at some point in the past whereas (33) asserts the resulting state from the completion of the act of driving. However, there is another difference between (32) and (33) which Hussain (2015) does not point out. In fact, she goes on to argue that "there is no reason to believe that simple perfective past is somehow not a completed action… This is a matter of attention shifting and not truth conditions of the sentence in terms of the semantic values of the expressions making up the sentence" (2015, p. 27).

The eventuality expressed in both (32) and (33) is an activity and as it was demonstrated in the previous section activities don't have natural end points. However, it is possible still to negate that the action occurred in (32) because the if supplemented by the clause in parenthesis the predicate *garri chalai* asserts that *Ahmed tried to drive the car* and consequently negation is possible. This entails that Urdu activities with perfective participle and without a light verb can have the meaning of attempting an action rather than actually accomplishing it. Furthermore, negation is not permissible in (33) which substantiates that the actions of *driving the car* in fact occurred in the actual world.

Urdu verbal complexes with *Vv* constructions resemble the *having X'ed, Y* expression: the *Vv* constructions express the eventuality associated with the main verb V and also express the state after the culmination of V. In other words, the resultive constructions do express the action (asserted through the main verb) but focus on the resultant state. The Urdu construction *de dia* دے دیا (literally = give give) not only expresses the eventuality of *giving* but also asserts that the receiver of the action now possesses the object.

Having X'ed, Y formula also sheds light on the stative nature of Urdu complex verbs. There is always an underlying event implied in addition to the presupposition facts discussed earlier. Thus, in English a sentence starting with *having reached the finish line, continue moving* can be negated either as *not having reached the finish line, continue moving* or *having reached the finish line, don't continue moving.* The first part of this construction is stative and thus it is not possible to say *do nothing* after it. Statives need to

be converted to eventualities to be negated. Hence, we would have to say something on the lines of *do not reach the finish line and do not stop.*

Because of their stative nature, *Vv*s resist progressive aspect as it is difficult to look at the sub-intervals of the eventuality they assert. Habitual and iterative readings are, however, possible with *Vv*s because both in the case of habituality and iterativity, the eventuality comprises set of single complete eventualities seen in their entirety. See the Urdu sentences below:

احمد گاڑی چلا رہا ہے۔

34. Ahmed ga.rii calaa rah-a hai.
    Ahmed car cause to move stay.PFV.M.SG be.PRS.SG
    Ahmed is driving the car.

احمد نے گاڑی چلا دی رہی ہے۔*

35. *Ahmed=ne ga.rii calaa d-ii
    Ahmed=ERG car cause to move give.PFV.F.SG
    rahi hai.
    stay.PFV.F.SG be.PRS.SG

احمد گاڑی چلا دیتا ہے (جب بھی ڈرائیور نہ آئے)۔

36. Ahmed ga.rii calaa de-taa hai
    Ahmed car cause to move give.IPFV.M.SG be.PRS.SG
    [jab-bhii driver nah aaai]
    When-EMPH driver not come.PFV.SG
    Ahmed drives the car. [whenever the driver doesn't come] – habitual

احمد گاڑی چلا تا جاتا ہے (اور گاتا جاتا ہے)۔

37. Ahmed ga.rii cala-taa ja-taa hai
    Ahmed car move.IPFV.M.SG go.IPFV.M.SG be.PRS.SG
    (aor ga-taa ja-taa hai).
    (and sing.IPFV.M.SG go.IPFV.M.SG be.PRS.SG)
    Ahmed keeps on driving the car, (and keeps on singing). –iterative

This further substantiates that CVs in Urdu have stative properties. Progressives are not compatible with statives because they express homogenous static situations without any internal changes. Thus, CVs in Urdu are not compatible with progressive as shown in (35) because of the CV expressing a resulting state. As shown in (36) and (37) Urdu CVs yield

a habitual as well as an iterative reading when used in combination with the imperfective participle resulting from attaching the verb root to the imperfective siffix *ta* تا. The iterative constructions in Urdu similar to (37) requires that the action in the first clause is supplemented with a simultaneous action asserted by the second clause.

Hussain (2015) argues that telicity is one of the consistent properties of Urdu verbal complexes regardless of whether the eventuality is durative or punctual. The sense of final culmination expressed by the light verbs in Urdu verbal complexes comes from the assertion of reaching the final goal i.e. telicity in these predicates. The use of culmination marking light verbs with statives supports this claim. For example:

وہ سوال سمجھ لیتا ہے (پھر بھول جاتا ہے)۔

38. vo	sval	samajh	le-taa	hai
3	question	understanding	take.IPFV.M.SG	be.PRS.SG
[phir	bhol	ja-taa	hai].	
[then	forgetfulness	go.IPFV.M.SG	be.PRS.SG]	

He understands the sum [then forgets it again].

A specific narrative context is required to understand the telicity asserted in (38). This sentence can be uttered by a teacher telling a mother that her son understands the sum on certain occasions. So, the sentence in (38), despite being stative, can assert the culmination of sub-intervals with a goal of *understanding the sum*. This line of reasoning, however, does not yield a uniform semantics of perfectivity in Urdu. Firstly, atelics like activities and semelfactives can be used with light verbs in their perfective forms and without habitual/imperfective markers. Secondly, states in Urdu can be used with light verbs (in perfective forms) and they don't obtain a reading of telicity, but rather assert the inception of the state, as English states do with perfective aspect:

39. He understood the meaning of life.

اسے سوال سمجھ آ گیا۔

40. Us=se	sval	samjh	aa	ga-yaa.
3.SG=ACC	question	understanding	come	go-PFV.M.SG

He understood the sum.

اسے خیال آیا۔

41. Us=se	khyal	aa-yaa
3.SG=ACC	idea	come.PFV.M.SG

He had an idea

اسے خیال آ گیا۔

42. Us=se khyal aa ga-yaa
    3.SG=ACC idea come go.PFV.M.SG
    He remembered / he had an epiphany

The sentence in (39) is in perfective and asserts the inception of this state of *understanding.* In Urdu a similar meaning can only be expressed by the use of light verb *aa ʾ, to come.* Therefore, the aspectual information contributed by light verbs in Urdu seem to be dependent on the interaction of both grammatical and lexical aspect. Thus, CVs are not perfective always in the sense of asserting culmination and telicity – they do assert a certain resultive reading nonetheless. The sentence in (40) entails that the subject is now in a state after having successfully learnt/understood the sum – the resultive state. (41) and (42) differ in the sense that the use of the light verb *ga-yaa* changes the meaning of the situation as well. (41) simply means that the subject had an idea whereas (42) entails that the subject managed to remember something – we get the meaning that there was some sort of difficulty involved: either the subject was forgetful or careless or it took a while for him/her to remember.

The meaning contribution of light verbs to the verbal complex is also determined by the pragmatic context. Specifically, in the case of statives, like (40), perfectly viable alternatives are available:

اس نے سوال سمجھا (اور چلا گیا)۔

43. Us=ne sval samjh-aa (aor
    3.SG=ERG question understand.PFV.M.SG (and
    chal-aa g-yaa).
    cause to move.PFV.M.SG go.PFV.M.SG
    He learnt the sum (and left)

However, the omission of light verb changes the state to an activity in this scenario and the sentence only expresses information about the action with an emphasis on not the result but just the action. Light verb constructions, therefore, have a pragmatic force of drawing the focus towards the resulting state. If the context requires that the outcome of an eventuality is to be emphasized a light verb construction is used instead of just the perfective participle construction.

5.4 Perfectivity and Internal Arguments

The discussion in the preceding sections with reference to Urdu entails that aspectual meaning, and the use of light verb in order to convey aspectual information is affected by the properties of verbs; that is the situation types. In addition, pragmatic factors also play some part in determining whether a simple verb or a complex verb construction is used in Urdu. However, the semantic properties of the arguments of a verb also affect the interpretation of aspectual information – specifically the notion of culmination. The internal argument of a verb expressing change determines the scale of change by the underlying eventuality over time (Tenny, 1992). Therefore, the internal arguments act as a function of time and have considerable bearing on how aspect is realized by a given predicate. In predicates like *sing a song* and *translate a novel*, the event is delimited by the object: the end of the song is the end of the singing event and the translation event is only over when the end of the novel is reached. This can be illustrated further with how the adverbial *halfway* modifies the meaning of phrases:

- a. Sing a song halfway
  b. Sing half a song
- a. Destroy the building halfway
  b. Destroy half of the building

The second phrase in both of the above examples expresses one possible meaning of the first phrase. Correspondingly, the internal argument determines the extent to which the event holds in volume or space, or in other words the internal argument of the verb delimits the event it expresses. Krifka (1992) argues that nominal reference and temporal constitution are semantically similar concepts: the NP *an orange* denotes and object with defined limits and similarly *walk a mile* denotes an event with definite boundaries.

Affected arguments delimit the verbs and also affect the syntactic behavior like middle formation and passivation of the NPs (Tenny, 1992). This is illustrated in the following examples:

44. Alexander's building of the tomb.
    The tomb's building by Alexander.
45. Alexander's chase of Helen.
    *Helen's chase by Alexander.
    Helen's shunning of Sparta.

*Sparta's shunning by Helen.

The arguments in (44) can be passivized because they are affected where arguments in (45) are not affected and consequently cannot be passivized. Adverbials also demonstrate how events are delimited by internal arguments: *the city was destroyed in a day* is semantically good but **the city was destroyed for a day* is odd. It is because the event of destroying is delimited by the argument. Correspondingly, *pursue Maria for an hour* is acceptable as opposed to **pursue Maria in an hour* because the event of pursuing is non-delimited.

5.4.1 Cumulativity and Quantization

Nominal predicates can be formed with count nouns and mass nouns. Count nouns like *chair* and *bottle* can be used with numbers whereas mass nouns cannot: the NP *two chairs* is acceptable but **two water* is not. Both countable and mass nouns have the property of *cumulativity* as water combined with water is still water, and *chairs* added to *chairs* still result in *chairs*. However, *two chairs* and *two bottles of water* are quantized. For example, if we apply the predicate *five chairs* to two distinct entities, we cannot apply the same predicate to their collection. A proper part of *a bottle of water* is still a *bottle of water but* no proper part of *two chairs* is *two chairs.* Singh (1998) argues that the properties of nominal predicates are applicable to verbal predicates.

Cumulativity is applicable on atelic predicates and *quanitization* on telic predicates. Two distinct events of *baking in the kitchen* when combines yield an event of *baking in the kitchen* again. But, no proper part of the event of *baking a cookie* is an event of *baking a cookie.* Cumulativity and quantization properties of internal arguments affect the aspectual interpretation of the verb and Tenny (1992) has contended that they 'measure out' events – which is a cover term for 'consistent and uniform change along a scale'. With achievements, count nouns delimit the event but mass nouns don't:

46. He drank a jug of water. (*for an hour/in an hour). – delimited
47. He drank water. (for an hour/*in an hour). – nondelimited

The temporal constitution of a predicate can be affected by the reference of the nominal predicate. Sing (1998) asserts that in Hindi the *partitive-patient* relation in a predicate lead to the neutral perfective reading. The partitive relation is also referred to as the *part-whole relation* or the *meronymic relation*. This is a relation between a whole and its constituent parts. Some languages, like Finnish, have a partitive case to mark *partialness*

and lack of definite identity (Szabolcsi & Sag, 1992). The partitive-patient relation entails that only part of the object is a patient of the action. The Urdu SVs, express the partitive relation in certain cases and don't assert that the entire object is being referred to. Correspondingly, see the following sentences:

اس نے چائے پی (لیکن ساری نہیں)۔

48. Us=ne cha'e p-ii (lakin sar-ii nahii'n)
    3.SG=ERG tea drink.PFV.F.SG (but complete.F not)
    He drank tea. (but not the entire quantity)

اس نے چائے پی لی (لیکن ساری نہیں*)۔

49. Us=ne cha'e p-ii l-ii
    3.SG=ERG tea drink.PFV.F.SG take.PFV.F.SG
    lakin sar-ii nahii'n)
    (but complete.F not)
    He drank the tea. (*but not the entire quantity)

اس نے دو کپ چائے پی (لیکن ساری نہیں*)۔

50. Us=ne do kap cha'e p-ii (*lakin sari nahi)
    3.SG=ERG two cup tea drink.PFV.F.SG (but complete not)
    He drank two cups of tea. (some tea was left from each of the two cups)

اس نے دو کپ چائے پی لی (لیکن ساری نہیں*)۔

51. Us=ne do cup cha'e p-ii l-ii
    3.SG=ERG two cup tea drink.PFV.F.SG take.PFV.F.SG
    lakin sar-ii nahii'n)
    (but complete.F not)
    He drank two cups of tea. (all the tea was consumed from both the cups)

اس نے ساری چائے پی۔

52. Us=ne sar-ii cha'e p-ii
    3.SG=ERG all.F tea drink.PFV.F.SG
    He drank all of the tea.

اس نے ساری چائے پی لی۔

53. Us=ne sar-ii cha'e p-ii l-ii.
    3.SG=ERG all.F tea drink.PFV.F.SG take.PFV.F.SG
    He drank all of the tea.

These sentences show that the aspectual meaning of the predicate has implication for the quantificational meaning of the nominal predicate. In (49) the sentences asserted that there is some specific quantity of tea that has been consumed although (48) also asserts the culmination of the *drinking* event. The quantized NPs in both (50) and (51) with an SV and a CV imply completion and there is no significant difference in the aspectual meaning of both the sentences. However, because of the CV (50) implies that the NP is definite. In cases where the semantic properties of the predicate entail that a completive reading is asserted even without a CV, light verbs serve to add a definiteness effect on nominal predicates in Urdu. Therefore, light verbs seem to serve an additional function apart from expressing aspectual information, and have a definiteness effect on the internal argument.

In Urdu there are no definite articles which can give rise to ambiguities in case of bare NPs. But with count nouns, light verbs are required to assert absolute completion with predicate that have *graduality*:

ماریا نے سٹرابیری کھائی (لیکن ساری نہیں)۔

54. Maria=ne satrabiri kha-yii. (lakin sar-ii nahii'n)
    Maria=ERG strawberry eat-PFV.F.SG (but complete-F not
    Maria ate strawberries. / Maria ate a strawberry. / Maria ate some strawberries. (but not all….).

ماریا نے دو سٹرابرئیاں کھائیں (لیکن آدھی)۔

55. Marie=ne do satrabirya;n kha-yii. (lakin aadh-ii).
    Maria=ERG two strawberry eat-PFV.F.SG (but half-F)
    Maria ate two strawberries (but only half of each).

ماریا نے دو سٹرابرئیاں کھا لیں (لیکن آدھی)۔

56. Maria=ne do satrabirya;n kha l-ii. (lakin aadhii).
    Maria=ERG two strawberry eat take.PFV.F.SG (but half.F)
    Maria ate two strawberries (but only half of each).

5.4.2. Graduality and Total Affectedness

The property of *measuring out* mentioned earlier corresponds to the notion of *incremental theme* and is labelled as *graduality* in formal semantics. Graduality is a composite property including *uniqueness of objects, mapping to objects* and *graduality.*

Each verb expressing an event is applicable to a unique object. This unique object can be a singular entity or an aggregate entity like *a dozen eggs*. The same event can be repeated on the unique object a number of times.

Events can affect objects in an incremental way so that subevents correspond to parts of the object. Subevents and sub-objects have the same relation as the entire event and the whole object. Therefore, every subevent of *eating a meal* corresponds to eating of a part of the meal. This property is termed as *mapping to objects.* Verbs like *finish the race* don't have this property as the subevent of finish the race don't involve *finishing* it. *Graduality* is another thematic relation pertaining to how object is affected by the event in a gradual way. *Reading a book* is an event in which the *reading* process affects the object gradually. Non-gradual verbs like *see, find* and *reach* affect their objects instantaneously.

In Urdu the simple verb and complex verb constructions both convey the meaning of culmination with predicates that lack the property of graduality, as illustrated by the following sentences:

ماریا نے ڈبیٹ جیتی۔

57. Maria=ne dabet jiit-ii.
    Mari=ne debate win-PFV.F.SG
    Maria won the debate.

ماریا نے ڈبیٹ جیت لی۔

58. Maria=ne dabet jiit l-ii.
    Mari=ne debate win take-PFV.F.SG
    Maria won the debate.

*ماریا نے کھڑکی توڑی (لیکن پوری نہیں)۔

59. Maria=ne kh.rkii to.r-ii (*lakin porii nahii'n)
    Maria=ERG window cause to break-PFV.F.SG (but complete not)
    Maria broke the window. (*but not the entire window)

ماریا نے کھڑکی توڑدی۔

60. Maria=ne kh.rkii to.r d-ii.
    Maria=ERG window cause to break give-PFV.F.SG
    Maria broke the window.

ماریا نے چابی گمائی ۔

61. Maria=ne cabii guma-ii.
    Maria=ERG key lose-PFV.F.SG

Maria lost the key. (deliberately)

ماریا نے چابی گما دی۔

62. Maria=ne cabii guma d-ii.
    Maria=ERG key lose give-PFV.F.SG
    Maria lost the key.

All of the above sentences have instantaneous predicates which are non-gradual so the aspectual information conveyed by both the SV and CV is the same. The light verbs do contribute additional meaning of directionality and volition associated with them but don't add any significant information with reference to perfectivity. Predicates that lack graduality, therefore, don't have partitive reading. However, in case predicate with graduality, a CV construction is required in Urdu to convey the meaning of culmination. Consider the predicates with graduality in following sentences:

اس نے ڈوپٹہ رنگا (لیکن پورا نہیں)۔

63. Us=ne duupa.ta rang-aa (lakin pora nahii'n).
    3.SG=ERG dupatta dye.PFV.M.SG (but complete.M not)
    She dyed the dupatta (*but not completely).

اس نے ڈوپٹہ رنگ دیا (لیکن پورا نہیں*)۔

64. Us=ne duupa.ta rang di-yaa *(lakin pora
    3.SG=ERG dupatta dye give.PFV.M.SG (but complete.M
    nahii'n)
    not)
    She dyed the duppata (*but not completely).

Verbs affect their objects to varying extents, however some verbal predicates affect their object totally and have the property of *total affectedness*. Affectedness here refers to how the verb causes a change in the internal or physical structure of the object. The verb *drank* in (65) given below has the *total affectedness property* but (66) and (67) do not. The event of *mixing* has some effect on the syrup undoubtedly and so does the *buying* event but both of these verbs don't cause an intrinsic change in the object.

65. He drank the syrup.
66. He mixed the syrup.
67. He bought the syrup.

Although a light verb is required in Urdu to convey meaning of culmination in case of predicates with graduality (as it was illustrated in examples 63 & 64), predicates with *total affectedness* property don't allow for negation with a conjunct clause, as in example (68) below. Although the process of making tea is gradual, the event has the property of *total affectedness* and thus even without a light verb a meaning of completion is conveyed.

*اس نے چائے بنائی (لیکن پوری نہیں)۔

68.	Us=ne	cha'e	bana-ii	(*lakin	por-ii
	3.SG=ERG	tea	make.PFV.F.SG	(but	complete.F
	nahii;n).				
	not)				

She made tea (*but did not make it completely).

In addition to above mentioned properties, verbal predicates can express that an object comes into existence because of the underlying event. For example: *bake a Croissant.* The same verb, however, can or cannot result in the *independent existence* of the object – *finding a key* is different from *finding a friend* as in the case of later the relation of friendship only exists once the friend is found but it the key already exists whether it is found or not. The property of *independent existence* has an impact on predicates that gradually affect their patients and have the *total affectedness property*.

اس نے لیمینیڈ بنائی (لیکن پوری طرح نہیں*)۔

69.	Us=ne	lemanaid	bana-ii	
	3.SG=ERG	lemonade	make.PFV.F.SG	
	(*lakin	por-ii	tarha	nahii;n)
	(but	complete-F	similar to	not)

She made lemonade (*but didn't finish making it).

اس نے پانی میں شہد ملایا لیکن پوری طرح نہیں ۔

70.	Us=ne	panii me;n	.sehed	mila-yaa	lakin
	3.SG=ERG	water in	honey	mix-PFV.M.SG	but
	por-ii	tarha	nahii;n		
	complete-F	similar to	not		

She mixed honey in the water but didn't mix it completely.

The partitive completive distinction does not exist for predicates that have argument with the independent existence property. Therefore, an SV and CV both contribute the same

aspectual meaning – as in (69) above. Urdu predicate, correspondingly, require a light verb construction if the predicate has a partitive property and the argument is not totally affected by the verb.

In conclusion, the lexical information inherent in a verb and a nominal predicate determine whether they have the above discussed properties or not and a broader categorization of situations is not sufficient to account for the analysis of aspectual system in Urdu.

5.5 Negation and Perfectivity

The interaction of negation can provide interesting insights about the meaning of perfective aspect. Perfective aspect is not compatible with negation in many languages. According to Miestamo and Van der Auwera (2011), negation restricts perfective aspect in Maori, Hungarian, Mandarian, Upper Chehalis and Khasi (based on the work of Schmidt, 1980). Hungarian and Mandarian don't allow negation with perfective aspect at all whereas in Russian it is grammatically possible but dispreferred. Moreover, perfective and imperfectives pattern differently with negation in contrast to the affirmatives.

Negation has an inherent aspect because when we use negation with an event, we are essentially expressing the notion that the eventuality being expressed through the predicate is either not the case or is not on-going. Correspondingly, negation is less likely to be used with grammatical forms that delimit events. Consider the following examples from both Urdu and English with different aspectual variations:

71. Ali didn't turn-up at work today.
72. Ali has not turned-in his assignment yet.
73. Ali is not going to the market.

علی آج بہت عرصے بعد آفس آیا۔

74. Ali aj bohut arsai baad aafis aa-yaa
    Ali today a lot time after office come-PFV.M.SG
    Ali came to the office today after a long time.

میں نے کھانا نہیں کھایا۔

75. Mai;n=ne .khana nahii;n .kha-yaa
    1.SG=ERG food not eat-PFV.M.SG

I have not eaten. (I haven't had any food)

میں نے کھانا نہیں کھا لیا ہے۔*

76. *Mai;n=ne .khana nahii;n .kha li-yaa hai
1.SG=ERG food not eat take-PFV.M.SG be.PRS.SG
*I have not eaten (up)

میں کھانا نہیں کھا رہا ہوں۔

77. Mai;n .khana nahii;n .kha rah-aa huun.
I am not eating.

میں ۹ بجے کے بعد کھانا نہیں کھاتا۔

78. Mai;n 9 bja=ke baad nahii;n .kha-taa.
1.SG 9 o'clock=LOC after not eat.IPFV.M.SG
I don't eat after 9 o'clock.

At the outset both the perfective and imperfective verb in English sentences in (71, 72) and (73) respectively seem to be compatible with negation. However, when we look at the semantics of these sentences, we can see that despite the perfective/imperfective form of the verb – the aspectual marking is not contributing the same meaning as these aspectual forms do in affirmative sentences. In English examples, we see a meaning of the eventuality being not true with both the perfective in (71) and the imperfective in (73). Moreover, an important point to be noted here is that (73) the negative doesn't negate that the event of Ali's *going to the market* is not continuous but rather the eventuality is being asserted to be not true at the moment of speech - the use of progressive places the reality of the action being negated at the moment of speech. This becomes even clearer when we contrast the sentence in (73) to (71) which is about recent past. In order to situate an event that is being negated at the moment of speech, we need the progressive and use of perfective shifts the time scale to recent past.

We have seen in this preceding discussion in this chapter that the meaning of absolute culmination with durative eventualities in Urdu is expressed through light verbs which add nuances of meaning to the event description in addition to the meaning of termination or culmination of the event expressed by the verb. Negation is not compatible in Urdu with light verbs as it can be seen in (76). Negative sentences can contain both perfective participle (75), imperfective participle (78) and progressive (77) but negation doesn't allow light verbs. Negation entails incompletion of the event therefore absolute expression of culmination or completion is incompatible.

States in contrast to perfectives are readily compatible with negation due to their homogenous temporal constituency. Individual level statives are especially unproblematic with negation as they are less-specifically related to time of speech in comparison to how tensed-event descriptions are. *Ali is tall* and *Ali is not tall* both assert a quality which is expressed in relation to the subject and the sentence *Ali was tall* can only be used in a scenario where Ali is either not alive any more or in a narrative description of a character. Miestamo and Van der Auwera (2011) argue that negative sentences have a stative nature because they express a situation that didn't bring about any change in the world in comparison to the affirmative counterparts which express a change (in case of dynamic eventualities). Consider the following sentences:

79. Ali drank all the tea.

80. Ali did not drink the tea.

(79) entail that there was a change in the world but in (80) Ali's not drinking of the tea does not affect any change in the world. There are however, some exception as well to how negation interacts with eventualities. With verbs like *stop* and *stay*, negation does not obtain the stative-like meaning and does in fact contribute to the meaning of change or dynamism if the eventuality is dynamic. For example, in the sentence *I didn't stop him from jumping in the pool*, the subject's stopping of the event could have brought a change in the course of events. Nonetheless, he stative-like meaning of negatives, therefore blocks or restricts the use of perfective aspect.

The argument for the stativity of negative statements comes from the scope of negation over aspect in syntax. Being negation combined with the event predicate before it is assigned an aspectual value by the AspP, the eventuality is already under the scope of negation when the PredP (predicate phrase) merges with the AspP. Negation first merges with vP which then merges with the AspP (Aspectual phrase) which is the projection of grammatical aspect (Csirmaz, 2008). AspP is then dominated by the TP (tense phrase). The following figure shows the representation of negation in syntax:

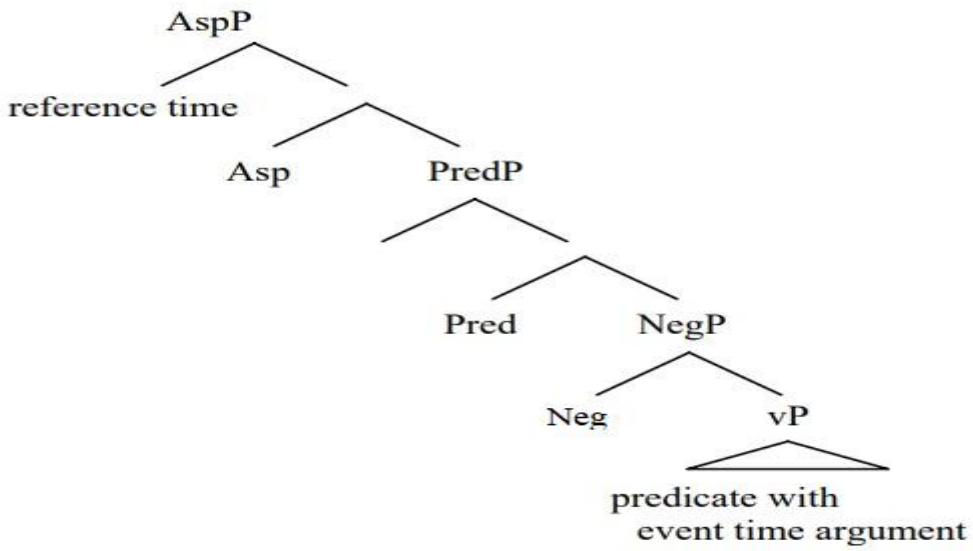


Figure 8. Realization of Negation in Syntax

Csirmaz (2008) argues that instead of triggering a stative meaning, negation introduces the sub-interval property to the predicate. It should, however, be asserted that the sub-interval property is a characteristic of statives as well (in addition to progressives). The properties of the eventuality being merged in the predicate phrase PredP are not affected by negation. Negation does not affect the aspectual properties of the predicate as it is not an aspectual operator. The sub-interval property is a characteristic of predicates and negation applies on reference time (TT) and not on event time (TSit). States obtain an ongoing meaning with the present tense and if negation patterns with statives then negated perfectives do not render any such reading. Negated perfectives don't give habitual or futurate readings. In addition, states don't move time (c.f. section 5.6 in the previous chapter) in narratives but negated perfectives do. See the following examples from Urdu and English:

81. Ahmed asked the student to leave the classroom. The student didn't budge.

میں نے عالیہ کو بہت آوازیں دیں۔ عالیہ نے کوئی جواب نہیں دیا۔

82. Mai;n=ne Aaliya=ko bohat aavaza;n di-i;n. Aaliya=ne
1.SG=ERG Aaliya=ACC a lot call.F.PL. give-PFV.F.PL Aalia=ERG
koi javab nahii;n di-yaa.
Some answer.M not give.PFV.M.SG
I called Aaliyaa many times. Aaliya didn't answer.

The second sentence in both (81) and (82) express an effect of the first sentences and the eventuality being negated moves times as affirmative perfective counterparts of these sentences would. The second sentences in both examples above show an absence of action after the action expressed by the first sentence has occurred. This is in stark contrast to the reading lent by a stative sentence as illustrated by the following sentences:

83. Ahmed asked the student to leave the classroom. The student was asleep.

میں نے عالیہ کو بہت آوازیں دیں۔ عالیہ سوئی ہوئی تھی۔

84. Mai;n=ne	Aaliya=ko	bohat	aavaza;n	dii;n.
1.SG=ERG	Aaliya=ACC	a lot	call.F.PL.	give-PFV.F.PL
Aaliya	so-ii	ho-ii		th-ii.
Aaliya	sleep.PFV.F.SG	be-PFV.F.SG		be.PST.F.SG

I called Aaliya many times. Aaliya was asleep.

The state of the student being asleep in (83) coincides with the action of Ahmed asking the student to leave and there is no movement in time. Same is the case in (84). Therefore, the incompatibility of negation with perfective forms results because of the introduction of the sub-interval property to the predicate which also introduces a stative-like meaning to the predicate.

5.6 The Present Perfective Paradox

As we have seen in the preceding sections, perfective aspect interacts differently with different situation types and predicates. Perfective aspect is most frequently used with past forms, owing to the notion of culmination associated with it which requires that action is not continuing anymore. Therefore, it seems natural that perfective aspect would not be exactly compatible with a tense that locates eventualities exactly at the moment of speech. No matter how short the span of the eventuality is, if it is viewed as closed it becomes part of the past – which might be recent past. Present tense yields the meaning of ongoingness of the eventuality at the moment of speech with states and imperfectives (both habituals and progressives), generally. Correspondingly, the discussion in this section focuses on the interaction as well as the apparent incompatibility of present tense and perfective aspect. The incompatibility of present tense and perfective aspect is commonly referred to as *the present perfective paradox* and the term was first introduced by Malchukov (2009). This

section focuses on how this paradox can be observed and analyzed in both English and Urdu with reference to the temporal features associated with present tense and perfective aspect.

It is often argued that the simple present tense in English is not a real tense on the same lines as the English simple past. Specifically, with dynamic situation which have a defined starting point and endpoint and stretch over a considerable duration, it is difficult to locate the situation on a single time point – the moment of speech – which is the temporal reference of simple present tense. Following this intuition, Sauerland (2002), for example, posits that the present tense is actually vacuous because it triggers no presuppositions about the time of a situation in contrast to past tense which carries presuppositions of anteriority. Consider the following examples from English and Urdu:

85. On every Monday of this month, I pray salah in the mosque.
86. On every Monday of this month, I prayed salah in the mosque.

اس مہینے، ہر پیر کو میں مسجد میں نماز پڑھتا ہوں*۔

87. Is	mahine,	har	pir=ko	mai’n	masjid	me;n
this	month	every	Monday=LOC	1.SG	mosque	in
namaz	pa.rh-taa		huu;n.			
salah	read-IPFV.M.SG		be.PRS.1.SG			

اس مہینے، ہر پیر کو میں نے مسجد میں نماز پڑھی۔

88. Is	mahine,	har	pir=ko	mai’n=ne	masjid	me;n
this	month	every	Monday=LOC	1.SG=ERG	mosque	in
namaz	pa.rh-ii					
salah	read-PFV.M.SG					

Both (86) and (88) presupposes that all the Mondays I prayed in the mosque precede the time of utterance of the sentence. On the other hand, (85) and (87) can be true when uttered on any day in the month except the last Monday of the month. However, when we look at the truth conditions of both the sentences, they are the same:

> 85 is true iff every time span t that is Monday in this month, it is such that I prayed salah in the mosque.
>
> 86 is true iff every time span t that is Monday in this month, it is such that I prayed salah in the mosque.

The truth conditions of both the sentences are exactly the same and if the sentence in (87) is uttered at a time when conditions for the past are met, both are contextually interchangeable. But we cannot use (88) if there are still Mondays left in the present month. In opposition to this analysis, Thomas (2016) argues that we need to consider the projection of presupposition triggered with the use of present tense to account for the truth condition and not assume that the present tense does not contribute temporal location in this scenario.

However, when we closely look at the present tense, it does appear that simple present tense in both English and Urdu seldom makes an assertion specifically and entirely about the moment of speech. Therefore, it is natural to not think of the present tense as a deictic category as the past and future tense. Some proposals have argued that simple present owing to the extremely short duration it encodes cannot be compatible with dynamic situations that extend over comparatively longer durations (De Wit, 2006). Narratives and commentaries allow the use of simple present to create a sense of false present and therefore compressed to correspond to the shorter duration associated with the simple present. Nonetheless, one feature of the simple present is retained in real as well as fictive contexts, the speaker views the event as epistemically immediate when the sentence is uttered.

The simple present in English correspond to either statives, genericity, habituals or futurates. In Urdu due to the specific habitual marking on the verb construction similar to English simple present correspond to habituals and genericity (as it is evident in 87 above). Statives are expressed by the copula and the predicate and therefore don't carry the habitual suffix *ta*. De Wit (2006) argues that the incompatibility of present with the perfective arises from the cognitive implication that arise from mixing present tense with the perfective aspect. Consequently, in both English we cannot use simple present tense to express a dynamic eventuality that is still going on at the time of speech in present perfective – and the use of present progressive becomes obligatory. This problem doesn't arise for statives in particular owing to their homogeneity:

89. I love marshmallows.
90. Can you stop jumping on the bed...? I *try/am trying to take the sheet of.
91. Would you help me in taking the sheet of the bed before the kids get in. I take the sheet of and they see me doing it, there will be a chaos.

However, present tense can be used in non-stative contexts as well. Performatives, narratives and commentaries employ present tense but the temporal reference in these cases doesn't correspond to an exact alignment with the moment of speech and the action. The preference for present progressive in contrast to present simple, as we can see in 90), has implication for how tense interacts with aspect because progressive expresses imperfectivity. As the speaker in the middle of the action while uttering the sentence the use of simple present in (90) is infelicitous.

Notice the difference in meaning created by the use of present simple in (91) in contrast to the infelicity of present simple in (90). As it was mentioned with reference to the use of present simple in narrations and commentaries, the use of simple present entails that the speaker views the reality of the eventuality being expressed as non-contingent in the sense that we assume that it can be epistemically controlled and is expected. This is in contrast to present progressive in which case the speaker assumes that part of the situation being expressed through the progressive expresses a contingent part of the reality and doesn't necessarily have to be expected at the moment of utterance.

5.7 Conclusion to Chapter 5

In this chapter we have seen that Urdu and English differ considerably in their aspectual system. Light verbs are required in Urdu to mark absolute termination or culmination of the eventuality in case of activities and accomplishments. The perfectivity asserted by Urdu light verbs also seem to render a resultive aspectual meaning, and associate the main verb to another contextually salient verb. Correspondingly light verbs were observed to add nuances of meaning about the manner in which a give situation is realized including volitionally, direction of the action and absolute termination. The internal arguments of the verbs have an effect on whether light verbs are required to mark termination/culmination. In addition, we saw that perfective is not compatible with negation because negation introduces a stative like meaning and sub-intervals to predicate, both of which are not compatible with perfective. Lastly, it was discussed that perfective is seldom used with the present tense as perfective is most commonly used with dynamic situations and it is almost impossible to express a dynamic situation as having reached culmination at the moment of utterance.

CHAPTER 6

THE IMPERFECT DIMENSIONS OF IMPERFECTIVITY

وہ آ رہے ہیں وہ آتے ہیں آ رہے ہوں گے
شب فراق یہ کہہ کر گزار دی ہم نے
(they are coming, they are about to come, would be coming
In saying so, I spent the night of separation[23])
– Faiz Ahmed Faiz

The focus of this chapter is the notion of imperfectivity and the semantic contribution of imperfective markers. Imperfectivity and imperfects correspondingly are over-arching terms used to express the continuity of events in various ways. The first section of this chapter aims to elaborate on the meaning contribution of imperfects and after that the next sections deal with the semantic issues associated with how imperfectivity interacts with various temporal properties of events. As it has been discussed in the previous two chapters, viewpoint aspect interacts with lexical aspect in various ways with considerable implications for semantic meaning. Correspondingly, the interaction of imperfective aspect with various types of lexical aspect (situation types) is discussed in section 7.2 through 7.4.

6.1 Semantic Contribution of Imperfectivity

Imperfective aspect in contrast to perfective aspect expresses an eventuality from a situation internal perspective – either as incomplete or in progress. Imperfectivity essentially denotes the ongoingness of a situation. As a grammatical aspectual property *imperfectivity* is realized in two basic ways: progression and habituality. Progressive aspect asserts a situation to be part of an eventuality in progress without any reference to the actual duration for which the eventuality really lasts for. On the other hand, habituality refers to the successive occurrence of an eventuality.

[23] This is a famous Urdu couplet by Faiz Ahmed Faiz – one of the most widely acclaimed and respected poets of Pakistan. The translation is my own.

English has a distinct progressive form which is formed with the addition of the suffix *–ing* to verb stems (be + V-ing) which is used to assert that a situation is going on at a particular reference time. English has a habitual aspect only for past eventualities formed periphrasitically with the addition of *used to* phrase before the main verb. In Urdu, the progressive is realized periphrasitically with the auxiliary *rahna* رہنا which marks progression and is added after the stem of the main verb and followed by the tense auxiliary. Progressive occurs with all the three tenses in Urdu. The imperfective suffix *ta* تا added to the verb stem forms the imperfective participle in Urdu which is used to express habituality. A combination of imperfective participle and inflected form of *rahna* رہنا is used to convey either continuation or repetition of an action (see 8 below). In contrast to the progressive which occurs across all the available tenses, most of the languages with general imperfectives only allow it with the past tense. Imperfectives formed with the addition of *ta* تا *to* the verb stem in Urdu are available for past, present and subjunctive constructions (see 9, below).

1. Ali is swimming in the pool. (Progressive)
2. Ali swims in the pool. (Habitual)
3. I used to swim in the community pool. (Habitual past)

علی بس پہ سکول جا رہا ہے۔

4. Ali bus pa skuul ja raha hai. (Progressive)
   Ali bus on school go stay.PROG.M.SG be.PRS.M.SG
   Ali is going to the school by bus.

علی بس پہ سکول جا تا ہے۔

5. Ali bus pa skuul ja-taa hai. (Habitual Present)
   Ali bus on school go-IPFV.M.SG be.PRS.M.SG
   Ali goes to school by bus.

علی بس پہ سکول جا تا تھا۔

6. Ali bus pa skuul jata thaa. (Habitual Past)
   Ali buson school go-IPFV.M.SG be.PST.M.SG
   Ali used to go to school by bus.

علی بس پہ سکول جا یا کرتا تھا۔

7. Ali bus pa skuul ja-yaa kerta tha.
   Ali buson school go-PFV.M.SG go-IPFV.M.SG be.PST.M.SG
   Ali used to go to school by bus. (Habitual Past)

علی پورا مہینہ بس پہ سکول جاتا رہا۔

8. Ali por-aa maheena bus pa skuul jataa
   Ali complete.M month bus on school go-PFV.M.SG
   rah-aa.
   stay.PROG.M.SG
   Ali kept on going to the school on bus. (Iterative)

علی بس پہ سکول جاتا ہو گا یقیناً۔

9. Ali bus pa skuul jat-aa ho-gaa yaqenan.
   Ali buson school go-IPFV.M.SG be.FUT.M.SG indeed
   Ali must have been going to school by bus, certainly. (subjunctive)

The Urdu progressive marker *-raha* is used consistently to mark progression across all tenses and patterns similarly with English progressive in terms of how it interacts with different situation types (as it has been discussed in this and previous sections of this chapter). However, *raha* can also express the meaning of iteration when used without the tense auxiliary. Raha acts as a light verb here instead of expressing progression.

علی راستے میں کھڑا رہا (سارا دن)۔

10. Ali raaste me;n kha.r-aa rah-aa (sara-a din).
    Ali path in stand-PF.M.SG stay.PROG.M.SG all.M day
    Ali kept standing on the pathway (all day).

Imperfectivity has been analyzed and defined in various ways. Smith (1997) asserts that imperfective predicates do not give any information about the end point of a situation and the interval expressed by the predicate is internal to the situation. Krifka (1992) elaborates on imperfectivity in terms of the whole/part relations. In German and Finnish the progressive is marked by partitive case marking on the NP, for instance. In Reichenbachian terms imperfectivity is explained as a relation between reference time and the time for which the eventuality holds (Klein, 1994 adopts the Reichenbachian system, for example. See section 2.2.3 for a detailed overview of Klein's system). In all of these proposals the central meaning contribution of the imperfective is the expression of continuation of an eventuality. This continuation, however, is different for progressives as compared to habituals. The sentence in (1) mentioned earlier expresses that the action of swimming is still going on at the moment of utterance of the sentence. On the other hand,

(2) does not express that Ali is swimming at the moment of utterance of (2) but rather that the action happened at some time point in the past and there is an expectation that Ali will swim again in the future – thus expressing the continued occurrence of the action of swimming.

The difference between progressives and habituals lies in the temporal reference they denote as both indicate the 'ongoingness' of an eventuality. Ferreira (2016) has proposed that progressives quantify over singular events, whereas habituals quantify over plural events. In Formal Linguistics quantifiers specify and/or quantify sets. Progressive aspect asserts the existence of a singular event whereas habitual aspect expresses that there are plural occurrences of the event. Just as events can be singular or plural, time intervals can be singular or plural as well. For progressive, the eventuality needs to be going on at the time of reference set up by the sentence. In (1) for example, for the sentence to be true, Ali should be swimming at the time of utterance of the sentence. On the other hand with the habitual in (2), a plurality of the event of swimming needs to be true: Ali might not be swimming at the time of utterance of (2) but he must have swum at least at one time point in the past and there is a likelihood that he will swim again at some time point in the future. Correspondingly, imperfective aspect only asserts that an action was ongoing and the action may or may not reach the natural/expected end point. Consider the following examples:

11. Aaliya was making an omelet (when the fire-alarm sounded and she ran out of the house).
12. Aaliya was closing the door (when the door came out of the hinge).

Both of the above sentences only assert that the eventualities were in progress at a time interval in the past and the both of the eventualities might not have reached their end point. There is of course a possibility that an external event might stop the eventuality from reaching the end point, but the progressive only asserts the 'ongoingness' and therefore the truth conditions of the imperfective are not affected even if the eventuality does not culminate. The conjunct clauses added to the first clause in (11) and (12) substantiate that imperfectives do not assert any information about the culmination of the eventuality.

The main aspect that distinguishes between the progressive and the habitual is the nature of event predicates they quantify over. Ferreira (2016) proposes two abstract operators *sg* and *pl* which extract elements from predicates on the basic of a mereological

criteria. *Sg* results in a subset of the set it applies on and the subset comprises the minimal element of the set. *Pl* takes out the homogenous sums from the predicate's denotation and the sums do not overlap. The plural predicate *Ali swims* is a sum of swimming events and the event sum is also an event of *Ali's swimming*[24].

Aspectual phrases dominate verb phrases (VPs) in the syntax and are in turn dominated by the tense phrase (the TP). The syntactic realization of temporal operators *T* (standing for Tense) and *Asp* was discussed in detail in chapter 2 (c.f. section 2.2). The aspectual operator *Asp* turns event predicates into predicates of time intervals, and specify the reference time (TT in Klein's system) while relating it to the time of the situation introduced through the VP. The aspectual operators Perfective (*Pfv*) and Imperfective (*Imp*) are types of *Asp*. According to Ferreira (2016) *Pfv* and *Imp* have different temporal requirements. *Pfv* requires that the reference time includes event time (the situation occurs within the reference time and is not asserted to extend beyond the reference time). *Imp* requires that the event time includes reference time (the time of for which the situation lasts in real world extends beyond the reference time).

Imp combines differently with *Sg* and *Pl* operators. With *Sg*, it produces progressive readings so we can say that progressive morphology is the spell out *Imp* when it combines with singular event-predicates. With *Pl*, the *Imp* results in habitual readings of the eventuality. The semantic contribution of *Imp* is that of temporal inclusion of reference time and thus Ferreira's analysis (2016) allows both the progressive and habitual to be derived on the basis of the same operator *Imp*.

The crosslinguistic variation in the realization of imperfective aspect has led to many proposals for a unifying way to analyze imperfectivity. Deo (2015) argues for a uniform definition of the notion of *imperfectivity*, without any emphasis on the morphological means through which it is realized in a language. She argues that *imperfectivity* is a property of those predicates which have the sub-interval property. Imperfective aspectual reference, therefore, pertains to predicates with the sub-interval

[24] I have simplified the formalization of operators *Sg* and *Pl* here. These operators factor-in the property of atomicity which explains the distinction between how the sets of activity-events would be different from sets of accomplishment predicates. Please see Ferreira (2016) for an elaborate analysis on this topic. Activities are not naturally atomic – that is, they can't be sub-divided into individual complete events whereas accomplishments are atomic in the same way a set of cats is atomic.

property as opposed to perfective reference which is a characteristic of predicates with the anti-subinterval property. The reference of temporal predicates is analyzed at the sentential level in Deo's proposal (2015) with an underlying assumption that there is an opposition between perfectivity versus imperfectivity on similar lines as the telic-atelic distinction exists between eventualities. Deo asserts that the analyses of aspectual reference at the sentence level allows one to determine the meaning contribution of grammatical markers of imperfectivity.

6.2 The Imperfective Paradox

When an eventuality is expressed with a progressive, the time period of the eventuality is asserted to extend beyond the reference time (TT in Klein's system). The aspectual reference of the progressive denotes a time interval that is not the final interval of the eventuality and this time interval is fully contained within the entire time span of eventuality (TSit in Klein's system). Regardless of the situation type used in a progressive sentence, the progressive entails that the eventuality is ongoing at the reference time. Portner (2011) terms it as the *process property* of progressive. The semantic contribution of progressive needs to be distinguished from that of its imperfective, yet non-progressive, counterparts. If the progressive asserts that a situation holds at a time *t* then its non-progressive counterpart holds true for the open time interval associated with *t.* Parsons (1989) provides an overview of this argument which was first proposed in an earlier analysis of progressive by Scott and Montague (1974). Therefore, if *Ali is reading* is true at *t* then there are open time intervals associated with *t* so that *Ali reads* is true at every sub-interval included in that time interval. This analysis, however, only on the basis of the grammatical aspectual marker of progressive is not adequate. See the contrast between the following:

13. Aaliya was riding the bike.
14. Aaliya rode the bike.
15. Aaliya was fixing her watch.
16. Aaliya fixed her watch.

The above sentences demonstrate what has been termed as the *imperfective paradox* or *the partitive puzzle* alternately. The *imperfective paradox* refers to the observation that

inference of culmination of a situation from past progressive to past is valid for activity verbs but not for accomplishment verbs. If we look at the above-mentioned sentences, (14) follows from (13): if the sentences *Aaliya was riding the bike* is true then *Aaliya rode the bike* is also true and therefore (12) entails (14). On the other hand, *Aaliya was fixing her watch* does not entail that *Aaliya fixed her watch*. (13) is atelic and (16) is telic. The Scot and Montague analysis mentioned earlier predicts that if (15) is true at a time point *t* then (16) must be true at the time points before and after *t.* But this is not the case. The progressive asserts that the eventuality continues beyond the reference time interval and there is an underlying assumption that the eventuality will culminate (if it has a natural endpoint). However, as we can see if (15) is true at a past time interval *t,* (16) can easily be false as Aalia might not have fixed her watch. The following interruption scenarios for (15) further clarifies the failure of entailment of completion for progressive accomplishment verbs:

17. Aalia was fixing her watch when her mother called her and she didn't get a chance to fix it later.

The distinction between the progressive and the non-progressive aspectual reference is, therefore, also dependent upon the underlying situation type. Activities and accomplishments both have stages and the sub-interval property. The imperfective paradox is tied to lexical aspect and the telic/atelicty of activities and accomplishments. If we assume ϕ to be a verb/predicate then telic verbs don't allow the "x ϕ-ed" entailment from "x was ϕ-ing" sentences, but atelic verbs hold these entailments. The imperfective paradox is an observation about durative eventualities with reasonable sub-interval property. The generalization given earlier only applies to activities and accomplishments. Statives and semelfactives are atelic. Statives don't allow progressive usually in English. In Urdu, statives do allow progressive and the result is an ingressive reading and the progressive expresses the initial stage of the stative or the time interval of the inception/instigation of the state. Semelfactives give the meaning of iteration with progressives in both English and Urdu. Achievements are telic and Punctual. They obtain ingressive meaning with progressive, expressing the initial stages of the eventuality in both English and Urdu. The following sentences illustrate these facts:

18. *Sara is knowing English. (Stative)

سارا کو انگلش آ رہی ہے۔

19. Sara=ko English aa rah-ii hai.
    Sara=GEN English come stay.PROG.F.SG be.PRS.SG
    Sara is beginning to know English. (Stative – ingressive reading)
20. Sara is knocking on the door. (Semelfactive – iterative reading with progressive)

سارا دروازے پہ دستک دے رہی ہے۔

21. Sara darwaze par dastak de rah-ii hai.
    Sara door on knock give stay.PROG.F.SG be.PRS.SG
    Sara is knocking on the door. (Semelfactive – iterative reading with progressive)
22. Sara is winning the match. (Achievement – ingressive reading)

سارا میچ جیت رہی ہے۔

23. Sara match jeet rah-ii hai.
    Sara match win stay.PROG.F.SG be.PRS.SG
    Sara is winning the match. (Achievement – ingressive reading)

The imperfective paradox only arises with formally marked progressives and general imperfectives don't give rise to this contrasting behavior between telic and atelic verbs (Filip, 2012). Urdu progressives exhibit the imperfective paradox exactly as English progressives and pattern similarly with the telic/atelic verbs:

عالیہ سائیکل چلا رہی تھی

24. Aalia cycle chala rah-ii thii ⊨[25]
    Aalia cycle move stay.PROG.F.SG be.PST.F.SG
    Aalia was riding the bicycle

عالیہ نے سائیکل چلایا

25. Aalia=ne cycle chala-yaa
    Aalia=ERG cycle move.PFV.M.SG
    Aalia rode the bicycle.

عالیہ اپنی گھڑی ٹھیک کر رہی تھی

26. Aalia apni gha.rii .thik ker rah-ii thii ⊭

[25] x ⊨ y means x semantically entails y. x ⊭ y means x does not semantically entail y.

Aalia POSS.F watch fix do stay.PROG.F.SG be.PST.F.SG
Aalia was fixing her watch.

عالیہ نے اپنی گھڑی ٹھیک کر لی

27. Aalia=ne apni gharri .thik ker l-ii.
Aalia=ERG POSS.F watch fix do take-PFV.F.SG
Aalia fixed her watch.

When a progressive is used with a telic eventuality it can be true even when its non-progressive counterpart is false: as is the case in (24) and (26). The same does not hold for atelic eventualities for which the predicate has to hold true for both progressive and non-progressive aspectual reference. If an eventuality is in progress at a certain time interval *t* then it can be assumed that it will continue to hold beyond that time interval but this assumption needs to be linked to the semantic contribution of progressive. In addition, we need an analysis for the variation in the inference patterns of activities in contrast to achievements. One of the approaches aiming to explain the *imperfective paradox* is the *modal* analysis proposed by Dowty (1979). On the modal analysis, it can be argued that the eventuality expressed with the progressive will continue in the future if we take the *will* part of this assumption as a modal notion. The eventuality does not have to continue beyond the time interval relevant to the progressive in the actual world as long as we assume inertia worlds for the sentence to be true (as we do to compute the truth conditions of future tense with the underlying assumption that nothing interrupts the normal course of events).

The time interval up until the reference time asserted in a progressive sentence is evaluated in relation to the inertia world which is identical to the actual world and after the reference time the truth conditions are evaluated in relation to the inertia world where everything happens as expected (and it is not identical to the actual world). Correspondingly, Landman (1992) reasons that the idea of inertia worlds is associated with normality in the sense that it is assumed that the nothing unusual happens in the inertia world after the time interval referred to by the progressive. So, the eventuality of *Aalia fixing her watch* (in 13) is true at the time interval *t* if under normal conditions there is a larger time span in which *Aalia fixed her watch* is also true (we assume an inertia world for the time span following the reference time of the progressive in which the eventuality is fully realized). Dowty's (1979) analysis can be phrased as follows in relation to sentence in (14):

> *Aalia is fixing her watch* is true in a world *w* at a given time interval *i* iff in every inertia world for the world *w* at *i*, there is a larger interval of which the time interval *i* is a part and the larger interval has another subinterval at which *Aalia fixed her watch* is true.

Therefore, modal analysis of the imperfective paradox entails that progressive sentences with accomplishment predicates assume that there is a larger time interval in which the accomplishment culminates. The semantic assumptions about activities and accomplishments are different consequently. For activities, we assume that if an activity is true at a particular time interval *i* then it is true for the adequately large subinterval of *i* as well. Accomplishments, on the other hand, have an activity part and a resulting state/existence part. *Aalia was fixing her watch* has an activity part where she is *fixing the watch* at a time interval *i* which carries on over a larger subinterval, and a resulting state part when she fixes the watch which is only required at the very end of the eventuality. The larger subinterval requirement for the activity part of accomplishments is satisfied, subsequently, on the assumption of an inertia world as stated earlier.

Thus, an accomplishment like *Aalia fixing her watch* entails that *Aalia fixed*. The resulting state part is required at a bigger time interval which happens later than the time interval at which the progressive is evaluated. As there is no requirement for the accomplishment to be realized during the subintervals, it has no bearing on the evaluation of the progressive if the accomplishment is actually realized or not. On this analysis then, (15) does not entail (16).

The assumption that the progressive relates an eventuality in progress to a complete eventuality is put into question by the imperfective paradox. As it has been shown above the progressive can be true even if the eventuality expressed by the progressive does not realize its natural end – on the modal analysis. This issue becomes even more apparent with eventualities resulting in the existence of an object like *building a house, drawing a circle* and *making a portrait*. The sentence *Aalia was building a house,* does not entail that an actual and complete house came into existence resulting in *failure of existence entailment* (Portner, 2011). When we contrast the progressive sentence with the non-progressive past counterpart *Aalia built a house* there is an entailment that the house was built completely.

On a different approach the progressive is taken to not relate an incomplete eventuality to a complete one, but rather it is argued that the function of the progressive is to change a complete event into an incomplete one (Parsons, 1989). This difference is formalized in terms of two aspectual relations between eventualities and time intervals: *hold* and *culminate*. Eventualities can either hold at an interval in which case they are true at a given time interval *i* or eventualities can culminate at a time interval *i* in which case they get completed at the time interval *i*. The function of the progressive is to change the *culminate* relation into the *hold* relation. The entailment pattern of activities is explained adequately by this approach as both the progressive and non-progressive forms of activities assert a *hold* relation, whereas the non-progressive component of accomplishments assert a *culminate* relation. Based on this analysis, then, we can see that (13) entails (14) as both assert a *hold* relation but (15) does not entail (16).

Based on the difference between the hold and culminate relation between eventualities and intervals, the progressive does not entail the culmination/completion of the eventuality. Consequently, we do not have to assume an inertia world to evaluate the progressive. However, this analysis runs into problems as based even on the *hold* relation, we assume for (15) for example that the eventuality of *Aalia fixing her watch*, that there was an actual fixing of the watch. This can be understood in contrast to the sentence *Aalia tried fixing her watch* which does not assert that the watch was actually fixed. Parsons (1989) argues that there are of course incomplete events in the real world so we don't have to assume that the progressive requires a completion entailment. Moreover, speakers are willing to term an incomplete fixing event as a fixing event nonetheless and do call an incomplete house *a house*. One argument against the assumption of completeness being part of the meaning of progressive are the issues raised by sentences of the following pattern:

28. Sara was baking a cake.
29. Sara was baking a cake that she baked completely.

سارا کیک بیک کر رہی تھی ۔

30. Sara kek bek kar rah-ii thi.
    Sara cake bake do stay.PROG.F.SG be.PST.F.SG

سارا کیک بیک کر رہی تھی، جو اس نے پوری طرح بیک کر لیا۔*

31. *Sara kek bek ker rah-ii thi jo

Sara	cake	bake	do	stay.PROG.F.SG		be.PST.F.SG	that
us=ne		pori		tarha	bek	kar	li-yaa.
3.SG=ERG		complete.F		way	bake	do	take-PFV.M.SG

If sentences in (28) and (30) assume complete events of *baking of a cake* then the same progressive in (29) and (31) followed by relative clauses are odd. If we consider these sentences as semantically transparent, the relative clauses in (29) and (28) entail that the progressive does not carry an assumption that the event reaches it natural end-point ultimately. Though this seems like an apt objection to Dowty's analysis, the assumption being denied by the relative clauses in (29) and (31) is not the baking of cake but rather the cake being baked completely. The accomplishment verb used with the progressive only assumes that the event will be complete, the cake may be half-baked but it is still asserted to be baked to the extent that we can say that *the cake was baked*. Conclusively, the sentences with relative clauses are odd because the relative clause express redundant information which is expressed by the progressive and seems excessive. As it was asserted earlier, progressives create inertia world contexts. Landman (1992) argues that the inertia world analysis is further substantiated by the pattern observable in the following sentences:

سارا ایک اڑن تشتری ڈھونڈنے کی کوشش کر رہی تھی۔

32. Sara aek	a.ran-ta.starii	.dhuun.dh-ne=kii	ko.si.s	kar	rah-ii	
Sara one	flying saucer	find-INF.OBL=GEN	attempt	do	stay.PFV.F.SG	
thii.						
be.PST.F.SG						

Sara was trying to find a flying saucer.

کوئی اڑن تشتری نہیں ملی

a) Koii	a.ran-ta.starii	nahii;n	mil-ii.	
Some	flyin-saucer	not	find.PFV.F.SG	

No flying saucer was found.

اس نے وہ احمد کو دے دی

b) Us=ne	vo	Ahmed=ko	de	d-ii.
3=ERG	that	Ahmed=DAT	give	give.PFV.F.SG

She gave it to Ahmed. (vo = determiner = flying saucer)

اس کو وہ نہیں ملی

c) Us=ko	vo	nahii;n	mil-ii. (wo = oorran tashtari)

3=DAT that not find. PFV.F.SG
He didn't find it. [It (the flying saucer) was not found.]

For the sentence in (32), the sentence in (a) above seems acceptable and plausible, (b) also seems acceptable but (c) is odd. The reason for the oddity of (c) is that (c) assumes the existence of a flying saucer which is not found and the use of the anaphora *wo* (=it) is, therefore, infelicitous. The inertia world context does not emerge in all situations because the inertia worlds are similar to the real world – only unlike the real world nothing unexpected happens in them. For a progressive to be true it is assumed that the eventuality is allowed to run to its normal course at a time interval surrounding the time interval *i* asserted by the progressive, and the eventuality is allowed to reach its natural end-point.

Conclusively, progressives require a certain point of view to be evaluated. The term perspective here refers to a subset of information which allows us to ignore the rest of the information to evaluate the truth of a progressive sentence. The analysis presented in this section espoused the perspective of an inertia world with the assumption that the eventuality culminates naturally without any interruptions proposed by Dowty initially and then developed further by Landman (1992). This perspective can be contributed by the situation used with progressive and can lend us useful information about those facts of the world which need to be considered to evaluate the sentence. The context of the situation also provides the perspective or point of view required to evaluate the sentence.

6.3 Progressive Achievements

Activities and accomplishments occur frequently with the progressive and yield the ongoingness meaning. However, as it was mentioned briefly in the preceding section, with progressive, achievements result in different meaning in terms of temporal reference as compared to activities and accomplishments. Achievement verbs, in essence, express an instantaneous change in the state. The verb *reach*, for example, asserts the state of arriving at a particular location at the very time interval indicated by the tense marking on the verb instead of being at a different location. The similar explanation extends to verbs like *die* and *recognize* which indicate an immediate change in the state of the agent/experiencer; from being alive to being dead, and from not identifying something to identifying it respectively. As the transition happens in a very short span of time, the internal constitution

of the achievement eventuality is not accessible. Consequently, achievements with progressive don't assert the 'in-process' meaning but they still occur frequently with progressive:

مہمان حال میں (بس) پہنچ رہے ہیں۔

33. Mahmaan haal me;n (bas) phnc rah-e hai;n
Guests hall in.EMPH reach stay.PROG.M.PL be.PRS.PL
The guests are (just) arriving in the hall.

ثمینہ بیگ چوٹی پہ پہنچ رہی ہیں۔

34. Samina Baig cotii pa phnc rah-ii hai;n
Samina Baig peak on reach stay.PROG.F.SG be.PRS.PL
Samina Baig is reaching the summit.

بیمار آدمی مر رہا ہے۔

35. Bimaar aadmii mr rah-a hai.
Sick man die stay.PROG.M.SG be.PRS.SG
The sick man is dying.

یونس بال کیچ کر رہے ہیں۔

36. Younus ball kec kar rah-e hai;n
Younus ball catch do stay. PROG.M.PL be.PRS.PL
Younus is catching the ball.

The first two sentences have a slow-motion reading where an otherwise instantaneous event is perceived in an extended time frame. The sentences in (33) is better with adverbs like just because the same sentence without the adverb بس (*buss*, literally = just) entails an iteration of the *arriving* event of guest. The above-mentioned progressive achievements express a time interval before the realization of the achievement event, the time before the eventuality is really actualized. However, it should be noted that as achievements are instantaneous, they are realized as soon as they begin so the time point before the beginning of an achievement is in fact the interval before it is realized. This is different from progressive accomplishments which express that the eventuality is in-process towards its natural end *the telos*.

In one of the earlier analyses of progressive achievements, Verkuyl (1989) has contended that achievements have a very short activity part which becomes apparent in the progressive, while in another proposal Mittwoch (1991) has argued that the progressive

actually turns achievements into accomplishments. However, S. Rothstein, (2008) maintains that if we assume that achievements in fact behave like accomplishments with progressive, both progressive achievements and progressive accomplishments should show similar behavior – which is not the case. This difference is explored in this section.

Progressive achievements show the initial stage of the achievement as opposed to the non-progressive versions which express post-change state when the eventuality has been realized. To account for this variation, S. Rothstein, (2008) argues that the progressive has as a type-shifting function when used with an achievement, resulting in a derived accomplishment. The imperfective paradox discussed in detail in the preceding section is also observable with progressive achievements: *the sick man is dying* does not entail that *the sick man will die*, and *Younus is catching the ball* does not entail that *Younus will catch the ball*. This becomes even more apparent with interruption scenarios:

37. The sick man was dying but one morning when he woke, he had regained his health miraculously.
38. Younus was catching the ball when his foot slipped and he missed the catch.
39. Samina Baig was reaching the summit when a storm engulfed the mountain and she had to be rescued.

Therefore, despite being telic and instantaneous, achievements can be expressed in terms of their constituent stages without the telicity being realized as illustrated by the above sentences. Achievements are similar to accomplishments in this sense as they both contrast with activities in terms of their entailment patterns in progressive versus non-progressive forms. Nonetheless, accomplishments and achievements also show different behaviors in their progressive forms. Accomplishments and achievements allow different types of temporal modification (S. Rothstein, 2008). See the following sentences:

عالیہ کو گھڑی ٹھیک کرنے میں کتنا وقت لگا۔

40. Aalia=ko gha.rii thek kern-e me;n kitna vqt
    Aalia=ACC watch right do.INF-OBL in how much time
    laga?
    begin.PFV.M.SG?
    How long did it take for Aalia to fix the watch?

عالیہ کو گھڑی ڈھونڈنے میں کتنا وقت لگا۔

41. Aalia=ko gha.rii .dhuun.dhne me;n kitna vqt
Aalia=ACC watch find.INF-OBL in how much time
laga?
begin.PFV.M.SG?
How long did it take Aalia to find the watch?
عالیہ کو گھڑی ٹھیک کر چکنے میں کتنا وقت لگا۔

42. Aalia=ko gha.rii thek ker cukn-e me;n kitna
Aalia=ACC watch right do finish.INF-OBL in how much
vqt laga?
time begin.PFV.M.SG?
How long did it take before Aalia finished fixing the watch?
عالیہ کو گھڑی ڈھونڈ چکنے میں کتنا وقت لگا۔*

43. *Aalia ko gha.rii .dhuun.dh cukn-e me;n kitna
Aalia=ACC watch find finish.INF-OBL in how much
vqt laga?
time begin.PFV.M.SG?
*How long did it take before Aalia finished finding the watch?

While (40) is a question about the duration of the *fixing* eventuality, (41) refers to the time before which the *finding* eventuality was realized. Similarly (42) expresses the entire duration over which the *fixing* event took place, but (43) is odd because the achievement verb in the sentences expresses an instantaneous eventuality which is finished in a very short interval of time – which are only apparent on the slow-motion readings. The oddity of (43) shows that it is possible to quantize the time before an achievement occurs but not the actual duration of the achievement which is not accessible.

It is possible to use accomplishments with temporal modification such as *for x time* and *spend x-time* which result in a non-telic meaning. For example, *I read Anna Karenina for two hours* and *I spend two hours reading Anna Karenina* are both atelic and have a temporal constitution similar to activities. However, achievements don't allow the use of similar temporal modification because they impose a durational property of the eventuality as *#Samina Baig reached the summit for two hours* and *#Samina Baig spent two hours reaching the* summit are unacceptable. However, both accomplishments and achievements can be used with the *in x time* adverbials but the resulting readings are different. Urdu

achievements show a similar behavior as English achievements. The following examples show this contrast between *for x time*: expressed by the postpositions *se* سے, and tak تک – although sometimes the postposition *tak* تک is not required to express duration – and *in x time* modification: expressed by *me;n* میں in Urdu sentences:

میں نے دو گھنٹے تک عینہ کرینینہ پڑھی۔

44. Mai;n=ne do ghante (tak) Anna Karenina parh-ii.
    1.SG=ERG two hours (till) Anna Karenina read. PFV.F.SF
    I read Anna Karenina for two hours.

مہمان بیس منٹ سے حال میں پہنچا۔*

45. *Mehmaan bis minat se haal me;n phnc-aa
    Guest twenty minute since hall in reach.PFV.M.SG
    *The guest reached in the hall for twenty minutes.

میں نے دو گھنٹے میں عینہ کرینینہ پڑھی۔

46. Mai;n=ne do ghante me;n Anna Karenina pa.rh-ii.
    1.SG=ERG two hours in Anna Karenina read. PFV.F.SF
    I read Anna Karenina in two hours.

مہمان بیس منٹ میں حال میں پہنچا۔

47. Mehmaan bis minat me;n haal me;n phnc-aa
    Guest twenty minute in hall in reach.PFV.M.SG
    The guest reached the hall in twenty minutes.

With accomplishment in (46) the *in two hours* part asserts that the event of reading stretched over a period of two hours, whereas with the achievement in (47) the *in twenty minutes* part expresses that the eventuality of the guest reached its telos at the end of these twenty minutes. With the accomplishment the beginning of the event is the beginning point of the two hours in (46) and the event ends with the end of the said two hours. Therefore, accomplishments are open to the sub-interval readings as during every sub-interval of the two hours I was reading Anna Karenina. This is not the case with achievements which are not open to the sub-interval property even with the *in x time* modification: *the guest reached the hall in twenty minutes* does not entail that *the guest was reaching the hall during the said twenty minutes*. Hence, the entailment pattern for accomplishments and achievement is markedly different. This is further substantiated by achievements in future progressive with the *in x time* adverbials as compared to accomplishments:

جہاز دو گھنٹے میں ائیر پورٹ پر پہنچ رہا ہے۔

48. Jahaz do ghante me;n a'erpor.t par uutar
Airplane two hours in airport on land
raha hai.
stay.PROG.M.SG be.PRS.SG
The plane is landing on the airport in two hours. (achievement)

میں یہ ناول تین دن میں پڑھ رہی ہوں۔

49. Mai;n ye naval tin din me;n p.rh rah-ii
1.SG this novel three days in read stay.PROG.F.SG
huu;n
be.PRS.1.SG
I am reading this novel in three days. (accomplishment)

The accomplishment in future progress in (49) asserts that the entire event will occur in the duration of three days whereas the achievement in (48) asserts that the change of state of the plane that is from being in the air to being on the ground will occur after two hours from the reference time. In other terms, the future progressive achievements with the *in x time* pattern carry an assertion about the telicity of the event and point to the time interval when the telos will be achieved. On the other hand, accomplishment with future progressive carry no such assertion as in (49).

Furthermore, it is difficult to envision an achievement in progress as part of a bigger eventuality as we can with progressive accomplishments. The *halfway through* modification is not possible with achievements consequently: *Aalia is halfway through fixing her watch is acceptable* but *Aalia is halfway through finding her watch is odd*. Progressive achievements express the time interval before the onset of the event is also substantiated by the fact that the progressive can be replaced by 'about to' phrases with achievement verbs:

ثمینہ بیگ چوٹی پہ پہنچنے والی ہیں۔

50. Samina Baig co.tii ph phncn-e wal-ii hai;n
Samina Baig peak on reach.INF-OBL about to-F be.PRS.1.PL
Samina baig is about to reach the summit.

یونس بال کیچ کرنے والے ہیں۔

51. Younus bal kec karn-e wal-e hai;n
    Younus ball catch do.INF-OBL about to-F be.PRS.1.PL
    Younus is about to catch the ball.

Progressive accomplishment, on the other hand, don't allow the similar paraphrase as *Aalia is fixing her watch* cannot be rephrases as *Aalia is about to fix her watch*. Furthermore, achievement in perfect progressive don't easily allow the use of temporal adverbials: I have been reading *Anna Karenina for two days is perfectly acceptable* but *the sick man has been dying for two days is not*. The final distinction between progressive accomplishments and progressive achievements is that the activity part and the telos part of the event in the latter can both be independently modified:

عالیہ ساری رات سستی سے گھڑی ڈھونڈتی رہی لیکن رات کو اس نے وہ جلدی ہی ڈھونڈ لی۔

52. Aalia saraa din suustii se gha.rii .dhuun.dtii
    Aalia all day laziness with watch find.IPFV.F.SG
    rah-ii
    stay.PROG.F.SG
    lekin raat=ko us=ne vo jaldii hi .dhuun.dh
    but night=DAT 3.SG=ERG that soon.EMPH find
    l-ii
    take.PFV.M.SG
    Aalia was finding the watch all day lazily but then she found it quickly at night.
53. #I was reading the paper slowly for two days but today I read it quickly.

The activity part of the achievement is essentially the precursory part before the eventuality is finally realized, so the manner in which it occurs can differ from the actual realization of the event. This is not the case with accomplishments which are build-up of successive sub-stages and thus the activity part is continuous leading up to the telos.

Achievements cannot be used with the progressive if the context dictates that the eventuality will not be culminated in contrast to progressive accomplishments which don't have this requirement (S. Rothstein, 2008). On the same line progressive achievements cannot be used too soon in a discourse context but progressive accomplishments can. The following sentences illustrate these properties:

54. I am reading Anna Karenina but I am not sure that I will be able to finish it.
55. #Samina Baig is reaching the summit but we doubt that she would make it to the peak.
56. Sara just stepped outside and she is walking to the market.
57. #Sara just stepped outside and she is arriving at the market.

Since progressive accomplishment only require the event to culminate in a possible inertia world to be true the accomplishments sentences (54) and (56) are semantically good (according to the analysis presented in the preceding section) – although there is doubt that they might not culminate in the real world. But, for progressive achievements, as the eventuality is asserted to be already in its preliminary state, we need to see a continuation branch so that the culmination is in view which is put in doubt in (55) and (57) by the context and resultingly the sentences are semantically unacceptable.

Lastly, another reading is associated with progressive achievements. When the external argument of the achievement verb is plural, it gives rise to a multiple-event reading rather than the readings of progressive achievements discussed above, in contrast to progressive accomplishments. The following sentences demonstrate this difference:

زلزلے کے متاثرین ابھی بھی زخمی حالت میں ہسپتالوں میں پہنچ رہے ہیں.[26]

58. Zalzaley=ka mutaserein abhi.bhe zakhmi halat
    Earthquake=DAT affectees now.EMPH injured condition
    me;n haspatal-oo;n me;n phn.c rah-e
    in hospitals-M.PL in reach stay.PROG-M.PL.OBL
    hai;n
    be.PRS.PL
    Affectees of the earthquake are still arriving at the hospitals with injuries.
59. Hoards of murder hornets are attacking the apiary.
60. Hoards of murder hornets are flying towards the apiary.

(58) has a reading that the affectees continue to arrive at the hospital and similarly (59) entails that the murder hornets are repeatedly attacking the apiary. This reading of

[26] https://www.bbc.com/urdu/regional/story/2006/05/060531_javad_death_toll_ra.shtml

progressive with achievement is clearly brought on by the external argument, that is the subjects, of these sentences. If we replace the external argument with singular NPs the reading shifts from multiple events to that of the preliminary stage of the achievement eventuality as in *the hornet is attacking the apiary*. Moreover, the plurality of the NP results in an interpretation in which there are plural instances of the event. There are multiple events of arriving in (58) and multiple instances of attack in (59). This behavior is not shown by progressive accomplishments even with plural NPs as their external arguments as (60) entails that the hornets are still in the process of flying as compared to the multiple event reading. Consequently, the reading entailed by progressive achievement in (58) and (59) is not the repetition of the same event which will require either a specific marker as the adverb *repeatedly* in English (as English does not have a morpheme to indicate repetition) and the modification of the verb by ta تا the imperfective marker followed by *raha* رہا in Urdu. Thus, the plurality of the NP triggers a re-alignment between the aspectual property of the progressive and the punctual meaning associated with achievements. In this scenario, progressive achievements are show a similar behavior as the behavior of semelfactives with the progressive which entail an iterative rather than an in-process reading. *Ali was knocking on the door* entails that there were multiple instances of *knocking on the door* rather than the knocking being in progress at the reference time (see DeVell, 2005 for details on semelfactives).

It can be concluded that progressive accomplishments and progressive achievements have different aspectual structure. Achievements are instantaneous and even with the progressive they are not open to the sub-interval reading and it is not possible to see an achievement event as a composite of subevents. Both Urdu and English achievements and accomplishments pattern in the same way and there is no difference in the behavior of progressive achievements in terms of the aspectual structure of the progressive and its temporal reference.

6.4 Incompatibility of Progressive with Statives

Progressive does not occur as freely with statives as it does with all other types of eventualities and when statives are used with progressive, they don't lend the 'in-process' reading. As progressive is not usually used with stative verbs, Portner (2011) terms it as the 'no-statives property' of the progressive. Correspondingly, *#Aalia is loving her sister*

and #*Sara is knowing the answer* are semantically odd. One explanation for the oddity of these sentences is that the progressive expresses a sub-interval of a larger interval over which a given eventuality holds true. The eventuality is not itself limited to and true at the sub-interval expressed by the progressive (Deo, 2015). The progressive inherently carries the meaning of change and statives don't involve change as every sub-interval of the time span for which a stative is true is similar: if *a plan is elaborate* it is elaborate at every sub-interval of the time span for which the state is true. Additionally, statives don't need causation and don't have a target state therefore statives don't need agents as *what Sara did was love her father is odd*, barring the sarcastic reading (Ernst, 2016).

Homogeneity of temporal constitution is a characterizing property of statives. If a stative holds for a given time interval, it holds true for every sub-internal of that interval. And because every subinterval is identical to every other subinterval, change or development cannot be expressed. Therefore, expressing a stative with a progressive results in oddity. Vlach (1981) argues that statives are odd with the progressive because the progressive itself is a stativizer (Vlach cited in Glasbey, 1998). The main argument given by Vlach is that both the progressives and the lexical stative verbs lead to discourse overlap. See the following examples:

61. Sara was in the room when I got home.
62. Sara came out of the room when I arrived.
63. Sara was coming out of the room when I arrived.
64. Sara made tea when I arrived.

The stative in (61) entails that Sara was in the room for some time before the speaker got home which is different from the entailments in (62) and (64). The sentences in (62) and (64) entail that the *coming out of the room* and *the making of tea* happened after the arrival of the speaker. The stative property is ascribed to a sentence if the past form of the sentence followed by *when I arrived* is true for a span of time starting before and leading to the time of the arrival. The same property holds true for progressives as it can be seen in (63) because the event of coming out of the room had started before the arrival. Vlach argues that statives that occur with progressive don't have the stative property. However, the non-stative property does not apply to all progressive statives and a distinction needs to be made about the type of statives that disallow the progressive. Statives can also lend an inchoative reading like (62) and (64):

65. Sara was sad when I left.

The above sentence entails that Sara became sad when the speaker left and we do not get the reading that she had been sad for some time leading to the time of the speaker's leaving. Therefore, the non-stative property of progressive statives is not enough to account for progressive statives. It has been argued that statives that assert a permanent situation are odd with progressive. As compared to stage-level predicates, individual level predicates express relatively permanent situations and therefore don't occur with progressive: for example, *Tigers are striped* and *Eli is tall* are both individual level and don't allow progressives. Some Individual level statives, however, do occur with progressive. In English the verbs of posture and location including verbs like *sit, stand, crouch, and lie* allow progressive readings (Smith, 1997) as the following sentences demonstrate:

66. The earrings are lying under the table.
67. Sara is crouching.

As it was discussed in detail earlier in this chapter, progressive asserts the ongoingness of an eventuality generally. Yet, with stative verbs as it can be observed in the sentences mentioned above, the progressive sentences express a time interval after a change in state. There is an assumption that there has been a change in state to be inferred from the discourse context. This is an unusual meaning of progressive as the progressive asserts a situation in flux, but with statives in (66) and (67) we get a dynamic interpretation after the change has already occurred. This is an unusual property of English statives of posture and location, however. Similar Urdu counterparts don't allow progressives for individual level statives of location and posture similar to *lying* and *crouching*, even when there is a recent change or the adverbial *aub* (literally = now) is added. The progressive counterparts with *raha* with these statives result in an inchoative reading, entailing the beginning of the stative:

سارا اب کرسی پہ بیٹھی ہے۔

68. Sara (ab) kursii pa be.th-ii hai.
    Sara (now) chair on sit-PFV.F.SG be.PRS.SG
    Sara is sitting on the chair (now).

سارہ کرسی پہ بیٹھ رہی ہے۔

69. Sara kursii pa be.th rah-ii hai.
    Sara chair on sit stay-PROG.F.SG be.PRS.SG
    Sara is about to sit on the chair.

تصویر ڈھیلی ہو گئی ہے۔

70. Tasveer .dhilii ho ga-ii hai.
    Picture loose be go.PFV.F.SG be.PRS.SG
    The portrait is hanging loose.

تصویر ڈھیلی لٹک رہی ہے۔

71. Tasveer .dhilii latak rah-ii hai.
    Picture loose hang stay-PROG.F.SG be.PRS.SG
    The portrait is hanging loose.

Hence, progressive is acceptable with statives if there is a recent change or there is an expectation of change. However, other types of statives in addition to the verbs mentioned earlier also occur with progressives. Urdu statives show similar behavior with progressives with stage-level statives as English does. See for example, the following:

72. I am loving the new season of Westworld.

مجھے ویسٹ ورلڈ کا نیا سیزن پسند آرہا ہے۔

73. Mujh=e ves.tvarl.d=ka nya sizan pasand aa
    1.SG=OBL westword=M.GEN new season like come
    rah-aa hai
    stay.PROG.M.SG be.PRS.SG

74. I am understanding your point of view now.

مجھے آپ کا نظریہ اب سمجھ آ رہا ہے۔

75. Mujh=e ap=ka nazarya ab samjh aa
    1.SG=OBL 2=M.GEN point of view now understanding come
    rah-aa hai.
    stay.PROG.M.SG be.PRS.SG

The use of progressive in the above sentences relies on a meaning shift resulting from a coerced used of the progressive. Use of progressive with statives in (72) and (74) results in what Smith (1997) terms as the ‘dynamic situation’. Both the sentences express a change in state or an in-flux reading which entails that the state is subject to change, somehow – as the use of *loving* instead of *love* implies that has been some development in

relation to a past state or an expected development in the future. We may, therefore, term these statives as *dynamic statives* after the terminology introduced by Smith. The non-progressive counterparts of the stative verbs in the above sentences *I love the new season of Westworld* and *I understand your point of view* entail a more permanent and stable state, which is line with the general behavior of English statives which don't allow the use of progressive with statives that express permanent states (regardless of whether the stative is individual-level or state-level). Therefore, the selectional requirement of dynamism for progressive are satisfied in the cases of progressive statives similar to those in 72 – 75; allowing the use of progressive with the stative.

In addition, to the coerced use of progressive resulting in a *dynamic stative*, the notion of *aspect shift* can shed some further light on the behavior of progressive statives. Zucchi (1998) argues that some predicates can show characteristics that fulfil the criterion of more than one aspectual category and thus exhibit the phenomenon of *aspect shift*. Aspect shift can be analyzed in two ways: *lexical ambiguity* and *coercion*. Lexical ambiguity allows certain verbs allows to lend both a stative and a process reading. Coercion, on the other hand, is made possible by some general operation at the syntactic level leading to the change in the meaning of a constituent – therefore a stative can be coerced into a process predicate as an activity predicate can be coerced into an accomplishment predicate when they occur in conjunction with the *in x time* adverbials (see examples 45, 46 & 47 discussed earlier in section 6.3 Progressive Achievements).

Both of the approaches, however, don't adequately explain why aspect shift does not occur uniformly with predicates of a particular category across different contexts. With reference to the present discussion this is particularly important as aspect shift only happens under certain circumstances with statives. The stative *resemble*, for instance, can only occur with the progressive in the context of incremental increase:

76. He is resembling Eliot more and more each day.
77. #He is resembling Eliot.

Zucchi (1998) argues that in order to account for the occurrence of stative predicates with progressive we need to assume that with the progressive copular predicates and non-copular predicates behave differently as they interact with different aspects of the predicates they combine with. Zucchi's (1998) analysis of progressive statives builds on

Partee's (1977), Taylor's (1979) and Dowty's (1979) proposals that there are two types of *be* predicates: one is a process predicates and the other is stative. The main assumption in this approach is that progressive occurs with only those predicates which have the interval property. An interval predicate can be defined as a predicate that can only be true for intervals and not for instants (intervals are larger than instants). This distinction between the terms *interval* and *instant* was first characterized by Dowty. *Run* is an interval predicate, for example as the person who is running needs to move in space and thus be at different positions at different instants and therefore it cannot be true of singular instants in time. Correspondingly, a predicate like *feel* can be true for an extended time interval but if someone *feels x*, they *feel x* for every instant of the time interval for which the feeling lasts. On this analysis we can explain the difference between (76) and (77). The addition of *more and more* with the predicate requires that the predicates holds over time span larger than an instant and thus changes it into an *interval predicate*. Therefore (76) is acceptable but (77) is not.

In addition, Dowty had argues that only those be-predicates occur with the progressive that allow the active *do* with them as we can see in the following examples:

78. Ali was being rude.
79. What Ali did was be rude.
80. Ali was shy.
81. #What Ali did was be shy.

English and Urdu statives with progressive bear out the predictions made by this approach. Only those copular predicates that occur with *do* can also occur with the progressive. The pseudo-cleft test with *do* cannot be applied to Urdu statives (as it was mentioned in Ch. 5), however, the declarative form in Urdu is similar to English:

82. He was being angry.
83. What he did was be angry.

وہ غصہ کر رہا تھا۔

84. Vo .ghusa kar rah-aa thaa.
    3 anger do stay.PROG.M.SG be.PST.M.SG
    (He was being angry.)

The be-predicates that do not fulfill the active *do* requirement, therefore, are not acceptable with the progressive:

85. #The car was being stuttery.
86. #The car was being more and more stuttery with every km we covered.
87. #What the car did was be stuttery.

6.5 Habituals and Counterfactuals

Habitual aspect is used to express events that occur regularly or generally. In English habituality is expressed by present simple and English only has a distinct habitual form for past habituals formed with the *used to* phrase. Urdu has a distinct imperfective participle *ta* تا which is added to the verb stem and is used to express habitual aspect for present and past habituals including habitual presumptive and habitual irrealis. The Urdu imperfective participle is also used sometimes with the verb to express immediate future (as the simple present constructions are used in English).

علی بس پہ سکول جا تا ہے۔

88. Ali bus pa skuul	ja-taa	hai. (Habitual Present)	
Ali bus on school	go-IPFV.M.SG	be.PRS.M.SG	

Ali goes to school by bus.

یہاں سردیوں میں برف پڑتی ہے۔

89. Yahaa;n	sardiyo;n	me;n	baraf	pa.r-ti	hai
Here	winter	in	snow	fall-IPFV.F.SG	be.PRS.SG

It snows here in the winter. (Schmidt, 1999, p. 119) – General Fact

خبردار دشمن آتا ہے۔

90. Khaberdaar,	du.sman	aa-ta	hai.
Beware,	enemy	come-IPFV.M.SG	be.PRS.SG

Watch out, the enemy approaches. (Schmidt, 1999, p. 120) – Immediate Future

احمد اسی پتے پہ رہتا ہو گا۔

91. Ahmed	isii	pate-pa	reh-taa	ho-ga.
Ahmed	this	address-on	live-IPFV.M.SG	be-FUT.M.SG

Ahmed must be living be on this address. – Habitual Presumptive

اگر یہ گھر میرا ہوتا تو کتنا اچھا ہوتا۔

92. Agar ye ghar mer-a ho-taa to kitna
If this house mine-M be.IPFV.M.SG then how much
acha ho-taa.
good be-IPFV.M.SG
It would have been great if this house was mine. – Habitual Irrealis

As it was discussed in the first section of this chapter, both the progressive and the habituals express ongoingness of an eventuality and the main difference in their meaning lies in how they quantify over events: singular events in case of the progressive and plural events for habituals. In addition to the similarity of ongoingness meaning introduced by the *Imp* operator there is another similarity in the temporal reference of the progressive and the habituals. As we have seen, in order to explain the imperfective paradox, we have to assume that the meaning of progressive has a modal component (c.f. 7.2 above). Ferreira (2016) argues that we need to take into account modality for the analysis of habituality to account for the entailments of continuity associated with habituals. As it was discussed in the first section of the chapter (c.f. section 7.1) Ferreira's approach has the advantage of unifying the meaning of progressive and habituals under one operator the *Imp* which introduces the meaning of continuity to event predicates. Including the modal component for habituals sustains this uniformity.

When we say that *Ali goes to school by bus* we are assuming that this is a regular event and although the sentence itself doesn't express that there is going to be a future event of *Ali's going to school*, we do interpret that the event has happened in the past and is true for the present and there is an expectation that the event will happen again in the future unless some external factor hampers the event from happening. Ali might not go to school tomorrow if he is sick or he has to stay home for some reason. Therefore, in order to account for the semantics of habituals we need to factor-in a modal component which will allow us to ignore all possible events that might affect the truth of (88) or interrupt the eventuality expressed by the habitual. The modal component is same in both the progressive and habituals, consequently. The only difference remains is the distinction of quantifying over a singular event (progressive) and plural events (habituals) already discussed in 7.1.

Progressive and habitual meaning are conveyed by the same form in many languages including Greek and Italian[27] (Ferreira, 2016). Under Ferreira's proposal this pattern follows naturally as *Imp* specifies the same aspectual information for both the progressive and habitual. In other languages, another pattern can be observed in which the imperfective forms marking habituality are also used in counterfactual constructions and Urdu is one of these languages. The imperfective participle formed with the addition of the imperfective marker *ta* تا is a characteristic of Urdu counterfactuals in addition to its use for habituals:

اگر آپ جلدی آجاتے تو ایسا نہ ہوتا۔

93.	Agar	ap	jaldii	aa	ja-taI	to	aisaa	nh
	If	2	soon	come	go-IPFV.M.PL	then	like this	not
	ho-taa							
	be-IPFV.M.SG							
	This would have not happened if you had come earlier.							

The patterning of habitual and counterfactual morphology in Urdu substantiates a generalization first introduced by (Iatridou, 2000). Iatridou observed that if progressive forms take a different morphology in comparison to form expressing genericity/habituality, the counterfactuals pattern with the habituals and never with the progressive. Counterfactuals (CFs hereon) express a situation which is contrary to the world of evaluation according to which a sentence is being judged. The if-clause is used frequently in English to express counterfactuality with varied tense forms.

Past tense morphology plays a crucial role in signifying meaning of contrary-to-fact meanings in CFs. In Urdu only CFs containing verbs with past and present tense take on the same morphology as habituals (see 93 above). Urdu CFs for future take inflected forms of future marking suffix *ga* گا, unlike English where the past tense in CFs express hypothetical situations in both the present and the future tense. See English and Urdu CFs

[27] Ferreira gives the following example from Greek:
eperne to farmako
take-past-imp the medicine
'He was taking the medicine/He used to take the medicine.' (Ferreira, 2016, p. 354)

below (sentence in 96 and 97 are Urdu equivalents of English sentences 94 and 95 respectively):

94. If I were to become the president, I would make healthcare free for all. (future hypothetical)
95. If I were doing what you are doing right now, I would be in huge trouble. (present hypothetical)

اگر میں صدر بن گئی تو میں سب کے لیے صحت کی سہولیات مفت کر دوں گی۔

96. Agar	mai;n	sadar	ban.ga-ii		to	mai;n	sab=ke
If	1.SG	president	become-FUT.F.SG		then	1.SG	all=ACC
liye	sehat=ki	saholiat	muft	ker	dun-gii.		
for	health=DAT	facilities	free	do	give-FUT.F.SG		

اگرمیں یہ کرتی جو آپ کر رہی ہیں ، تو مجھے سخت مشکل کا سامنا کرنا پڑتا۔

97. Agar	mai'n	ye	kart-ii		jo	ap	ker
If	1.SG	this	do-IPFV.F.SG		that	2	do
rah-ii			hai;n	to	mujh-e		sakht
stay-PROG.F.SG			be.PST.SG	then	1.OBL.SG=ACC		extreme
mushkil=ka			samna	ker-na	par-taa.		
hardship=GEN			encounter	do.INF.OBL	fall-IPFV.M.SG		

Counterfactuals don't have a real tense as they express hypothetical situations. The past tense doesn't serve to locate the events in time but has the same purpose as the modal operators – by selecting possible worlds to quantify over. For example, the sentence *If I were leading this project, it would be finished by now*, can be rephrased as: in a similar world to the world of evaluation according to which the sentence is being evaluated *I lead the project in the past and the project is finished at the present time in relation to the time of utterance.* The if clauses in both English and Urdu are evaluated in relation to the utterance time and the past tense in the CF serves to indicate which of the possible world and its conditions need to be selected for the sentence to be interpreted.

Iatrodou (2000) contends that the imperfective (habitual in Urdu) is a fake imperfective as even in sentence positing a contrary to fact scenario of the completion/culmination of an event, the imperfective marking is used instead of the perfective marking with the verb. In line with this observation, we can see that habitual

marking in Urdu CFs appears to express a fake habitual aspect. This is further substantiated by the occurrence of habitual marking in CFs containing individual-level statives which don't, otherwise occur with both habitual and progressive marking:

آپ وہا ں ہوتے تو بہت خوش ہوتے۔

98.	Ap	vahaa;n	ho-te	to	bohat	khuu.s
	If	there	be-IPFV.M.PL	then	a lot	happy
	ho-te					
	be-IPFV.M.PL					
	You would have been happy, if you were there.					

آپ خوش ہیں کیونکہ آپ وہاں ہیں۔

99.	Ap	kuu.s	hai;n	kiiyuu;nke	ap	vahaa;n	hai;n,
	2	happy	be.PRS.PL	because	2	there	be.PRS.PL
	You are happy because you are there.						

آپ وہاں ہوتے، تو خوش ہیں۔*

100.	*Ap	vahaa;n	ho-te,	to	kuu.s	hai;n
	2	there	be-IPFV.M.PL	then	happy	be.PRS.PL

Hence, the habitual marking in CFs doesn't express the same temporal reference as it does in non-counterfactual environments. The fake habitual marking relates directly to the present time according to which we evaluate the sentence. The present tense rarely occurs with perfective aspectual marking in any language and its use is very limited as in the English narrative present, for example. Ferreira (2016) posits that this can be one reason for the non-occurrence of perfective marking in the counterfactuals as perfective does not occur with the present tense.

The semantics of Urdu immediate-futures and habitual presumptives with the same structure as in (90) and (91) respectively also follow from the modal base analysis as future is not a real tense in the same sense as the present and past, and is mostly considered as a modal. The assertion about immediate future in (90) needs to be evaluated in relation to a possible world and the sentence in interpreted in relation to the utterance time in the same way we analyze (88) and (89): there is a possible world similar to the world of evaluation in which the enemy in question will reach the location of the speaker shortly after the present moment. The presumptive in (91) can be analyzed on the same lines as the truth of the sentence is evaluated in relation to the assumption of the speaker who assumes that they

have assumed a world in which Ahmed lives on the address they have. Therefore, imperfective marking in CF doesn't contribute aspectual information and introduce a modal meaning to these sentences due to which the counterfactuals are evaluated in contrast to the actual world of the speaker and its realities. This is in stark contrast to the aspectual meaning expressed by the imperfectives in 88) and (89).

6.6 Conclusion to Chapter 6

We can conclude according to the discussions in the various sections in this chapter that Urdu and English do not differ considerably with reference to the actualization of imperfective aspect. Urdu progressives were observed to show the similar semantic puzzles as English progressives with accomplishments, achievements and statives. In Urdu progressive statives were found to behave similar to the stative indicating posture or position in English. The realization of imperfectivity is, nonetheless, similar, to a large extent in both the languages with the exception of counterfactuals in Urdu which have the same morphological form as the habituals. The temporal semantics of habituals in Urdu is different from counterfactuals however, as counterfactuals introduce a different modal meaning to predicates as compared to the modality of habituals.

CHAPTER 7

CONCLUSION

This thesis is an attempt to provide an account of how linguistic expression of temporal reference varies cross-linguistically with an emphasis on Urdu and English Language. Temporal reference allows speakers of language to situate events in time. We cannot talk about events in the real world without associating them with time points and the analysis of how languages express temporal relations sheds light on how linguistic structures are paired with semantic content – via the syntax-semantics interface. Amongst the various ways through which human languages realize temporal reference including tense, aspect and temporal adverbials, aspectual reference has acquired the semanticists' special interest for decades and it continues to do so because in contrast to tense and temporal adverbials, aspectual systems allow the speakers to mold the description of an event according to their perception and orientation. In this background, this study has focused primarily on the realization of aspect in Urdu and English, and the related semantic issues by adopting a generative framework as the underlying theoretical foundation.

The main focus of this thesis are the three dimensions in which speakers orient and locate events namely the perfect in chapter 5, the perfective aspect in chapter 6 and imperfective aspect in chapter 7. The present chapter provides a comprehensive overview of the analysis, and is divided into three sections. The first section recaps the discussion in each of the three chapters and links the three research questions of the study to the insights from each of the three chapters. Section 2 of the chapter attempts to provide a concise and inclusive account that can be drawn from the comparative analysis. The last section of this chapter discusses future avenues for research that can provide further insights about the semantic issues discussed in the present study and add more to our understanding of how linguistic structures express temporal reference in Urdu and English.

7.1 Insights and Findings

This dissertation focused on a cross linguistic study of a particular facet of temporal reference i.e. aspectual system in Urdu and English. The main research question that this

dissertation aimed to answer was how Urdu and English differ in terms of the temporal restriction associated with the semantic contribution of linguistic markers of perfectivity and imperfectivity. The secondary research questions aimed to break-down the broader question into three dimensions along which the aspectual system of any language is realized. The secondary research questions are recounted here for the reader's facilitation:

1. How is present perfect realized in Urdu in comparison to English in terms of its semantic contribution?

2. How can the realization of perfective Aspect in Urdu be compared to the realization of perfective aspect in English in relation to the meaning associated with perfective forms in both languages?

3. What are the main differences in Urdu and English imperfectives and how do imperfectives interact with various situation types in both the languages?

The main insights and findings of the analysis and discussion in the preceding three chapters are recapitulated in the following sections in relation to each of the three research questions.

7.1.1 Research Question 1

Although Perfect is analyzed as relative tense in this thesis, its analysis is crucial for drawing a comparison between the aspectual systems of Urdu and English. To address research question no.1, Chapter 4 of this dissertation aimed to provide a comprehensive account of present perfect constructions (perfect hereon) in Urdu and English in relation to their semantic contribution. One of the main concerns of this chapter was to elucidate how present perfect is realized in Urdu in comparison to English and aimed to uncover the implications of any morphosyntactic differences in perfect constructions for the semantic contribution of perfects in both the languages. Present perfect has been classified as a tense and as an aspect by various authors, however, in line with the most recent proposals on perfect in the Generative tradition, perfect is considered a relative tense. Setting up of a unique time span is the major semantic contribution of perfect and this time span is termed as the PTS. PTS associates the time of speech to a time span in past. How a given eventuality is situated on the time scale through the PTS depends on the type of perfect and the morphosyntactic features that enter into the configuration of perfect predicates in a

given language. Urdu and English perfects pattern in the same way as English and anteriority is part of the meaning of the perfect. The meaning of recency is not part of the semantic contribution of perfective participle in Urdu and it is created through the present tense auxiliary ہے *hai* in Urdu.

The polysemy of different perfect forms which gives rise to the differences in the meaning of perfect forms, can be explained on the basis of the difference in the event structure of the perfect predicates. Homogenous situations like statives activities obtain a different event structure in comparison to complex situations like accomplishments and activities. Complex situations have both an activity and a state part. When the underlying situation type in a perfect predicate is an atelic or iterative telic and the event is located before the reference time which corresponds to the right boundary (RB) of the prefect time span (PTS) and contained completely withing the TSit, we obtain an experiential perfect reading of the perfect predicate. We get universal perfect readings when the event argument is co-extensive with the time of the situation and extends over the entire PTS. Resultative readings of perfect are lent by achievement and accomplishment predicates. The event structure of accomplishments is different from achievements in one significant way. The activity part of the event argument is located before the reference time in case of accomplishments but with achievements both the activity and state part of the event arguments are located at the reference time – owing primarily to the punctuality of achievement predicates. The state part of both achievements and accomplishments occurs at the reference time. Perfects of recent pasts have the same event structure as resultative perfects as they give an explicit perfect-state reading and the state part occurs at the reference time e.g. *I have just watched Inception* entails that the subject is in a state resulting from having watched the movie Inception and the state holds true for the reference time TT.

Existential perfects in Urdu are similar to English perfects but Urdu does not have universal perfects (U-perfects) on the same pattern as English Universal perfects. Urdu perfects are formed with the perfective participle which doesn't elicit the unboundedness property – a crucial requirement for U-perfects. In addition, we saw that Urdu present perfects are not perfective in the same way as English perfects are; especially in the case of telic eventualities including accomplishments and achievements, a light verb is required to mark culmination. English perfect predicates of activities can lend the U-perfect reading

even without the progressive morphology if a durative adverbial like since is used, but with telic eventualities progressive morphology is required. Therefore, the perfective/imperfective reading of perfect depends on the interaction between lexical aspect and morphological elements. Urdu present perfects have been classified as 'near-past' constructions' and compete with both simple past and distant past construction as they differ only slightly in terms of their temporal reference. All of three constructions can be used for the same past eventuality and aspectual value. Present perfect in Urdu is felicitous when present relevance needs to be expressed. In cases where just the mention of the eventuality is required, simple past is used. Distant past constructions are preferred if the pastness of the eventuality needs to be emphasized. It was argues that on the basis of preceding observations, the perfective participle in Urdu does not lend the meaning of termination for eventualities because it is not inherently perfective and should be termed as *aorist* instead of perfective.

Perfect constructions render meaning of both anteriority and recency. Anteriority is tied to the past participle in English and perfective participle in Urdu. Recency is expressed through the present tense auxiliaries in both the languages which form the perfect predicate. However, English perfects are not compatible with past-oriented adverbs posing a challenge for the semantic account of perfect which espouses that anteriority is part of the meaning contribution of perfect. This phenomenon, termed as the *Present Perfect Puzzle (PPP)*, does not occur in all languages entailing that the realization of perfect is different across languages. Urdu does not show the PPP and past-oriented adverbials are compatible with Urdu present perfect constructions. The difference in Urdu and English in terms of which adverbials they allow with perfects can be explained on the basis of the difference in syntactic structures of perfect participle in both languages. Furthermore, PTS can be set differently and the time of speech may or may not be included in the PTS. In English the time of speech is included in the PTS, therefore past-oriented adverbials are not allowed as they are not compatible with the time of speech. In Urdu, however, the PTS extends till the moment of speech but does not include it. consequently, Urdu perfects are compatible with past oriented adverbials and do not exhibit the PPP.

The stative nature of perfect predicates was also discussed in chapter 5. Perfect predicates obtain a stative value and pattern with statives in some but not all ways. Due to their distinct meaning, the stative properties of perfect predicates are termed as the *perfect*

state. The perfect state is different from both individual-level and stage-level predicates in terms of not having the homogeneity property that characterizes statives. Both English and Urdu perfects behave in the same way in terms of their stative nature and distribution. The perfect state can be better understood as a resultant state. Resultant state should not be confused with telicity entailing the meaning of termination or culmination of the eventuality expressed through the perfect predicate. The resultant state is different from target state: target state is a state towards which an eventuality is directed, resultant state on the other hand is a state ascribed to an entity because of having participated in a situation regardless of how the situation turned out to be (whether it reached its intended goal or not). In other words, the stative component of the perfect predicate results from a previous action which ascribes some particular quality to its participant – irrespective of whether the action reached it designated termination point or not.

Lastly, a rather limited use of present perfect construction in narratives was also discussed in chapter 5. Due to its stative value, present perfect does not move time which makes it less suitable for expressing progression in narrative discourse. Present perfect is use in narratives, nonetheless, to create a meaning of temporal stasis. Over the past few decades, some studies have shown the increasing use of present perfect in sports narrative to express past events. This use of perfect is common in live-commentaries of sports events along with the progressive but when present perfect constructions are used to recount the details of an event, it serves to create a sense of present relevance. The use of present perfect in contexts where simple past is used in Standard English, can be taken as an indication of a possibility of convergence between the two tenses. The summary of the findings of chapter 4 are recapitulated in the following table:

Table 4

Realization of Present Perfect in Urdu

Basic meaning contribution of Present Perfect	• Setting up of a unique time span i.e. PTS which associates the time of speech to a time span in past
Temporal Constraints	• Urdu does not have universal perfects (U-perfects) on the same pattern as English Universal perfects. • Urdu perfects are formed with the perfective participle which doesn't elicit the unboundedness property – a crucial requirement for U-perfects. • It appears that Urdu present perfects are not perfective in the same way as English perfects are; especially in the case of telic

	eventualities including accomplishments and achievements, a light verb is required to mark culmination. • The perfective participle in Urdu does not seem to lend the meaning of termination for eventualities because it is not inherently perfective and should be termed as *aorist* instead of perfective. • Both English and Urdu perfects seem to behave in the same way in terms of their stative nature and distribution. The perfect state can be better understood as a resultant state.
Semantic puzzles/oddities associated with Present Perfect and analysis	• Past oriented adverbs cannot be used in English with present perfect (known as the Present Perfect Puzzle). Urdu does not show the PPP and past-oriented adverbials are compatible with Urdu present perfect constructions. • The difference in Urdu and English in terms of which adverbials they allow with perfects can be explained on the basis of the difference in syntactic structures of perfect participle in both languages. • PTS can be set differently and the time of speech may or may not be included in the PTS. In English the time of speech is included in the PTS, therefore past-oriented adverbials are not allowed as they are not compatible with the time of speech. In Urdu, however, the PTS extends till the moment of speech but does not include it.

7.1.2 Research Question 2

Chapter 6 of this thesis addressed the second research question of this dissertation. This chapter aimed to explore the notion of perfectivity in relation to how different structural elements contribute to the meanings associated with perfectivity in Urdu and English. Perfectivity marks termination in case of homogenous situations like activities and culmination for dynamic situation like achievements and accomplishments. Perfectivity and telicity are two closely tied concepts but they don't entail each other. Perfective aspect is a grammatical property of predicates and it essentially allows the speakers of language to express eventualities from holistic point of view. Telicity on the other hand has been described as a property of situation types or as a semantic feature alternately. However, it was argued in Chapter 5 that Telecity should be understood as a property of linguistic descriptions and not situation types. A situation with a natural goal like *reading a book* can be expressed as a telic as well as atelic eventuality. Telicity falls out from linguistic descriptions and we cannot assume that it is a fixed property of a situation type. Furthermore, the endpoint asserted by a telic linguistic description should be understood as a potential or designated end point (or goal) instead of the natural/real end point of the situation.

In relation to the realization of perfective aspect in Urdu specifically, one of the main concerns of chapter 6 was the semantic contribution of light verbs in relation to aspectual reference. It has been posited that the perfective participle in Urdu is associated with a neutral perfective aspectual value which expresses that a given situation has reached an arbitrary end point. Natural end points in Urdu are expressed through complex verbs (CV) which are composed of light verbs, the (im)perfective participle and optionally the auxiliary. Perfective participle which corresponds to the simple verb constructions (SV) in Urdu is compatible with activities and states in Urdu therefore, because these situation types are homogenous and don't have natural end points. For dynamic situations, like accomplishments, light verbs are required which make up a complex verb construction (CV) in Urdu in order to assert that the situation has reached its culmination. The evidence for this claim comes from the compatibility of SV constructions with conjunct clauses that cancel the entailment of completion and incompatibility of CV constructions with conjunct clauses that cancel the entailment of completion. Correspondingly, it can be argued that Urdu has a different structural mechanism for asserting culmination and termination for dynamic situations in comparison to English in which situation types don't impose constraints on the realization of perfective aspect in a similar way. In addition to perfective aspectual reference, Urdu light verbs introduce additional meaning in the predicate which may correspond to the manner in which a situation is actualized. Different light verbs introduce different nuances to the predicates of dynamic situations but they have the same aspectual value i.e. perfective as they add meaning of culmination/termination when used for dynamic situations.

Furthermore, light verbs in Urdu have a resultive meaning as well. This notion of resultivity is associated with the semantic contribution of light verbs. Light verbs are semantically bleached so they don't contribute the same amount of content as the main verb and function primarily as operators that affect the interpretation of the main verb. Resultivity of light verbs entails that light verbs link the situation expressed by the main verb to another situation. The light verbs, therefore, have an indexical function. There is an underlying implicature about another state/event; and the implicature is expressed by the light verb. The state/event expressed by the main verb is a result of the presupposed event/state. However, we need a specific discourse context to evoke this implicature. Another related temporal feature of light verbs is that they introduce temporal sequencing in sentences. Either the situation expressed by the main verb is sequenced before or after

another eventuality because of the light verb. Lastly, light verbs also obtain entailments of causation in relation to the main verb.

As it was mentioned earlier, a situation can be expressed with the perfective aspect with a variety of light verbs in Urdu each of which can add a different dimension to the meaning of the predicate. Thus, light verbs also introduce predicate perspectivation which corresponds to the various ways in which a given situation can be expressed from multiple contextual view-points. Due to their indexical nature, light verbs don't occur with arguments that lack referents in the real world (the equivalent of the English expression *no one,* for example). Negation implies lack of referent for the arguments as well so Urdu light verbs are generally not compatible with negation. It is possible to use negation with individual verbs in the verbal complex but the entire predicate cannot be negated. Light verb in Urdu also serve to draw focus towards a particular element in the sentence.

It should be pointed here that specific aspectual meanings are not associated with English compound verbs. Urdu light verb in CV constructions are always perfective. The light verbs in the verbal complex cannot be classified as aspectual auxiliaries, however, because they contribute additional meaning, apart from the aspectual information. It has been argued therefore that light verbs contribute a distinct form of aspect, the resultive aspect. Light verbs draw the focus towards the result of the eventuality instead of the external or the internal argument of a verbal complex. In contrast, Simple Verb (SV) constructions in Urdu don't obtain perfective meaning with dynamic situations. In fact, sometimes we get the meaning that there was an attempt at the given situation which could or could not have been successful.

Internal arguments also play a crucial role in how aspectual reference is realized through verbal complex in Urdu. Internal argument measures out the event in volume or space, or in other words the internal argument of the verb delimits the event it expresses. Urdu SVs, express the partitive relation in certain cases and don't assert that the entire object is being referred to and as the internal argument measures out the event it is possible to cancel the entailment of completion with an Urdu SV clause that does not have a definite NP or a countable NP. Correspondingly, light verbs add a definiteness effect on nominal predicates in Urdu because they introduce cumulativity. For predicates with the graduality property – a thematic relation pertaining to how object is affected by the event in a gradual

way – therefore, a CV construction is required in Urdu to convey the meaning of culmination.

The last two sections of chapter 5 focused on the incompatibility of negation and present tense with perfective aspect. Negation is not used with the perfective aspect because negation has a stativizing effect on predicates and states have lesser affinity for perfective aspect owing to their homogenous nature. When we use negation with an event, we are trying to express that the eventuality being expressed through the predicate is either not the case or is not on-going at the reference time. Negative sentences express a stative meaning because they express a situation that didn't bring about any change in the world in comparison to the affirmative counterparts which express a change. Perfective has a natural affinity for dynamic situations that introduce change and as a consequence it is incompatible with negation.

Perfective aspect occurs most commonly with past forms, owing to the notion of culmination associated with it which requires that action is not continuing anymore. Therefore, perfective aspect rarely occurs with present tense which locates eventualities exactly at the moment of speech. No matter how short the span of the eventuality is, if it is viewed as closed it becomes part of the past – which might be recent past. Present tense yields the meaning of ongoingness of the eventuality at the moment of speech with states and imperfectives (both habituals and progressives) generally, so it is not compatible with perfective aspect. The summary of the findings of chapter 5 are recapitulated in the following table:

Table 5

Realization of Perfective in Urdu

Basic meaning contribution of Perfective	• Perfectivity marks termination in case of homogenous situations like activities and culmination for dynamic situation like achievements and accomplishments.
Temporal Constraints	• The perfective participle in Urdu is associated with a neutral perfective aspectual value which expresses that a given situation has reached an arbitrary end point. Natural end points in Urdu are expressed through complex verbs (CV) which are composed of light verbs, the perfective participle and optionally the auxiliary. • Urdu perfectives are different from English perfectives in that they require light verbs to express natural end-points. • Urdu has a different structural mechanism for asserting culmination and termination for dynamic situations in comparison

	to English in which situation types don't impose constraints on the realization of perfective aspect in a similar way. • Urdu light verbs introduce additional meaning in the predicate which may correspond to the manner in which a situation is actualized. • Additionlly, it was obseverved that light verbs in Urdu have a resultive meaning. Resultivity of light verbs entails that light verbs link the situation expressed by the main verb to another situation. The light verbs, therefore, have an indexical function. There is an underlying implicature about another tate/event; and the implicature is expressed by the light verb. The state/event expressed by the main verb is a result of the presupposed event/state. • Urdu light verbs also seem to introduce predicate perspectivation which corresponds to the various ways in which a given situation can be expressed from multiple contextual view-points. Due to their indexical nature, light verbs don't occur with arguments that lack referents in the real world. • Light verbs also add a definiteness effect on nominal predicates in Urdu because they introduce cumulativity. For predicates with the graduality property – a thematic relation pertaining to how object is affected by the event in a gradual way – therefore, a CV construction is required in Urdu to convey the meaning of culmination.
Semantic puzzles/oddities associated with the realization of Perfective and analysis	• Urdu perfectives are found to be not compatible with present tense, as are English perfectives. This is because when an eventuality is viewed as closed, it becomes part of the past – which is recent past in the case of present perfect. Therefore, perfective aspect rarely occurs with present tense which locates eventualities exactly at the moment of speech.

7.1.3 Research Question 3

The third research question of this dissertation was addressed in Chapter 6 which attempted to address the semantic issues associated with the imperfective aspect in Urdu and English. Urdu and English imperfectives pattern in the same way in terms of their meaning contribution. However, there is one major difference between Urdu and English imperfectives in that Urdu habituals have the same morphosyntactic realization as Urdu counterfactuals. Imperfective aspect represents an eventuality from a situation-internal perspective – either as incomplete or in progress. Imperfectivity denotes the ongoingness or continuity of a situation and imperfective aspect only asserts that an action was ongoing

and the action may or may not reach the natural/expected end point. Imperfectivity is realized in two basic ways in morphosyntax: progression and habituality.

Progressive aspect asserts that a situation is in progress without any reference to the actual duration for which the situation really lasts for. The Urdu progressive marker *-raha* marks progression across all tenses and patterns similarly with English progressives marked with the suffix *-ing*. Both English and Urdu progressives interact with different situation types in a similar way. On the other hand, habituality refers to the successive occurrence of a situation. The main aspectual information contributed by imperfective is the expression of continuation of an eventuality. Progressives and habituals both express continuation of different sorts. Progressives correspond to singular events, whereas habituals entail plural events. Progressive aspect asserts the existence of a singular event whereas habitual aspect expresses that there are plural occurrences of the event. Just as events can be singular or plural, time intervals can be singular or plural as well. For progressive, the eventuality needs to be going on at the time of reference set up by the sentence. On the other hand, habituals assert that the underlying situation occurs repeatedly.

One of the main semantic issues discussed in chapter 6 was *the imperfective paradox.* This paradox refers to the observation that we can draw inferences of culmination from past progressive to past with activity verbs but not for accomplishment verbs. The distinction between the progressive and the non-progressive aspectual reference is, therefore, also dependent upon the underlying situation type. Activities and accomplishments both have stages and the sub-interval property. The imperfective paradox is tied to lexical aspect and the telic/atelicty of activities and accomplishments. The imperfective paradox emerges only with formally marked progressives and general imperfectives don't interact differently with telic and atelic verbs. Urdu progressives exhibit the imperfective paradox exactly as English progressives and pattern similarly with the telic/atelic verbs.

Correspondingly, a modal analysis was adopted to account for the imperfective paradox. The modal analysis asserts that the eventuality expressed with the progress can be assumed to be true in the future if we take the *will* part of this assumption as a modal notion. The eventuality might not continue beyond the time interval relevant to the progressive in the actual world and we only need to assume inertia worlds for the sentence to be true, similar to how we compute the truth conditions of future tense with the underlying

assumption that nothing interrupts the normal course of events. The time span corresponding to the reference time asserted in a progressive sentence is evaluated in relation to the inertia world which is identical to the actual world and after the reference time the truth conditions are evaluated in relation to the inertia world where everything happens as expected. Therefore, it can be argued that progressives require a certain point of view according to which the truth conditions of a progressive are evaluates. In the terminology of compositional semantics this point of view corresponds to a subset of information which allows us to ignore the rest of the information to evaluate the truth of a progressive sentence.

In addition to the imperfective paradox discussed with reference to accomplishments, progressive leads to a distinct aspectual meaning when used with achievements. Achievement verbs are punctual and they express an instantaneous change in the state. As the change in state expressed by an achievement verb happens in a very short span of time, the internal constitution of the achievement eventuality is not accessible. Consequently, when achievements are used with the progressive, the progressive doesn't assert the 'in-process' meaning. The analysis of both Urdu and English achievements with progressive shows that the progressive has as a type-shifting function resulting in a derived accomplishment.

Similarly, states don't occur does not occur as freely with progressive as it does with all other types of eventualities and when statives are used with progressive, they don't lend the 'in-process' reading. The meaning of change is an inherent part of the progressive and statives don't involve change as every sub-interval of the time span for which a stative is true is similar. The progressive in English is not compatible with individual level statives like *being tall* but English statives of posture and location do occur with progressive like crouch. Similar Urdu counterparts don't allow progressives for individual level statives of location and posture similar to *lying* and *crouching*, even when there is a recent change or the adverbial *aub* (literally = now) is added. Stative progressives in Urdu formed with *raha* result in an inchoative reading, entailing the inception of the state. When progressive is used with statives in rare cases there is a meaning shift involved resulting from a coerced used of the progressive. Progressive statives therefore obtain the 'dynamic situation' reading, and express a change in state or an in-flux reading which entails that the state is subject to change, somehow – as the use of *I am loving the new flavor of Lays* instead of

love implies that has been some development in relation to a past state or an expected development in the future. We may, therefore, term progressive statives as *dynamic statives.*

The last section of chapter 6 dealt with habituals and counterfactuals. Habituals express continuity in a different way as compared to progressives. Habituals entail that a situation recurs so they entail the continuity of a plurality of eventualities in comparison to singular eventualities in progressives. As we assumed that the meaning of progressive has a modal component, taking into account modality for the analysis of habituality to account for the entailments of continuity associated with habituals can provide us with a uniform picture of the imperfective aspect.

The patterning of counterfactuals with habituals in Urdu was also discussed in chapter 6. According to a generalization first introduced by (Iatridou, 2000), if progressive forms take a different morphology in comparison to form expressing genericity/habituality, the counterfactuals pattern with the habituals and never with the progressive. Urdu habituals satisfy this generalization and pattern with counterfactuals. The imperfective (habitual in Urdu) can be analyzed as a fake imperfective as even in sentence positing a contrary to fact scenario of the completion/culmination of an event, the imperfective marking is used instead of the perfective marking with the verb. The summary of the findings of chapter 6 are recapitulated in the following table:

Table 6

Realization of Imperfective in Urdu

Basic meaning contribution of Imperfective	• Urdu and English imperfectives pattern in the same way in terms of their meaning contribution. Imperfectivity denotes the ongoingness or continuity of a situation and imperfective aspect only asserts that an action was ongoing and the action may or may not reach the natural/expected end point.
Temporal Constraints	• The Urdu progressive marker *–raha* marks progression across all tenses and patterns similarly with English progressives marked with the suffix *-ing*. • Progressive leads to a distinct aspectual meaning when used with achievements. Achievement verbs are punctual and they express an instantaneous change in the state. As the change in state expressed by an achievement verb happens in a very short span of time, the internal constitution of the achievement eventuality is not accessible. Consequently, when achievements are used with the progressive, the progressive doesn't assert the 'in-process'

	meaning. The progressive has as a type-shifting function when used with achievement verbs, resulting in a derived accomplishment. • State verbs don't express the 'in-process' meaning with progressive. The meaning of change is an inherent part of the progressive and statives don't involve change as every sub-interval of the time span for which a stative is true is similar. Urdu does not allow progressives for individual level statives even when there is a recent change. Stative progressives in Urdu formed with *raha* result in an inchoative reading, entailing the inception of the state. When progressive is used with statives in rare cases there is a meaning shift involved.
Semantic puzzles/oddities associated with the realization of Imperfective and analysis	• Urdu progressives also seem to exhibit the imperfective paradox. We can draw inferences of culmination from past progressive to past with activity verbs but not for accomplishment verbs. The imperfective paradox emerges only with formally marked progressives and general imperfectives don't interact differently with telic and atelic verbs. • The imperfecive paradox can be resolved through a modal analysis of imperfectives. Progressives require a certain point of view according to which the truth conditions of a progressive are evaluates. In the terminology of compositional semantics this point of view corresponds to a subset of information which allows us to ignore the rest of the information to evaluate the truth of a progressive sentence.

7.2 Summing it all Up

To sum up the main findings of the analysis in thesis, Urdu and English have largely similar aspectual systems which differ only in a number of very specific dimensions. Firstly, the absence of Universal Perfects in Urdu differentiates it from English in terms of the semantic contribution of the morpho-syntactic elements that account for aspectual reference in both the languages. The perfective participle in Urdu that forms part of the perfect predicate configuration in addition to the present tense auxiliary does not express unboundedness and therefore blocks the universal perfect reading. However, this picture is complicated as present perfect predicates in Urdu allow for past oriented adverbials in contrast to English perfects. English perfects show the present perfect puzzle and are not compatible with past oriented adverbials. The PTS is set-up differently in English as compared to Urdu and the moment of utterance is included in the PTS which disallows the use of past oriented adverbials in English perfects. Urdu perfects don't exhibit the same restriction. Urdu perfective participle doesn't exactly pattern with the English past participle in that it allows past orientation but not unboundedness.

Building on the contrast between Urdu and English perfect predicates, when we look further at the realization of perfective aspect in English and Urdu, it surfaces that the two languages differ vastly in how termination and culmination of dynamic situations is expressed. Light verbs in Urdu are required to mark perfectivity on dynamic situations and the perfective participle does not have a fixed perfective aspectual value. In addition to the introduction of perfective value to the predicate, Urdu light verbs introduce meaning of volitionality, directionality and deliberation, in addition to other semantic features depending on the light verb being used. Urdu light verbs also have an indexical function and carry entailments that the main content verb used in conjunction with them in the verbal complex is linked to another verb/situation. Urdu light verbs pose a challenge for the semantic analysis of aspectual reference as they behave differently from aspectual auxiliaries as they encode additional information apart from conveying the meaning of perfectivity. In addition, Urdu light verbs also introduce definiteness which corresponds to culmination when we interpret it along with perfectivity. Negation and perfectivity are not compatible with each other, because negation introduces a stative element in the sentence which is not compatible with perfective aspect.

Lastly, the comparison of imperfectives in Urdu and English has shown that the two languages have more similarities than differences in the realization of imperfectivity. The interpretation of progressive aspect in both Urdu and English requires a modal analysis which allows us to account for the absence of culmination entailments in progressive accomplishments. Similarly, progressive achievements in both Urdu and English behave like derived accomplishments and the progressive makes the activity part of achievements apparent (which is not otherwise visible as achievements are realized in a very short time span). Urdu and English habituals pattern in the same way and require a modal analysis as the progressive in both languages do. Habituals differ from progressives in terms of eliciting the meaning of on-goingness of a plurality of a given eventuality – progressives entail ongoingness of a singular eventuality. Urdu and English habituals differ only in the use of habitual markers in Urdu in counterfactuals. The habitual participle in Urdu does not entail meaning of ongoingness and requires a fake-tense interpretation based on a modal analysis.

The findinds of this study can be used to help native speakers of Urdu in learning English. Tenses are one of the most difficult areas in second language learning. Teaching

aspectual categories along with tense distictions can help studnets in getting a better grasp of English language. Once the studntes undertand the apsetcual categories with reference to one tense (the present tense, for example), it becomes easier to apply the same structural knowledge on the other tenses.

7.3 Avenues for Future Research

This study does not, in any way, provide an exhaustive account of the semantics of aspectual system in Urdu. I believe that the present perfect in Urdu still requires further analysis as well. Urdu light verbs have already been discussed in a number of studies but we still don't know why aspectual information is paired with other meanings including volitionality, directionality, agentivity etc. through a singular form that is meant to express aspectual reference. Urdu has a rich modal-system and a comparative analysis of modality in Urdu and English was far beyond the scope of this study. However, as we saw in the analysis of progressive and habituals, modality is part of the semantics of aspect (tense too if we take into account the future tense). A comparative analysis of Urdu and English modality can shed further light on the similarities and differences in how these two languages express time. Apart from that an important dimension of the semantics of temporal reference which was not discussed in this dissertation was how we understand and express time in spatial terms. It would be interesting to draw a comparison between linguistic expression from both Urdu and English language that express time but have a space-like conceptual structure.

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Appendix A: Modified Velthuis Script for Urdu

	Urdu	Modified	IPA	Examples in	Examples in Urdu
Vowels	ا	a	ʌ	B**u**s	bas ‘stop, enough’ بس
	آ	aa	ɑ:	F**a**ther	Paalaa ‘nurture پالا
	ا	i	ɪ	K**i**ss	kis ‘which’ کس
	ی	ii	i:	F**ee**s	fiis ‘fees’ فیس
	ا	u	ʊ	F**u**ll	cup ‘quiet’ چپ
	و	uu	u:	F**oo**l	phuul ‘flower’ پھول
	ے	e	e:	F**a**ce	bel ‘vine’ بیل
	ے	ai	æ	Tr**a**p	bail ‘ox’ بیل
	و	o	o:	B**o**w	cor ‘thief چور
	و	au	ɔ	C**au**ght	kaun ‘who’ کون
DIPHTHONGS					
	ئے	a’e			ga’e ‘they went (m)’ گئے
	ئ	a’ii			ga’ii ‘she went’ گئی
	ئیں	a’ii;n			ga’ii;n ‘they went (f)’گئیں
	ئو	a’uu			ga’uu ‘cow (archaic)’ گوٗ
	آؤں	aa’uu;n			gaa’uu;n shall I sing گاؤں
	آوٗ	aa’o			gaa’o ‘you sing’ گاوٗ
	آؤں	aa’o;n			gaa’o;n ‘village’ گاؤں
CONSONANTS					
	ب	b	b	B**u**s	bas ‘stop, enough’ بس
	بھ	bh	bʱ		bhes ‘disguise’ بھیس
	پ	p	p	S**p**ill	pin ‘pin’ پن

	پھ	ph	p^h	**P**in	phuul ‘flower’	پھول
	ط،ت	t	t		tum ‘you’	تم
	تھ	th	t^h		tham ‘stop’	تھم
	ٹ	.t	ʈ		.tuu.t ‘break’	ٹوٹ
	ٹھ	.th	$ʈ^h$		.thes ‘dent’	ٹھیس
	ج	j	dʒ	**J**ail	jel ‘jail’	جیل
	جھ	jh	$dʒ^ɦ$		jhuul ‘swing’	جھول
	چ	c	tʃ	Staun**ch**	cal ‘walk’	چل
	چھ	ch	$tʃ^h$	**Ch**urch	chaap ‘stamp’	چھاپ
	ہ، ح، ھ	h	h/ ɦ	**H**and	haathii ‘elephant’	ہاتھی
	خ	.kh	χ		.khariid ‘buy’	خرید
	د	d	d		duur ‘far’	دور
	دھ	dh	$d^ɦ$		dhuul ‘dust’	دھول
	ڈ	.d	ɖ		.dor ‘string’	ڈور
	ڈھ	.dh	$ɖ^ɦ$		.dhuu;n.d ‘search’	ڈھونڈ
	ر	r	r		ras ‘nectar’	رس
	ڑ	.r	ɽ		pa.r ‘fall’	پڑ
	پڑھ	.rh	$ɽ^ɦ$		pa.rh ‘read’	پڑھ
	ز؛ض؛ظ	z	z	**Z**ip	zor ‘force’	زور
	ژ	.z	ʒ	Mea**su**re	.zaalaa ‘hail’	ژال
	س؛ص؛ث	s	s	**S**ame	seb ‘apple’	سیب
	ش	.s	ʃ	**Sh**ame	shaam ‘evening’	شام
	غ	.gh	ɣ		.ghulaam ‘servant’	غلام
	ف	f	f	**F**ail	fel ‘fail’	فیل
	ق	q	q		qasam ‘oath’	قسم
	ک	k	k	S**k**ill	kaam ‘work’	کام
	کھ	kh	k^h	**K**ite	khel ‘game’	کھیل
	گ	g	g	**G**oal	gol ‘round’	گول
	گھ	gh	$g^ɦ$		ghol ‘dissolve’	گھول
	ل	l	l	**L**oot	luu.t ‘loot’	لوٹ

	م	m	m	**M**an	maar ‘hit’ مار
	ن	n	n	**N**ot	nahii;n ‘not’ نہیں
	ں	;n			mai;n ‘I’ مِیں
	و	v	ʊ	Btw v & w	vahaa;n ‘there’ وہاں
	ی	y	j	**Y**ou	ye ‘this’ یہ
SPECIAL CHARACTERS[47]					
a=	ا	a=			faura=‘now’ فوراً
u=	ا	u=			summu= bukmu= صُمٌّ بُکْمٌ

Appendix B: Certificate of Translation

National University of Modern Languages
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It is to certify that after going through the translations attempted by a PhD researcher Zohra Fatima in her thesis titled *Semantics of Temporal Reference in Urdu and English Syntax*, I have found them to be valid and up to the mark both in terms of sense and style across the texts used as source and target ones. Thanks and regards.

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Appendix C: List of Urdu Sentences Used in the Analysis

Chapter 4		
Ungrammatical sentences are indicated by an asterisk (*). The purpose of these sentences is to show that in either Urdu or English (depending on the example) a particular morphological configuration cannot be used to communicate certain aspectual meaning.		
Sr.	**English Translation**	**Urdu Sentences**
1	I read Anna Karenina.	میں نے عینہ کیرینینہ پڑھی.
2	I read Anna Karenina.	میں نے عینہ کیرینینہ پڑھی تھی
3	I have read Anna Karenina.	میں نے عینہ کیرینینہ پڑھی ہے
4	We have been living here since 2010.	ہم یہاں ۲۰۱۰ سے رہ رہے ہیں
5	Ali has been sick for a week.	علی ایک ہفتے سے بیمار ہے
6	I have caught the butterfly.	میں نے تتلی پکڑ لی ہے
7	*I caught the butterfly but it flew away again.	میں نے تتلی پکڑی مگر وہ پھر اڑ گئ۔
8	*I have caught the butterfly but it flew away again.	میں نے تتلی پکڑ لی ہے مگر وہ پھر اڑ گئ*
9	I have read Anna Karenina just now (very recently).	میں نے ابھی ابھی عینہ کرینینہ پڑھی ہے
10	She has been sick (these days).	وہ بیمار ہے (آج کل)
11	She was sick (but isn't anymore).	وہ بیمار تھی (لیکن اب نہیں ہے)
12	Ali has been studying at NUST since 2009.	علی ۲۰۰۹ سے نسٹ میں پڑھ رہا ہے
13	Ali and Sara have been teaching them every day from 9 a.m. to 10 a.m.	علی اور سارہ انہیں روز صبح ۹ بجے سے ۱۰ بجے تک پڑھا رہے ہیں
14	Ali has submitted the application at 9 a.m. in the morning today.	علی نے آج صبح ۹ بجے درخواست دی ہے
15	*I have read Anna Karenina but didn't read the entire book.	میں نے عینہ کرینینہ پڑھی ہے لیکن پوری نہیں
16	*I read Anna Karenina but didn't read the entire book.	میں نے عینہ کرینینہ پڑھی لیکن پوری نہیں
17	Today, I walked in the park for two hours in the morning.	میں نے آج صبح دو گھنٹے پارک میں سیر کی ہے
18	Today, I walked the (entire) park in two hours.	میں نے آج صبح دو گھنٹے میں پارک کی سیر کی ہے
19	She won the match.	اس نے میچ جیتا
20	She has won the match.	اس نے میچ جیتا ہے
21	He just came.	وہ ابھی تو آیا تھا
22	It rained yesterday.	کل بارش ہوئی تھی
23	It rained yesterday.	کل بارش ہوئی
24	I arrived yesterday.	میں کل پہنچی ہوں
25	This letter arrived last month.	یہ خط پچھلے مہینے آیا ہے
26	It just rained yesterday.	ابھی کل ہی تو بارش ہوئی ہے
27	The Saudi Minister for Foreign Affairs is arriving in Pakistan tomorrow for an important visit.	سعودی وزیر خارجہ انتہائی اہم دورے پر کل پاکستان پہنچ رہے ہیں
28	I have always liked Gogol.	مجھے ہمیشہ سے ہی گوگل پسند ہے
29	I had always liked Gogol.	مجھے ہمیشہ سے ہی گوگل پسند تھا
30	I have run the marathon two times.	میں نے دو دفعہ میراتھان میں حصہ لیا ہے
31	I had run the marathon two times.	میں نے دو دفعہ میراتھان میں حصہ لیا تھا
32	I have just heard the news.	مجھے ابھی ابھی خبر ملی ہے

33	I had just heard the news.	مجھے ابھی ابھی خبر ملی تھی
34	I have caught the butterfly.	میں نے تتلی پکڑ لی ہے
35	I had caught the butterfly.	میں نے تتلی پکڑ لی تھی
36	*He has arrived on Monday.	وہ پیر کو پہنچا ہے
37	He had arrived on Monday.	وہ پیر کو پہنچا تھا
38	*He is knowing German. (he is getting the hang of German)	اسے جرمن آ رہی ہے
39	I have bought this book intentionally.	میں نے دانستہ طور پریہ کتاب خریدی ہے
40	I have bought this book intentionally.	میں نے یہ کتاب دانستہ طور پر خریدی ہے
41	The train has just left.	ٹرین بس ابھی چلی ہے
42	This letter has been lying here since yesterday.	یہ خط کل کا یہاں پڑا ہوا ہے
43	Ali is at school.	علی سکول گیا ہوا ہے
44	Ali has gone to school.	علی سکول گیا ہے
45	Ali is at school.	علی سکول میں ہے
46	How long has it been since Ali left for school?	علی کب کا سکول گیا ہوا ہے؟
47	When did Ali leave for school?	علی سکول کب گیا؟
48	Maira is intelligent.	مائرہ ذہین ہے
49	Maira has written a book.	مائرہ نے ایک کتاب لکھی ہے
Chapter 5		
50	I wrote today.	میں نے آج لکھا
51	He kept on going to their house.	وہ اُن کے گھر جاتا رہا
52	I walked in the park [and still am (walking)].	میں نے پارک میں سیر کی (اور ابھی بھی کر رہی ہوں)
53	I ate an apple [but didn't finish it].	میں نے سیب کھایا (لیکن پورا نہیں)
54	She reached the school [*but couldn't find the school].	وہ سکول پہنچا (لیکن اسے سکول نہیں ملا)*
55	She knocked at the door.	اس نے دروازے پہ دستک دی
56	Isra cooked the meal.	اِسرا نے کھانا پکایا
57	Isra cooked the meal.	اِسرا نے کھانا پکا لیا
58	Ahmed cooked the meal (for someone).	احمد نے کھانا پکا دیا
59	Ahmed cooked the meal (for himself, emphasis on the culmination of the action).	احمد نے کھانا پکا لیا
60	Ahmed has cooked the meal (already).	احمد کھانا پکا چکا
61	Ahmed cooked the meal (there was some obligation or difficulty involved in the task of cooking).	احمد نے کھانا پکا ڈالا
62	S/He had a fever. S/He took the medicine.	اسے بخار تھا۔ اس نے دوا لی
63	S/He had a fever. (So) S/He took the medicine.	اسے بخار تھا۔ اس نے دوا لے لی
64	I have sewn the shirt myself (no need to go to a tailor).	میں نے قمیض خود سی لی ہے (اب درزی کے پاس جانے کی ضرورت نہیں۔)
65	I have sewn the shirt myself (no need to go to a tailor).	میں نے قمیض خود سی ہے (اب درزی کے پاس جانے کی ضرورت نہیں۔*)
66	No one answered.	کسی نے بھی جواب نہیں دیا
67	No one answered (definitively).	کسی نے بھی جواب نہیں د ے دیا*
68	S/He didn't open the door.	اس نے دروازہ نہیں کھولا
69	S/He didn't open the door.	اس نے دروازہ نہیں کھول دیا*
70	He didn't open the door, [(he) closed (it).]	اس نے دروازہ کھول دیا نہیں (بند کیا)

71	Before this incident three ministers had been sacked from the cabinet for lobbying against the Chief Minister. The three ministers have not been re-instated yet.	اس سے قبل کابینہ میں سیاست اور وزیراعلیٰ کے خلاف دھڑے بندی پر تین وزرا کی چھٹی کروا دی گئی تھی۔**ابھی تک ان وزرا کو کابینہ میں واپس نہیں لیا گیا**
72	Ahmed drove the car (*but he couldn't) (Ahmed tried to drive the car but he couldn't).	احمد نے گاڑی چلائی (لیکن اس سے نہیں چلی)۔
73	Ahmed drove the car / Ahmed was able to drive the car (*but he couldn't).	احمد نے گاڑی چلا لی (*لیکن اس سے نہیں چلی)
74	Ahmed is driving the car.	احمد گاڑی چلا رہا ہے
75	Unacceptable/ungrammatical sentence	احمد نے گاڑی چلا دی رہی ہے۔*
76	Ahmed drives the car [whenever the driver doesn't come].	احمد گاڑی چلا دیتا ہے (جب بھی ڈرائیور نہ آئے)۔
77	Ahmed keeps on driving the car, (and keeps on singing).	احمد گاڑی چلا تا جاتا ہے (اور گاتا جاتا ہے)
78	S/He understands the sum [then forgets it again].	وہ سوال سمجھ لیتا ہے (پھر بھول جاتا ہے)۔
79	S/He understood the sum (mathematical).	اسے سوال سمجھ آ گیا
80	S/He had an idea.	اسے خیال آیا
81	S/He remembered/He had an epiphany.	اسے خیال آ گیا
82	S/He learnt the sum (and left).	اس نے سوال سمجھا (اور چلا گیا)
83	S/He drank tea (but not the entire quantity).	اس نے چائے پی (لیکن ساری نہیں)
84	S/He drank the tea (*but not the entire quantity).	اس نے چائے پی لی (لیکن ساری نہیں*)
85	S/He drank two cups of tea (some tea was left from each of the two cups).	اس نے دو کپ چائے پی (لیکن ساری نہیں*)
86	S/He drank two cups of tea (all the tea was consumed from both the cups).	اس نے دو کپ چائے پی لی (لیکن ساری نہیں*)
87	S/He drank all of the tea.	اس نے ساری چائے پی
88	S/He drank all of the tea.	اس نے ساری چائے پی لی
89	Maria ate strawberries. / Maria ate a strawberry. / Maria ate some strawberries. (but not all….).	ماریا نے سٹرابیری کھائی (لیکن ساری نہیں)
90	Maria ate two strawberries (but only half of each).	ماریا نے دو سٹرابرئیاں کھائیں (لیکن آدھی)
91	Maria ate two strawberries (but only half of each).	ماریا نے دو سٹرابرئیاں کھا لیں (لیکن آدھی)
92	Maria won the debate.	ماریا نے ڈبیٹ جیتی
93	Maria won the debate.	ماریا نے ڈبیٹ جیت لی
94	Maria broke the window (*but not the entire window).	ماریا نے کھڑکی توڑی (لیکن پوری نہیں)*
95	Maria broke the window.	ماریا نے کھڑکی توڑدی
96	Maria lost the key. (deliberately)	ماریا نے چابی گمائی
97	Maria lost the key.	ماریا نے چابی گما دی
98	She dyed the dupatta (*but not completely).	اس نے ڈوپٹہ رنگا (لیکن پورا نہیں)
99	She dyed the duppata (*but not completely).	اس نے ڈوپٹہ رنگ دیا (لیکن پورا نہیں*)
100	She made tea (*but did not make it completely).	اس نے چائے بنائی (لیکن پوری نہیں*)
101	She made lemonade (*but didn't finish making it).	اس نے لیمینیڈ بنائی (لیکن پوری طرح نہیں*)
102	She mixed honey in the water but didn't mix it completely.	اس نے پانی میں شہد ملایا لیکن پوری طرح نہیں
103	Ali came to the office today after a long time	علی آج بہت عرصے بعد آفس آیا
104	I have not eaten (I haven't had any food).	میں نے کھانا نہیں کھایا
105	*I have not eaten (up).	میں نے کھانا نہیں کھا لیا ہے*
106	I am not eating the food.	میں کھانا نہیں کھا رہا ہوں
107	I don't eat after 9 o'clock.	میں ۹ بجے کے بعد کھانا نہیں کھاتا

108	I called Aaliyaa many times. Aaliya didn't answer.	میں نے عالیہ کو بہت آوازیں دیں۔ عالیہ نے کوئی جواب نہیں دیا
109	I called Aaliya many times. Aaliya was asleep.	میں نے عالیہ کو بہت آوازیں دیں۔ عالیہ سوئی ہوئی تھی
110	On every Monday of this month, I pray salah in the mosque.	اس مہینے، ہر پیر کو میں مسجد میں نماز پڑھتا ہوں*
111	On every Monday of this month, I prayed salah in the mosque.	اس مہینے، ہر پیر کو میں نے مسجد میں نماز پڑھی
Chapter 6		
112	Ali is going to school by bus.	علی بس پہ سکول جا رہا ہے
113	Ali goes to school by bus.	علی بس پہ سکول جا تا ہے۔
114	Ali used to go to school by bus.	علی بس پہ سکول جا تا تھا
115	Ali used to go to school by bus.	علی بس پہ سکول جا یا کرتا تھا
116	Ali kept on going to the school on bus.	علی پورا مہینہ بس پہ سکول جاتا رہا
117	Ali must have been going to school by bus, certainly.	علی بس پہ سکول جاتا ہو گا یقیناً
118	Ali kept standing on the pathway (all day).	علی راستے میں کھڑا رہا (سارا دن)
119	Sara is getting the hang of English	سارا کو انگلش آ رہی ہے
120	Sara is knocking at the door.	سارا دروازے پہ دستک دے رہی ہے
121	Sara is winning the match.	سارا میچ جیت رہی ہے
122	Aliya was riding the bicycle.	عالیہ سائیکل چلا رہی تھی
123	Aliya rode the bicycle.	عالیہ نے سائیکل چلایا
124	Aalia was fixing her watch.	عالیہ اپنی گھڑی ٹھیک کر رہی تھی
125	Aalia fixed her watch.	عالیہ نے اپنی گھڑی ٹھیک کر لی
126	Sara was baking a cake.	سارا کیک بیک کر رہی تھی
127	Sara was baking a cake that she baked completely	سارا کیک بیک کر رہی تھی، جو اس نے پوری طرح بیک کر لیا*
128	Sara was trying to find a flying saucer.	سارا ایک اڑن تشتری ڈھونڈنے کی کوشش کر رہی تھی
129	No flying saucer was found.	کوئی اڑن تشتری نہیں ملی
130	She gave it to Ahmed.	اس نے وہ احمد کو دے دی
131	S/He didn't find it.	اس کو وہ نہیں ملی
132	The guests are (just) arriving in the hall.	مہمان حال میں (بس) پہنچ رہے ہیں
133	Samina Baig is reaching the summit.	ثمینہ بیگ چوٹی پہ پہنچ رہی ہیں
134	The sick man is dying.	بیمار آدمی مر رہا ہے
135	Younus is catching the ball.	یونس بال کیچ کر رہے ہیں
136	How long did it take for Aalia to fix the watch?	عالیہ کو گھڑی ٹھییک کرنے میں کتنا وقت لگا
137	How long did it take Aalia to find the watch?	عالیہ کو گھڑی ڈھونڈنے میں کتنا وقت لگا
138	How long did it take before Aalia finished fixing the watch?	عالیہ کو گھڑی ٹھییک کر چکنے میں کتنا وقت لگا
139	*How long did it take before Aalia finished finding the watch?	عالیہ کو گھڑی ڈھونڈ چکنے میں کتنا وقت لگا*
140	I read Anna Karenina for two hours.	میں نے دو گھنٹے تک عینہ کرینینہ پڑھی
141	*The guest reached the hall for twenty minutes.	مہمان بیس منٹ سے حال میں پہنچا*
142	I read Anna Karenina in two hours	میں نے دو گھنٹے میں عینہ کرینینہ پڑھی
143	The guest reached the hall in twenty minutes.	مہمان بیس منٹ میں حال میں پہنچا
144	The plane is landing on the airport in two hours.	جہاز دو گھنٹے میں ائیر پورٹ پر پہنچ رہا ہے
145	I am reading this novel in three days.	میں یہ ناول تین دن میں پڑھ رہی ہوں

146	Samina Baig is about to reach the summit.	ثمینہ بیگ چوٹی پہ پہنچنے والی ہیں
147	Younus is about to catch the ball.	یونس بال کیچ کرنے والے ہیں
148	Aalia was finding the watch all day lazily but then she found it quickly at night.	عالیہ ساری رات سستی سے گھڑی ڈھونڈتی رہی لیکن رات کو اس نے وہ جلدی ہی ڈھونڈ لی
149	Affectees of the earthquake are still arriving at the hospitals with injuries.	زلزلے کے متاثرین ابھی بھی زخمی حالت میں ہسپتالوں میں پہنچ رہے ہیں
150	Sara is sitting on the chair (now).	سارا اب کرسی پہ بیٹھی ہے
151	Sara is about to sit on the chair.	سارہ کرسی پہ بیٹھ رہی ہے
152	The portrait is hanging loose.	تصویر ڈھیلی ہو گئی ہے
153	The portrait is hanging loose.	تصویر ڈھیلی لٹک رہی ہے
154	I am loving the new season of Westworld.	مجھے ویسٹ ورلڈ کا نیا سیزن پسند آرہا ہے
155	I am understanding your point of view now.	مجھے آپ کا نظریہ اب سمجھ آ رہا ہے
156	He was being angry.	وہ غصہ کر رہا تھا
157	Ali goes to school by bus.	علی بس پہ سکول جا تا ہے
158	It snows here in the winter.	یہاں سردیوں میں برف پڑتی ہے
159	Watch out, the enemy approaches!	خبردار دشمن آتا ہے
160	Ahmed must be living be at this address.	احمد اسی پتے پہ رہتا ہو گا
161	It would have been great if this house were mine.	اگر یہ گھر میرا ہوتا تو کتنا اچھا ہوتا
162	This would have not happened if you had come earlier.	اگر آپ جلدی آجاتے تو ایسا نہ ہوتا
163	If I were to become the president, I would make healthcare free for all.	اگر میں صدر بن گئی تو میں سب کے لیے صحت کی سہولیات مفت کر دوں گی
164	If I were doing what you are doing right now, I would be in huge trouble.	اگرمیں یہ کرتی جو آپ کر رہی ہیں ، تو مجھے سخت مشکل کا سامنا کرنا پڑتا
165	You would have been happy, if you were there.	آپ وہا ں ہوتے تو بہت خوش ہوتے
166	You are happy because you are there.	آپ خوش ہیں کیونکہ آپ وہاں ہیں
167	Unacceptable/ungrammatical sentence	آپ وہاں ہوتے، تو خوش ہیں*