6.   Transitive Sentences and their Stative Resultants

Summary

A transitive sentence or verb is defined as one which alters or affects its object, called its patient. Other verbs which take a direct object but which do not alter it are defined as not transitive. Transitive sentences includes an element, called a resultant, which describes the state of the patient after action of the verb. For every transitive sentence it is possible to construct a resultant sentence which describes the resultant state of the patient.

The intending performer of the action of a transitive sentence is its agent, who may employ an instrument as an unintending performer of the action. Where the involvement of the agent is not emphasised, or the action is outside human control, the performer of the action is the instrument. The agent or instrument is the subject, and also the topic unless an element is in focus. A sentence of which the agent or instrument is the topic is called active.

The perfective participle of a transitive verb describes the state of the patient after action of the verb, and may take the same resultant as the verb.

A transitive sentence may also be constructed with the patient as topic; this is called passive. The agent and/or instrument may be stated as additional elements. To express a passive, languages alter the verb or the sentence structure in various ways from the active form. According to each language, a passive sentence may be one in which the patient is the subject or one in which the patient is the topic but not the subject.

This chapter is concerned with transitive sentences whose resultant is stative, either a state or condition expressed by an attribute or an identification expressed by a noun. An attribute may take at least three forms: a single word (adjective or participle), or a noun and a link word meaning "subject to", or a preposition or postposition (called a locative) linked to a location. The resultant sentence is an attributive or identification sentence comprising the resultant as subject, together with either a stative verb or an auxiliary stative verb ("be") and the attribute or noun.

In many languages, the agent or instrument, as subject, is unmarked. In others, the agent or instrument is marked as "ergative" and the object is unmarked. An ergative construction is a means of distinguishing an active sentence from alternative sentence constructions in which the patient is the subject.

A transitive sentence whose resultant is a locative expresses movement, and may include a directive which indicates the direction of movement. A directive may be qualified by the distance moved, and a locative may be qualified by the distance from another location. Distance is expressed by a quantity and unit.

An constituent sentence describes, measures, increases, or decreases a dimension or constituent part.

An involuntary attribute which arises through an external cause is called an effect. The external cause is the instrument of the transitive sentence whose resultant is the effect. A freedom is an action, usually deliberate, to free the patient of an effect.

An attribute which expresses a state which may arise from a cause in the future is called a dependency. A dependency may arise through an intentional or an involuntary action. If involuntary, it may have an instrument and be an effect. A dependency may be removed or relieved through the action of a different agent or instrument.

An artefact or instrument which is used for the purpose for which it is designed is called an appliance. A transitive sentence may express that function.

If the resultant of a transitive sentence is a noun, the resultant sentence assigns to the patient the identity of the resultant. If the resultant is indefinite, the sentence states that there exists an instance of the resultant which is the same as the patient.

A similarity is an identification between a characteristic of two entities.

An attribute or identification can also be a qualifier to a noun. The construction in which an identification is a qualifier is called apposition.

Terms Defined or Introduced

Transitive, intransitive, patient, resultant, resultant sentence, agent, instrument, agential, instrumental, active, passive, attributive, creation, locative, directive, measure, constituent, effect, freedom, dependency, relief, appliance, identification.

Background

So far in this book, we have been examining how sentences are constructed so that they fit together into a meaningful discourse. We have shown how sentences are either existential or consist of a topic and comment, or a topic and enquiry, or a hypothesis. In analysing sentences in this way, every meaningful word can be categorised as either definite, indefinite, or indefinable.

With Chapter 6., we start to examine how sentences describe an action or state, which we broadly term a function. The action or state is applied to some entity, affects another entity, and has relationships with other entities, and the sentence relates all these entities to the action or state to convey a meaning. This study is called functional analysis and the entities needed to make a meaningful sentence are called functional elements. The functional elements differ between functions, so that it is possible to categorise sentences by their functions and functional elements.

In principle, any one of the functional elements can be the topic, so that the rest are the comment, enquiry, or hypothesis. However, some elements are much more frequently selected as the topic (such as the agent, instrument, object, or recipient, as we shall see), than others. The grammar of each language provides tools to enable each element to be selected as topic. Some grammars are less flexible than others in this respect, and most languages do not readily allow certain functional elements to be the topic. However, in principle it is possible for any functional element to be the topic, and in this way the discourse structure and the functional structure of a sentence are independent of each other. As we examine functional structures, we shall show how our sample languages enable different functional elements to be the topic of sentences, and how this differs between different actions and states.

In the majority of sentences in most languages, the relationship between the topic and comment is represented by that between a subject and a verb. There is a semantic union between the subject and the verb, expressed by a grammatical agreement:

"The professor gave the lecture." "The lecture was given by the professor."

Where we consider such sentences, we shall refer to "the professor" and "the lecture" respectively as the "subject" and the remainder of the sentence, including the verb, as the "predicate". The sentences are therefore "subject-predicate" or "subject-verb-object-complement".

In a minority of sentences, the element with which the verb is in semantic union is not the topic. It is conventional to refer to such an element as the subject and to imply that there is a topic which is different from the subject. We shall call such sentences "topic-comment". The question of whether what is conventionally called the subject is properly the subject of such sentences is deferred to Chapters 16. and 17., by which time we will have a more rigorous definition of "subject" and "verb" at our disposal. The following are examples of topic-comment sentences which will appear in this and succeeding chapters:

English: "It was the professor who gave the lecture."

Italian: "La mia macchina l'a colpita un sasso." "My car has been hit by a stone."
[The my car it-has hit a stone.]

Russian: "Ucheniku veselo." "The pupil feels cheerful." [To-pupil cheerful.]

Malay: "Sopir itu namanya Pak Ali." "The name of that driver is Mr Ali."
[Driver-that, name-his Mr Ali.]

Hindi: "hame˜ ye pustke˜ nahī˜ cāhie" "We don't need these books."
[To-us these books not necessary.]

Chinese: "Xìn tā jì chūqù le." "She has posted the letter." [Letter she post out-go now.]

Japanese:
"Kono kuruma ni wa kā sutereo ga aru." "This car has a car stereo."
[This car-in (topic) car stereo (subject) there-is.]

The use of "topic-comment" does not imply that "subject-predicate" sentences are not also topic-comment, simply that such "topic-comment" sentences do not conform to the subject-predicate pattern.

Transitive Sentence and Stative Resultant

The actions and states examined in this chapter are those which can be called "transitive". In conventional terminology, it has been usual to describe as transitive any verb which takes a direct object, that is an object without a linking word:

"The author wrote the novel."
"The manager remembered the report."
"The officials obeyed the minister."

This is despite the fact that the functional grammar of each of these sentences is different. In the first case, the subject creates the object, in the second the subject engages in a mental act towards the object, and in the third the subject engages in an action which does not affect its object. In other languages their construction is different. If the sentences are expressed in Italian, the first is translated directly, in the second and third the verb takes a preposition, and the second has a reflexive form:

"L'autore ha scritto il romanzo."   [The author has written the novel.]
"Il direttore s'è ricordato del rapporto."   [The manager himself is reminded of the report.]
"I funzionari hanno ubbidito al ministro."   [The officials have obeyed to the minister.]

According to the usual terminology, any verb which requires a preposition before its object is intransitive. Therefore while in both Italian and English the first sentence is transitive, the second and third verbs are held to be intransitive in Italian and transitive in English. By the standard of functional grammar, this makes no sense. A grammatical distinction, such as that between transitive and intransitive, should correspond to a real difference of meaning, not to the usage of one language or another. Moreover, the second and third examples could be extended to a wide range of languages, including French, German, and Japanese, and a large number of verbs.

There is, of course, a distinction between transitive and intransitive sentences which corresponds to a real distinction of meaning. A conventional example of an intransitive sentence is the same in English and Italian:

"The visitors have returned to London." "Gli ospiti sono tornati a Londra."
[The guests are returned to London.]

If we are to give the terms "transitive" and "intransitive" a useful meaning, we must pass over the second and third examples for the time being, and limit ourselves to the first and fourth. We can then define the words with some precision: a *transitive* verb or sentence is one which alters or affects its object; an *intransitive* verb or sentence is one which alters or affects its subject. There is nothing new in these definitions. Despite that, "transitive" continues to be applied generally to the first three

examples, although in the second and third the object is not altered or affected in any way. We shall limit "transitive" to sentences defined as above. The second example will be assigned to a different category called "possession" (Chapter 8), and the third to another class called "participation", which is considered among other intransitive sentences in Chapter 7.

This use of "transitive" reflects the origin of the term, which is that the action of the verb passes over or "transits" to the object. The term "factitive" is also sometimes used with the same meaning. To reflect the fact that the object is altered, it is called the *patient* of the verb.

Any process involves change. Since a transitive sentence changes its patient, it may include a word or phrase to describe its state after the process is completed, especially if the verb is perfective. If the verb is imperfective, the word or phrase indicates the expected state of the patient after the process is completed:

"The blow broke the vase into pieces."   "The blow was breaking the vase into pieces."
"John pushed the window open."   "John was pushing the window open."
"Mary painted the fence green."   "Mary was painting the fence green."
"The contractors widened the road by two metres."
             "The contractors were widening the road by two metres."
"The Committee elected Richard Chairman."
             "The Committee was electing Richard Chairman."

The traditional term for "into pieces", "open", "green", "by two metres", and "Chairman" in these sentences is "complement", which is intended to convey that it "completes" the meaning. Unfortunately, this term is also used for words which "complete" sentences which are not transitive, and which do not indicate the result of a change, for example "happy" in "he looks happy", or "interesting" in "she found it very interesting". This seems another example of a grammatical term which does not properly reflect a function. We therefore suggest the term *resultant* for the altered state of the patient arising from the action of a transitive verb. For each of the above transitive sentences, there is a stative *resultant sentence* which expresses that state or condition. If it is desired to refer to the process by which the state arose, the resultant sentence in English includes a perfective participle, otherwise not:

"The vase was (broken) into pieces."
"The window was (pushed) open."
"The fence was (painted) green."
"The road was (made) two metres wider."
"Richard was the (elected) Chairman."

The perfective participle of a transitive verb describes the state of the patient after action of the verb, since it is the patient which is altered, and may take the same resultant as the verb:

"a vase broken into pieces"; "a window pushed open", etc.

In Chapter 11., it will be shown that there are transitive sentences, called "causative", which can have a dynamic resultant. However, in this chapter we are concerned only with transitive sentences with a stative resultant. As the examples show, a stative resultant may be an attribute or noun.

As mentioned in Chapter 5. (Perfective Participle), not all languages provide a perfective participle. However, all languages provide a resultant, and usually mark it by placing it immediately after the patient:

Arabic: "xāṭa l-qumāša θawban" "He tailored the cloth [into a] garment."

Indonesian:
     "Perbuatannya menjadikan ibunya sedih."
     "His actions made his mother sad." [Action-his made mother-his sad.]

In Finnish, the resultant is marked with an ending "-ksi"/"-kse", called the translative case:

"Juotko lasin tyhjäksi?" "Will you empty your glass?" [Drink-you glass empty (translative)?]
"Lykkäämme kokouksen huomiseksi." "We shall postpone the meeting until tomorrow."
[We postpone meeting tomorrow (translative).]
"Hän veisti puikon liian lyhyeksi." "He cut the stick (to become) too short."
[He cut stick too short (translative).]

In Hungarian, it is often marked with "-ra"/"-re" (onto"):

"Magyarra fordította a könyvet." "He translated the book into Hungarian,"
[Hungarian-onto he-translated the book.]
"Fehérre festettünk minden falat." "We painted every wall white."
[White-onto we-painted every wall.]

In Chinese, a resultant (in brackets) is obligatory after a transitive verb, even when it is not in English:

"Wǒ yǐjing zuò wán le wǒde zuòyè." "I have already done my homework."
[I already do finish (aorist) my homework.]
(wán = finish)
"Tā xiū hǎo le nèi liàng mótuōchē." "He has repaired that motorbike." (hǎo = good)
[He repair good (aorist) that unit motorbike.]
"Zhèi gè háizi nòng huài le wǒde diànnǎo." "This child has damaged my computer."
[This unit child damage bad (aorist) my computer.]
(huài = bad)
"Jǐngchá zhuā zhù le xiǎotōu." "The policeman has caught the thief." (zhù = firm)
[Policeman catch firm (aorist) thief.]

Agent and Instrument

The above examples also show that not all transitive verbs require a resultant in all languages. Sometimes, the verb adequately expresses the completed process, and sometimes it does not:

"The bullet killed the soldier."
"The bullet shot the soldier dead."

It will be seen that the subject of a transitive sentence can be two distinct elements: the *agent* (the intending performer of the action) or the *instrument* (the unintending performer). A transitive sentence with an agent as subject is *agential*, and can include a phrase to express the instrument. A transitive sentence without an agent, and in which the instrument is the subject, is *instrumental*. An agent is an animate being, and an instrument is inanimate:

"The man broke the rock in two with a hammer." (agential)
"The hammer broke the rock in two." (instrumental)

The instrumental sentence is used when the agent is not important to the meaning. It can also be used when there is no agent, for example in a natural event:

"The lava burned the villages." "The moon eclipsed the sun." "Moonlight lit up the scene."

An instrumental sentence can have a second instrument, through which it effects its action:

"The wind broke the windshield with a branch."

In some languages, a transitive sentence is reserved for an action within human control. The "subject-verb-object" format is regarded as agential, and the instrument is always marked. If no agent is present Japanese often uses an intransitive verb, reflecting the fact that an intransitive verb cannot have an agent:

"Mado ga seki ni wareta." "A stone broke my window."
[Window (subject) stone-by broken-was.]
"Tamago de arerugī ni naru." "Eggs cause me an allergy."

[Egg-by allergy-to becomes.]

Russian uses an impersonal form of the verb:

"Dachu zazhglo molniei." "The dacha was struck by lightning."
[Dacha (object) it-struck by-lightning.]
"Podval zalilo vodoi." "The cellar was flooded." [Cellar (object) it-flooded by-water.]

In other languages, the agent of a transitive sentence is marked. This is the *ergative* construction, and is discussed further below.

The Passive Construction

In the previous section, we have considered transitive sentences of which the subject is the agent (the intending performer of the action) or the instrument (the unintending performer). Since a transitive sentence usually supplies new information on the agent or instrument, that is the topic:

"Mary painted the fence green." "The hammer broke the rock in two."

Such a sentence is referred to as *active*. This applies unless an element of the active sentence is in focus:

"It was green that Mary painted the fence." "It was the rock that the hammer broke in two."

For these sentences, the elements in focus are "green" and "the rock", which are therefore the comments, while "that Mary painted the fence" and "that the hammer broke in two" are the topics.

In an alternative construction, a transitive sentence supplies new information on the patient. The topic is therefore the patient, and the sentence is said to be *passive*. A passive sentence conveys that an action has been or is being performed on the patient, and its resultant is therefore the changed state of the subject. It may be less interested in by whom or by what means the action occurs, and in that case the agent or instrument may be omitted.

A passive sentence bears some resemblance to an intransitive sentence as defined at the start of this chapter, in which the subject is altered or affected, and the resultant is the altered state of the subject. There is however a distinction. A passive sentence expresses an action on its topic due to an external agency or cause, whether stated or not; an intransitive sentence expresses an action on its subject which is not due to any known external factor:

"The tree was felled (by the woodman)."   (passive)
"The tree fell."   (intransitive)
"Prices were raised (by the retailer)."   (passive)
"Prices rose."   (intransitive)

Some English verbs possess parallel forms for the passive and intransitive, while others do not:

"The door was opened (by the doorman)."   (passive)
"The door opened."   (intransitive)

A passive form of the verb may be used when another element is in focus:

"It was by Mary that the fence was painted green."
"It was with the hammer that the rock was broken in two."

However, in discourse terms these sentences are not passive, as their topics are "the painting green of the fence" and "the breaking of the rock in two".

Passive forms occur in all or most languages, because most languages require the ability to express the patient as topic. However, whereas an active sentence has the same single "subject-verb-object" pattern in most languages, the passive is realised by means of at least five different constructions,

described below. In three of them, the sentence is constructed so that the patient is the subject of a *passive verb*:

- use of a passive auxiliary verb;
- use of the reflexive;
- use of a passive form of the verb.

In two other constructions, the patient is in topic position but is not the subject of the verb; the verb remains structurally active:

- placing the patient in topic position;
- a construction without an agent.

(i)   In English and some other languages with a perfective participle, the passive is formed by combining that with a passive auxiliary verb, the sense being "the subject has become/is becoming in the state of":

Italian: "Il romanzo è stato scritto dall'autore." "The novel was written by the author."

Persian: "košte našodam" "I was not killed." [Killed not-became-I.]   ("koštan" = "kill")

Hindi: "patr ḍāk se bhejā gayā thā" "The letter was sent by post."
                                        [Letter post-by sent gone was.]

The Russian perfective participle construction only expresses the perfective passive, as in the examples below. For imperfective passives, the spoken language uses a reflexive or impersonal construction:

"Pis'mo podpisano ministrom." "[The] letter [is] signed by [a] minister."
"Knigi vozvrashchayutsya v biblioteku." "The books are returned to the library."
                                        [Books return-themselves to library.]

English can distinguish between a perfective and imperfective passive by use of different auxiliaries:

"The vase was broken into pieces." "The vase was being broken into pieces."
"The window was pushed open."   "The window was being pushed open."
"The fence was painted green."   "The fence was being painted green."
"The road was widened by two metres."
                                        "The road was being widened by two metres."
"Richard was elected Chairman."   "Richard was being elected Chairman."

The first of these sentences, the perfective, is in many cases not distinguishable from the stative resultant.

German possesses an imperfective and perfective passive auxiliary, which it uses with the perfective participle to distinguish between the passive (a process) and the stative resultant. Both of the following mean in English "we were assigned to the same group". However, the German verb form cannot distinguish the imperfective "we were being assigned to the same group":

"Wir wurden derselben Gruppe zugeteilt."
[We became to-the-same group assigned.]
"Wir waren derselben Gruppe zugeteilt."   [We are to-the-same group assigned.]

(ii)   A passive form may be expressed as the reflexive form of the active verb. As Chapter 7. will show, a reflexive is the same as an agential intransitive. Since an intransitive is a verb which alters or affects its subject, this construction may not allow a separate agent or instrument to be expressed:

Spanish: "Se discutieron varios problemas." "Various problems were discussed."
[Themselves discussed various problems.]
"Su primera novela su publicó en 1982." "His first novel was published in 1982."
[His first novel published itself in 1982.]

Italian: "Si raccontavono molte storie." "Many stories were told."
[Themselves told many stories.]
"Gli uomini non sposati si dicono celibi." "Unmarried men are called bachelors."
[The men not married themselves call bachelors.]

Arabic: "lā tatajassamu fī ʔintāji l-jadīdi" "It is not embodied in the production of the new."
[Not it-embodies-itself in production of-the-new.]

In Russian and Arabic, the reflexive form of the passive does permit an agent or instrument:

Russian: "Smeta sostavlyaetsya bukhgalterom."
"The estimate is being prepared by an accountant."
[Estimate prepares-itself by-accountant.]

Arabic: "taʔaθθarat bi-zalzāli 12 ʔuktūbar"
"They were affected by the earthquake of 12 October."
[They-affected-themselves by earthquake 12 October.]

(iii) Many languages possess a particular passive form of the verb. For example, the Greek active verb ends in "-ω" and the passive in "-μαι", using the conventional first-person singular representation:

"προδίνω" "betray"   "προδίνομαι" "be betrayed"

"Ο Εφιάλτης πρόδωσε τους Σπαρτιάτες." "[The] Ephialtes betrayed the Spartans."
"Οι Σπαρτιάτες προδόθηκαν από του Εφιάλτη."
"The Spartans were betrayed by [the] Ephialtes."

The following Arabic verbs are passive through a vowel change from the active:

"qad ʕūlija ʻāla ʔaydī ʔaṭibbāʕa maharatin" "He was treated by skilled doctors."
[He was treated at hands of doctors skilled.]
"yudāru bi-l-yadi" "It is operated by [the] hand."
"lam yuktašaf ḥattā l-ʔāna ʔayyu ʕilājin"
"No treatment has up to now been discovered."
[Not was-discovered up-to now any treatment.]

The following illustrate active and passive forms of the same verb:

Turkish: "Köprüyü tamir ediyorlar." "They are repairing the bridge."
[Bridge (object) repair they-are-doing.]
"Köprü tamir ediliyor." "The bridge is being repaired."
[Bridge repair is-being-done.]

Hindi: "mai˜ use chāpū˜gā" "I shall print it."
[I it shall-print.]   ("chāpnā" = "print")
"pustak agle hafte chap jāegī"   ("chapnā" = "be printed")
"The book will be printed next week."
[Book next week printed will-become.]
"usne tarkārī jalāī" "He burned the curry."   ("jalānā" = "burn")
[He (agent) curry burned.]
"yah lakṛī nahī˜ jaltī" "This wood doesn't burn." ("jalnā" = "be burned")
[This wood not burn.]

Japanese:
        "Hanako wa Ichirō o damashita."   ("damasu" = "deceive")
        "Hanako deceived Ichiro."
        [Hanako (topic) Ichiro (object) deceived.]
        "Ichirō wa Hanako ni damasaremashita."
        "Ichiro was deceived by Hanako."
        [Ichiro (topic) Hanako-by was-deceived.]

Inuit: "Inuit nanuq takuaat." "The people saw the polar bear." [People bear see-they-it.]
        "Nanuq inunnit takuniqarpuq." "The bear was seen by the people."
                [Bear people-by see-(passive)-they.]

Indonesian and Swahili possess separate forms for the passive and stative:

Indonesian:
        "Surat itu ditulisnya dalam bahasa Inggris."   ("tulis" = "write")
        "That letter was written by him in English."
        [Letter that written-by-him (passive) in language English.]
        "Surat itu tertulis dalam bahasa Inggris."
        "That letter was written in English."
        [Letter that written (stative) in language English.]

Swahili: "Kikombe kimevunjwa na mtoto."   ("vunja" = "break")
        "The cup has been broken by the child."
        [Cup has-been-broken (passive) by child.]
        "Kikombe kimevunjika." "The cup is broken."
        [Cup is-broken (stative).]

(iv)   Languages which allow a free word order can achieve the effect of a passive in a sentence which is structurally active, by putting the patient rather than the agent or instrument in topic position. Italian and Spanish, for example, mark the initial word as patient by means of an object pronoun in front of the verb. The following are alternatives sentences:

        Spanish: "La reacción fue provocado por una alergia o una enfermidad."
             [The reaction was produced by an allergy or an illness.]
            "La reacción la provocó una alergia o una enfermidad."
            [The reaction it-produced an allergy or an illness.]

        Italian: "La mia macchina è stata colpita da un sasso." [The my car is been hit by a stone.]
            "La mia macchina l'a colpita un sasso." [The my car it-has hit a stone.]

        Inuit can freely adjust the word order:

        "Piniartup puisi pisaraa." "The hunter caught the seal."
                [Hunter (agent) seal catch-he-it.]
        "Puisi piniartup pisaraa." "The seal was caught by the hunter."
                [Seal hunter (agent) catch-he-it.]

(v)   The passive sentence is constructed as an active sentence but without an agent. This is sometimes described as "impersonal". It may arise because, as in the case of Russian, Welsh, Irish, Finnish, and Hungarian, no other passive form of the verb exists. In the absence of an agent, the hearer infers that the patient is the topic:

        French: "On a attrapé le larron." "The thief has been caught" [One has caught the thief.]

        German: "Bei uns darf gestöbert werden." "In this shop you may rummage about."
                [With us it-is-allowed rummaged to-become.]

        Russian: "Vash bagazh otpravyat v gostinitsu." "Your luggage will be taken to the hotel."
                [Your luggage they-take to hotel.]

"Nas kormili tri raza v den'." "We were given three meals a day."
[Us they-fed three meals in day.]

Welsh: "Gwneir caws o laeth." "Cheese is made from milk."
[There-is-making cheese from milk.]
"Gwisgir y wisg Gymreig ganddi hi." "Welsh costume is worn by her."
[There-is-wearing the costume Welsh by her.]

Irish: "Do crúdh na ba." "The cows were milked." [Were-milked the cows.]
"Deintear bróga na leathar." "Shoes are made of leather."
[Are-made shoes of leather.]

Finnish: "Ovi suljetaan avaimella." "The door is closed with a key."
[Door one-closes with key.]
"Paitaanne ei vielä ole pesty." "Your shirt has not been washed."
[Shirt-your not yet it-is washed.]

Hungarian:
"Óránként közlik a hireket." "The news is broadcast every hour."
[Every-hour they-broadcast the news.]
"Ritkán fordítják jól Kosztolányit." "Kosztolányi is rarely translated well."
[Rarely they-translate well Kosztolányi.]

Attributive Sentence and Verb

With the exception of the identification function, transitive sentences result in a stative condition which can be called an *attribute*. Before proceeding to describe the types of transitive verb in more detail, it will be useful to discuss the function and construction of attributes. An attribute is a stative condition which occurs in two contexts:

- As a qualifier to a noun, that is a word attached to a noun which provides further information on it, as described in Chapter 2. (Restrictive Qualifier).
- As a predicate to a stative sentence, which provides information on the condition of the subject. This is an *attributive* sentence and the predicate is expressed by an *attributive* verb.

In English and in many other languages, most attributes are a single word called an "adjective". However, not all attributes are adjectives, as the following examples of a noun qualifier and equivalent attributive sentence illustrate:

"a long speech"   "The speech was long."
"a beautiful picture"   "The picture is beautiful."
"a Government in crisis"   "The Government is in crisis."
"valuable suggestions"   "Your suggestions are of value."
"existing records"   "The records exist."
"the living forest"   "The forest lives."/"The forest is alive."

The first two sentences show adjectives "long" and "beautiful". The attributive sentences are achieved by means of the auxiliary attributive verb "be".

The second two sentences show an attribute formed from a noun and the word "in" or "of". These expressions have already been discussed in Chapter 4. The words "in" or "of" have the meaning "in a state of", and can be regarded as an auxiliary attribute or a converse link. Other English examples of this type of attribute are "in pain", "at risk", "in motion", "at rest", "in error", "at work", "at leisure", "at school", "in existence", or "in love". Italian examples are "di turno" ("on duty"); "in cima" ("at the top"); "in crescita" ("in growth"); "in giro" ("on tour"); "in panne" ("in breakdown").

The third two sentences show an attribute expressed as a stative verb, from which an attributive participle can be formed. Other examples are "suffer" and "rest". Locative examples, described below, are "surround" and "contain". The general pattern of an attributive sentence can be summarised as "subject-attribute". As we shall see, many attributes can themselves have an instrument, for

example "John was angry at the insult"; in those cases, the structure can be extended to "subject-attribute-instrument". Since these sentences describe the state or condition of the subject, the subject is always the topic.

The common feature of these words are that they express the resultant of an expressed or implied transitive or intransitive sentence. The state or condition represents new information and is therefore indefinite; each sentence can be expressed existentially: "There is beauty in the picture"; "There is value in your suggestions"; "There is life in the forest".

Many languages employ the auxiliary attributive verb "be":

Irish: "Tá sé ina fhear shaibhir." "He is a rich man." [Is he in-its man rich.]

Hindi: "dīvār ū̃cī hai" "The wall is high." [Wall high is.]

In many other languages an attribute is a stative verb. Either there is no auxiliary attributive verb, or it is not available in the present tense. In those cases, a qualifier may be distinguished from a predicate by being placed before the noun, while the predicate is after the noun:

Russian: "krasivyi gorod" "a beautiful city";
"Gorod krasiv." "The city is beautiful" [City beautiful.]

Turkish: "kasada vesika" "the document in the safe" [safe-in document]
"Vesika kasada." "The document is in the safe." [Document safe-in.]

Chinese: "yí ge hěn kuān de huāyuán" "a wide garden" [one unit wide of garden]
"Zhè ge fángjiān shí mǐ kuān." "This room is ten metres wide."
[This unit room ten metre wide.]

Japanese:
"takai hon" "[an] expensive book"
"Hon wa takai." "The book is expensive." [Book (topic) expensive.]
"genkina hito" [a] healthy person
"Kono hito wa genki da." "This person is healthy." [This person (topic) healthy is.]

In Inuit, "ungasis" is a stative verb meaning "be far". The qualifier "far" is formed by attaching to the verb a suffix "-suq", here translated as "being":

"nunamut ungasissuq" "far from the land" [land-to far-being]
"Kilumiitirisut untritilittut ungasissigaaq." "It is a hundred kilometres away."
[Kilometres-as hundred-as far-so-it.]

Alternatively, if no auxiliary verb is used, the subject is marked as definite and the predicate (being new information) is not marked as definite:

Arabic: "al-ḍawʔu nāṣiʕun" "The light [is] clear."

"al-masʔalatu basīṭatun" "The question [is] simple."

If the words following the Arabic subject are marked as definite, they are a qualifier:

"al-ʕaqabatu al-kaʔūdu" "the insurmountable obstacle"
[the obstacle the-insurmountable]

In Indonesian/Malay, the words "ini" ("this") and "itu" ("the"/"that") mark the subject as definite. The words following these words are the predicate:

"Ini kereta besar." "This is a big car." [This car big.]
"Kereta ini besar." "This car is big." [Car this big.]
"Kereta besar itu baru." "The big car is new." [Car big the new.]

In Hungarian, an attributive verb may occur at the start or end of the sentence:

> "Koszos a cipő." "The shoes are dirty." [Dirty the shoes.]
> "Ez a ház hatalmas." "This house is huge." [This the house huge.]

Not all stative relations are attributive. The same predicate construction is employed for an identification, described below. An additional category of stative relations expresses possession, as is shown in Chapter 8.

The Ergative Construction

As the above examples show, if no agent is expressed the same construction is used in some languages for both a dynamic perfective sentence and the stative sentence which describes its resultant:

> English: "The window was pushed open."
>
> Italian: "Il romanzo è stato scritto dall'autore." "The novel was written by the author."
>
> Russian: "Pis'mo podpisano ministrom." "[The] letter [is] signed by [a] minister."
>
> Finnish: "Paitaanne ei vielä ole pesty." "Your shirt has not been washed."
> [Shirt-your not yet it-is washed.]

In other languages, the verb in the form of a perfective participle has both transitive and stative meanings, but they are distinguished by different auxiliary verbs:

> German: "Wir wurden derselben Gruppe zugeteilt." "We were assigned to the same group."
> [We became to-the-same group assigned.]
>
> Persian: "košte našodam" "I was not killed." [Killed not-became-I.] ("koštan" = "kill")
>
> Hindi: "patr ḍāk se bhejā gayā thā" "The letter was sent by post."
> [Letter post-by sent gone was.]

It is, of course, essential to the sense of a narrative to indicate whether an action is in progress or has been completed. In most of the languages we have chosen for illustration, an action in progress can have an agent or instrument in topic position, so constructing a standard active transitive sentence:

> English: "She pushed the window open."
>
> Italian: "L'autore a scritto il romanzo."

However, some languages adopt the additional device of marking the agent, by means of a case or inflection which is called *ergative*. Hindi and Inuit employ an ergative, here indicated by (agent):

> Hindi: "usne kitāb likhī" "He wrote the book." [He (agent) book written.]
>
> Inuit: "Akkam-ma aataaq aallaavaa." "My uncle shot the harp-seal."
> [Uncle-my (agent) harpseal shot-he-it.]

The common feature of the ergative construction in both these languages and others which employ it is that it is only used for transitive agents. It does not occur with the agents of intransitive sentences. Because the ergative case distinguishes between the agent and object or patient, the object or patient is generally unmarked.

Further examination shows differences in the structure of the ergative between languages. In the Hindi example, the participle "likhī" ("written") agrees with the patient "kitāb" ("book") in that it is feminine, while the agent "usne" ("he") is masculine. Without the ergative, the sentence would be a stative description of the condition of the book. Moreover, the Hindi ergative is only used for perfective

transitive sentences. In imperfective sentences the risk of confusion between dynamic and stative does not arise, and the agent is not ergative but nominative, the case of the subjects of intransitive and stative sentences:

"sādhu mantra jap rahā thā" "The sadhu was reciting incantations."
[Sadhu mantra repeating was.]

However, the Inuit ergative is used for imperfective and general sentences as well as perfective, while (unlike Hindi), it is not used if the agent is expressed by a pronoun:

"Qimmit irniinnaq paasisarpaat." "The dogs (agent) understand it at once."
[Dogs at-once understand-habitual-they-it.]
"Aappaluttumik qalipappara." "I painted it red." [Red-being-with paint-I-it.]

We may consider two further ergative languages, Basque and Samoan. In Basque, the basic form of the verb is a perfective participle. In the following sentence it is "egin" ("do", "done"):

"Txuleta gutxi egina nahi dut." "I want my steak rare." [Steak little done wish I-have.]

The same form of the verb is used for perfective transitive sentences, with the agent marked as ergative. In this way, Basque distinguishes the perfective from the attributive:

"Zer egin behar zuen Josuk?" "What did Josu have to do?" [What do need had Josu (agent)?]

The Basque ergative is not used for imperfective sentences, but unlike the other languages cited is used for "have":

"Elin oraindik txuleta jaten ari da." "Elin is still eating her steak." [Elin still steak eating is.]
"Nik badaukat zinta hau." "I've got this tape." [I (agent) have tape this.]

The Samoan transitive verb has two forms which express an active transitive sentence, generally called "active" and "passive". When the "active" form is used, the agent is not marked. When the "passive" form is used, the agent is marked as ergative with the prefix "e" ("by"). In these examples, "fa'aaogā" ("use") is active and "fa'aaogaina" ("used") is passive:

"Fa'aaogā le ulo e fai a'i mea'ai." "Use the pot to cook food."   (active)
[Use the pot to cook with-which food.]
"Ua fa'aaogaina e Tavita nofoa o lo'o i ai i totonu o le fale."   (passive)
"David is using the chairs which are inside the house."
[Are being-used by-David chairs there-are inside the house.]

As these examples show, the Samoan ergative is used for imperfective as well as perfective. Without the agent "e Tavita", the second sentence would be a simple passive "The chairs are being used", which can be interpreted as dynamic or stative according to its context in the narrative. The ergative agent marks the sentence as dynamic.

The approach of structural grammar is to regard the ergative-absolutive construction as an alternative to the nominative-accusative one, "absolutive" being the case of the object of an ergative sentence. This of course is correct. However, both realise the same function, the "agent-patient-resultant" dynamic sentence.

In addition to indicating whether a verb is dynamic or stative, the ergative can distinguish a transitive from an intransitive sentence, where the same form of the verb is used in both (Chapter 7., The Inceptive Function):

Avar: "wacas šiša bekana" "The boy broke the bottle." [Boy (agent) bottle broke.]
           "šiša bekana" "The bottle broke." [Bottle broke.][1]

---

[1] Comrie, 223.

"bekana" ("broke") and "šiša" ("bottle") have the same form in both sentences, "šiša" being absolutive. The first sentence is marked as transitive through having an ergative topic.

Functions of the Transitive Verb

The function of a transitive sentence is to affect or alter its patient to a state described by the resultant. So far, we have been examining the elements which are or can be common to all transitive sentences: the agent, verb, patient, resultant, and instrument.

However, this is not an adequate description of all the transitive sentences which occur. Closer examination shows that transitive sentences vary according to the resultant to which they give rise. In the rest of this chapter, we shall describe seven different types of resultant and corresponding transitive sentences. They are:

- The creation and destruction function, whose patient is created or destroyed.
- The transformation function, whose patient is altered to a new form.
- The locative function, whose patient is located and moved in space or time.
- The constituent function, which alters the constituent of its patient.
- The effect function, whose patient is in an altered state due an external cause.
- The dependency function, whose patient is at risk of an external event.
- The appliance function, whose patient is subjected to a human artefact.
- The identification function, whose patient is identified with a definite or indefinite noun.

Some of these transitive and attributive constructions are adequately described by the elements we have already covered (agent, verb, patient, resultant, and instrument). Others refer to elements additional to these:

- The locative sentence refers to a direction and distance.
- The dependency sentence refers to an external event.
- The appliance sentence includes an appliance or artefact.

Chapter 10. will cover an additional element of transitive and intransitive sentences, the beneficiary. Chapters 8., 9., and 11. will cover other types of agential sentence, the dative, adoptive, causative, and facilitative. Dative and adoptive sentences give rise to a different type of stative resultant sentence, the possession. The resultant sentence of a causative sentence is not stative, but dynamic. A facilitative is a type of dative sentence whose resultant sentence is a modal.

Each of the following transitive sentences is accompanied by its stative resultant sentence, marked with "→".

The Creation and Destruction Functions

Under this heading are included two categories of sentence, those which describe an act of creation and those which describe an act of destruction. Their common feature is that the transitive sentence may not need to include a separate expression for the resultant. To consider first a creative sentence:

"Philip built the house."   →   "The house is built."
"Anne wrote the letter."   →   "The letter is written."

If there is no need to state the constituents from the which house or letter was made, the meaning of these sentences is complete. Alternatively, the constituents can be included:

"Philip built the house in brick."   →   "The house is of brick."
"Anne wrote a letter of thanks."   →   "The letter expresses her thanks."

It can be seen that in reality the object of these sentences, the thing created, is not its patient. The house and the letter are not converted into anything; they are the result of the conversion and therefore the resultant. What is the patient is the constituents from which they were made. If these sentences

were expressed in the same format as other transitive verbs, they would appear more artificial or indirect:

> "Philip built the bricks into a house."
> → "The bricks are built as a house."
> "Anne composed her thanks in a letter."
> → "Her thanks are written in a letter."

The characteristic of a creative sentence is therefore that the direct object is the resultant, and the patient (if expressed) is the constituents from which it is made. The resultant sentence has as its subject not the patient, as is usual, but the resultant. If no constituents are included, the verb of the resultant is the perfective participle, such as "built" or "written".

Many creative actions are the representation of an object in some medium. The object is not altered, and the patient is the medium in which the representation is made. These sentences combine the functions of creation with communication (Chapter 8., The Representation Function):

> "Gainsborough painted a picture of his sitter as a country gentleman."
> "She summarised the article in five lines."
> "We translated the book into Greek."

Examples of a destructive sentence are:

> "Brutus murdered Julius Caesar."   → "Julius Caesar is dead."
> "The executor broke up the estate." → "The estate is broken up."
> "The fire burnt the house."   → "The house is burnt."
> "The family ate lunch."   → "The lunch was eaten."

These sentences conform to the standard transitive pattern. The patient is affected by the verb, in that it is destroyed. If there is no need to state the results of the destruction, the resultant can be omitted. In that case, the attribute of the resultant sentence is again the perfective participle, "dead", "broken up", "burnt", or "eaten".

Equally, the sentences can have a resultant which is the attribute of the resultant sentence:

> "Brutus stabbed Julius Caesar to death."
> → "Julius Caesar is dead from stab wounds."
> "The executor broke up the estate into lots."
> → "The estate is broken up into lots."
> "Fire burnt the house to ashes."   → "The house is burnt to ashes."

Both creative and destructive verbs can have an instrument:

> "Anne wrote the letter on her computer."
> "Brutus murdered Julius Caesar with a dagger."

The Transformation Function

Many examples of a transitive sentence listed earlier in this chapter (Transitive Sentence and Stative Resultant) are of sentences which alter their patient in some way, without either creating something new or destroying something. We can all their action a *transformation*. The verb expresses the transformation action. The resultant is generally an attribute which describes the transformed state, and is expressed by a complement:

> "John pushed the window open."   → "The window was (pushed) open."
> "Mary painted the fence green."   → "The fence was (painted) green."
> "Sheila mowed the grass very short."
> → "The grass was (mowed) very short."

In many instances, the verb expresses both the transformation action and the resultant state:

"James chopped up the logs with an axe."
                                    →   "The logs were chopped."
"John preserved the fence with creosote."
                                    →   "The fence was preserved."
"His actions saddened his mother." →   "His mother was (made) sad."
"The garage serviced the car."   →   "The car was serviced."

The above examples are of an intentional transformation by an agent. A transformation may also be carried out by natural forces:

"Rain softened the ground."   →   "The ground was soft."
"The sun melted the snow."   →   "The snow was melted."

or by an instrument whose action is ultimately due to an unspecified agent:

"The paintstripper melted the paint."
                                    →   "The paint was melted."
"The computer calculated the result."
                                    →   "The result appeared on the computer."

The Locative Function

Every language possesses a range of words for the relation of a subject to a physical location. There are a large number of such relations:

"Mary is in the garden." "John is outside the door." "The paper is on the table."
"Manchester is North of London." "Her office is along the corridor."

It is usual to place such words in a separate category, called "preposition" or "postposition" because they are pre-posed or post-posed to a noun. In fact, they are no different in function from other attributes or adverbials, except that they may connect to a physical location:

"The outside of the house is pretty."   (noun)
"This is an outside broadcast."   (attribute)
"They are working outside."   (adverbial)
"The land outside the garden is still wild."   (qualifier)

In Chapter 4. (Links), we saw how prepositions and postpositions are also often used to express grammatical relations unrelated to physical location. To distinguish between these functions, we refer to the grammatical relation as a *link* and the physical relation as a *locative*. A locative can also be a verb or an attribute:

"The moat surrounds the castle"   = "The moat is around the castle".
"The box contained a present"   = "A present was in the box".
"The land external to the garden is still wild" = "The land outside the garden…".
"The house adjacent to the school belongs to the headmaster"
                                             = "The house besides the school…".

While languages such as English have a separate locative for each position, other languages have few locatives. In the case of Chinese, they are "zài" (at/in) and "lí" ("distant from"), which can function as locative verbs:

"Tāmen xiànzài zài Měiguó." "They are in America now." [They now are-in America.]
"Háizi dōu zài wàitou." "The children are all outside." [Children all are-at outside.]
"Wŏ jiā lí dàxué hĕn yuăn." "My home is very far from the University."
                            [My home is-from University very far.]

Other positions are expressed by an adverbial placed after the noun, for example "li" ("inside"), "shang" ("on top"), or "fùjìn" ("beside"):

"Tā zài huāyuán li gē cǎo." "She is in the garden cutting the grass."
[She is-at garden inside cut grass.]
"Wǒmen zài hǎitān shang shài tàiyáng." "We were on the beach sunbathing."
[We were-at beach on-top bask sun.]
"Wǒ jiā zài Hǎidé gōngyuán fùjìn." "My home is near Hyde Park."
[I home is-at Hyde Park beside.]

Japanese has two principal locatives: "ni" and "de" ("at"/"to"). Others are constructed with these and an attributive noun:

"Ima kumo no ue ni imasu." "We are above the clouds now."
[Now cloud-of above-at there-are.]
"Ie no soba ni kōen ga arimasu." "There is a park beside my house."
[House-of beside-at park (subject) there-is.]
"Ōzei no mae de hanasu no wa suki de nai." "I don't like speaking before many people."
[Crowd-of before-at speak-of (topic) liking is-not.]

The Inuit suffix "-niip" or its variants converts a postposition or noun into a locative verb ("be at"/"be in"):

"Ikaniippuq napparsimmavik." "Over there is the hospital." [Overthere-at-it hospital.]
"Nuup iqqaaniippuq." "It's near Nuuk." [Nuuk-of nearness-its-in-it.]
"Illuminiippuq." "He is in his house." [House-his-at-he.]

Other Inuit examples of locative verbs are "maaniip" ("be here"), and "min" ("be from"):

"Ullaannguaralaarli maaniippunga." "I've been here since early morning."
[Earlythismorning-since here-I.]
"Jensiminuna." "It's from Jensi." [Jensi-from-that.]

Languages also need to express the relation of a subject to a point or period in time, and it is usual to use locatives for that function. However, since the number of temporal relations is much smaller, they can often be omitted:

"The meeting is [on] Tuesday." "The work will be done [during] Wednesday."

Finnish and Hungarian possess a wide range of locative inflexions. They also employ postpositions for English prepositions:

Finnish: "Laiva on laiturissa." "The ship is at the quay." [Ship is quay-in.]
"Koira on pöydän alla." "The dog is under the table." [Dog is table-under.]
"Naantali on Turun lähellä." "Naantali is near Turku." [Naantali is Turku-near.]

Hungarian:
"Híres egyetemen dolgozunk." "We work at a famous university."
[Famous university-at we-work.]
"A kutya az ágynál fekszik." "The dog is lying near the bed."
[The dog the bed-near lies.]
"A hazzál szemben van egy gyönyörű gesztenyefa."
"There is a beautiful chestnut tree opposite the house."
[The house-with-opposite there-is a beautiful chestnut-tree.]

Locatives are a stative attribute. The sentence can be summarised as "subject-locative-location."

Languages possess a wide range of transitive verbs which express movement, that is an action to transfer its patient to another location. The resultant of such a movement verb is therefore a locative. English examples of transitive movement verbs are:

"She fetched the chair into the hall."

| | → | "The chair is in the hall." |

"She pulled the letter out of the envelope."

| | → | "The letter was outside the envelope." |

"He placed the book onto the table."

| | → | "The book is on the table." |

| "He swept the dust off the floor." | → | "The dust is off the floor." |
| "He took the pot off the stove." | → | "The pot is off the stove." |

Since the movement is towards the resultant location, it is expressed by a word indicating direction, called a *directive*. For each locative, there is an equivalent directive. In the above examples, the directives are "into", "out of", "onto", "off", "up", and "back". Other directives with equivalent locatives are "to"/"at", "down", "through", "far from", "near to", "apart", "forward", "over", "under", "across", "between", "among", "along", "away", and "besides". In the terminology of Chapter 7., a directive is the *inceptive* form of the locative.

Finnish and Hungarian possess a wide range of directive inflexions.

Finnish: "Hän pani avaimen lukkoon." "He put the key into the lock."
[He put key lock-into.]
"Reino nousi penkiltä." "Reino got up from the bench."
[Reino got-up bench-from.]

Hungarian:
"Imre elment Olaszországba." "Imre went to Italy." [Imre went Italy-to.]
"Kitéptem egy lapot a füzetemből." "I tore a page out of my notebook."
[Out-tore-I a page the notebook-my-from.]

As the last Hungarian sentence illustrates, a movement sentence can include separate words or inflexions to describe the directive and the locative of the resultant or original location. English examples are:

"She lifted the picture up onto the hook."

| | → | "The picture is on the hook." |

"He put the meeting back until 10.00."

| | → | "The meeting occurred at 10.00." |

In English and other languages, the directive can be an adverbial without the physical location being stated:

"She fetched the chair in."	"She pulled the letter out."
"He lifted the shopping out."	"He took the pot off."
"She lifted the picture up."	"He put the meeting back."

German: "Ich warf mein Buch in den Garten hinunter."
"I threw my book down into the garden."
[I threw my book into the garden down.]

Welsh: "rhoi arwydd i fyny" "to put up a sign" [put sign up]
"rhoi'r teganau ar gadw" "to put the toys away"

Italian: "Portiamo giù questo barile." "Let's carry this barrel down."
[Let's-carry down this barrel.]
"quando lo ebbero poi portato via" "when they had taken it away"
[when it they-had then taken away]
"Non si sa mai cosa va a tirar fuori." "You never know what he is going to pull out."
"Marianna la tira su." "Marianna pulls it up." [Marianna it pulls up.]

Hungarian:
"Kati bement a szobába" "Kati went into the room." [Kati in-went the room-to.]
"A villamosra szálltam fel." "I got on the tram." [The tram-onto I-got up.]

"Levette a cuccait az asztalról." "She took her things off the table."
                                        [Off-she-took the things-her the table-from.]

Chinese: "Tā bǎ pánzi qīngqīng fàngxia" "He laid the tray down gently."
                                        [He the tray gently laid-down.]
"Shū yào de huílái ma?" "Can I/you get the books back?"
                                        [Book get can back-come query.]
"Tāmen lā kāi le liǎng gè zhèngzài dǎjià de rén."
"They pulled apart two people who were fighting."
[They pull apart (aorist) two unit fight who person.]

Japanese:
"Inu ga heya no naka e haitte kita." "A dog came into the room."
                                        [Dog (subject) room-of inside-to entering did.]
"Neko ga tēburu no ue e tobiagatta." " A cat jumped onto the table."
                                        [Cat (subject) table-on-top-to jumped.]

An alternative way to indicate direction is to include it in the verb, for example the English "erect" (put up), "remove" (take away), "extract" (pull out), "retrieve" (get back). These occur also in those languages which do not have explicit directive adverbials.

The Constituent Function

A characteristic of any physical entity is that it can be measured. A measure is a quantity of distance, extent, or other characteristic and therefore has a unit (Chapter 2., Quantity; Chapter 12., The Physical Noun). It is applied to the *constituents* of an object:

"The list contains fifteen names."
"The houses have ten windows."

The function of a transitive sentence is to effect change in its patient. In the case of a constituent sentence, the change is to a constituent of the patient. This change can be an addition or subtraction, increase or decrease. The resultant is a measure of the constituent:

"She removed £100 from her account."
                                    →   "Her account was £100 less."
"The Secretary included Mrs Smith on the list."
                                    →   "The list contains fifteen names."
"The architect gave the building ten windows."
                                    →   "The houses have ten windows."

If instead of measuring the quantity of constituents we measure the dimensions of an object, we employ a sentence with the same construction as a constituent sentence:

"Mount Everest is 8848 metres high."   "The height of Mount Everest is 8848 metres."
"The River Thames is 338 kilometres long." "The length of the Thames is 338 kilometres."
"Apples are priced at £1.20 per kilo."   "The price of apples is £1.20 per kilo."

The dimension can be a locative whose measure is the distance relative to a location:

"The artefacts were one metre below ground."
"The shops are one km along the road."
"The engineers arrived one hour after he was expected."

The dimension may also be a stative verb:

"The play lasted two hours."   "The duration of the play was two hours."
"The canal extends for 100 miles."   "The length of the canal is 100 miles."

For a directive, the dimension is the distance moved:

"She pulled the chair one metre away from the wall."
"He drove his car one km to the shops."
"The meeting was delayed for two hours."

A transitive sentence operating on a dimension increases or decreases it, expressed by a measure and unit:

"The road was widened by 10 metres."
→ "The road was 10 metres wider."
"The bank raised the interest rate by ¼ %."
→ "The interest rate was ¼ % higher."
"The move reduced his drive to work by one hour."
→ "He lives one hour closer to his work."
"She half filled the bucket with water."
→ "The bucket was half filled with water."

As we have already noted in the addition and subtraction of constituents, the resultant of a transitive dimension sentence either states a dimension or compares it with a previous dimension.

The analogy between a constituent and a dimension enables us to combine them into a single function, called "constituent". A constituent sentence measures a characteristic of an object in terms of units – either its dimensions or its constituent parts. A single constituent sentence can refer to and measure several constituents:

"She added six apples, five oranges, and seven kilos of potatoes to the basket."
"The play consisted of three acts with two intervals, each of ten minutes."

The measurement function occurs very frequently as a restrictive qualifier:

"a three-bedroom house"; "a five-barred gate"; "a seven-pound baby".

The Effect Function

Mental states are of two sorts, voluntary and involuntary, and this fact is expressed in language. A voluntary mental state is one which the subject takes on him/herself and which is directed towards an external object, such as "interest", "pleasure", "conviction", "regret", "resentment", and "satisfaction". As we will show in Chapter 8., a voluntary mental state is not an attribute but a possession, and is therefore not the resultant of the type of transitive verb which we are considering in this chapter. We call such voluntary states *opinions*.

An involuntary mental state is a spontaneous reaction by a subject to an external cause. It is a matter of observation that the statement of that cause is essential to their meaning. The same is also true of many though not all involuntary physical states. For such an involuntary mental or physical state with an external cause we are proposing the term *effect*. An effect is an attribute of its subject, linked to the cause of the effect.

As for other attributes, there is a transitive sentence which creates an effect in a patient. Examples are:

"Baggage burdened down the car." → "The car was heavy with baggage".
"His behaviour angered her." → "She felt angry at his behaviour."
"The results were surprising to us." → "We were surprised at the result."
"The wound in my leg is causing me pain."
→ "I am in pain from a wound in my leg."
"The future worries us." → "We are worried about the future."
"The speech excited the audience." → "The audience was excited at the speech."
"Seeing you here has made her happy."
→ "She is happy to see you here."
"The outcome disappointed us." → "We are disappointed at the outcome."
"Asbestos polluted the building." → "The building was polluted with asbestos."

| "Errors corrupted the text." | → | "The text was riddled with errors." |
| "Dust covered the furniture." | → | "The furniture was covered with dust." |

The first of these sentences expresses the causing of the effect in the patient, and the second, the resultant sentence, expresses the state of the effect due to the cause. It will be seen that the cause is the instrument of the transitive sentence, and we can therefore use the term instrument for the cause in the attributive sentence as well.

The above transitive sentences do not involve agents. Only three concept elements appear in their construction: the subject (patient of the transitive verb), the effect itself, and the instrument.

Many but not all of these transitive instrumental sentences can also be expressed with an agent: "He burdened down the car with the baggage"; "He angered her with his behaviour"; "She excited the audience with her speech", etc. It can be readily seen that these agential sentences have the same resultant sentence as the corresponding instrumental sentence.

Effects can operate in succession, and are then expressed by more than one instrument:

"His behaviour so angered her that she felt faint."
"Software bugs caused errors which corrupted the text."
"The wind blew dust onto the furniture."

A variant of the effect sentence is one which removes an effect from the patient. Such a sentence is usually agential, and its resultant sentence is a statement that the subject is free from the effect. It can be called a *freedom*:

"Contractors have freed the building of asbestos."
→ "The building is free from asbestos."
"The editor used software to get rid of the errors in the text."
→ "The text is rid of errors."
"The furniture was cleaned of dust with a hoover."
→ "The furniture was clean of dust."

The effects "free", "rid", or "clean" express the negatives of the effects "polluted", "riddled", and "dirty". "Asbestos", "errors", and "dust" are instruments of the original effects, but not of the subsequent freedoms; the instruments of the freedoms are the means whereby the effects are removed, such as "software" or "hoover" in these examples. For the freedoms, we must therefore include a separate term, called a *burden*, which in these examples are "asbestos", "errors", and "dust".

A freedom is therefore a sort of negative effect, but differs from it in two ways:

(i)   Most effects arise involuntarily, and the sentences which express them are accordingly usually instrumental. The removal of an effect (a freedom) usually requires deliberate action, and is accordingly agential.

(ii)   The instrument of an effect becomes the burden of the subsequent freedom. If the freedom has an instrument, it is a separate term.

Like other transitive verbs, an effect transitive can form a general participle, which expresses the general action of the verb without reference to a specific occurrence. These general participles are very common in English, as the following versions of the above examples show. They are instrumental in their nature:

"The baggage was burdensome".	"His behaviour was infuriating."
"The results were surprising."	"The wound is painful."
"The future is worrying."	"The speech was exciting."
"Seeing you here is felicitous."	"The outcome is disappointing."

In English, the link word between the effect attribute and instrument is often "at" but may also be "of" or other words. In French (as in other Romance languages), it is consistently "de":

"Je ne suis pas très heureux de ce projet."   "I'm not happy about the plan."
"Il en avais assez de lire."   "He was bored with reading."
"Je suis fâché de ne pas venir."   "I am sorry that I cannot come/at not coming."
"Il a été surpris d'apprendre que…"   "He was surprised to hear that…"

Hungarian and Turkish use the ablative case "from":

Hungarian:
"Reszket a hidegtől." "She is shivering from the cold."
[She shivers the cold-from."]
"Kivagyok a sok gondtól." "I am worn out with all the worry."
[Out-worn-I the much worry-from.]

Turkish: "muvaffakıyetten sarhoş" "drunk from success" [success-from drunk]
"açlıktan bitkin" "exhausted from hunger" [hunger-from exhausted].

In Chinese, the word "duì" is used for the same function:

"Tā duì yŭyán kè hĕn mănyì." "He is happy with the language course."
[He at language course very satisfied.]
"duì mŏushì găndào chījīng" [at something feel surprised]
"duì mŏurén shēngqì" [at someone angry]

In Japanese, the word "de" is used:

"Ōame de hashi ga kowareta."   "Heavy rain destroyed the bridge."
[Heavy-rain-from bridge (subject) broken-is.]
"Shigoto de totemo tsukareta." "Because of my work I got very tired."
[Work-from very tired-is.]

Indonesian/Malay forms transitive verbs from the effect attribute by the prefix "men-" and suffix "-kan":

"Pidatonya mengecewakan para pemilih." "His speech disappointed the voters."
("kecewa" = "disappointed")
"Kabar itu sangat menyedihkan." "The news was very saddening."
("sedih" = "sad")
"Film-film seperti itu membosankan saya." "Films like that bore me."
("bosan" = "bored")

In Greek, the effect attribute is expressed as the perfective participle of the transitive verb by the ending "-μένος" or a variant. As already noted, the general participle is formed with the ending "-ικός":

"συγκινώ" "excite"   "συγκινημένος " "excited"   "συγκινητικός" "exciting"
"κουράζω" "tire"   "κουρασμένος" "tired"   "κουραστικός" "tiring"
"απογοητεύω"   "απογοητευμένος"   "απογοητευτικός"
     "disappoint"   "disappointed"   "disappointing"
"εκπλήττω" "surprise"   "έκπληκτος" "surprised"   "εκπληκτικός" "surprising"
"ενοχλώ" "annoy"   "ενοχλημένος" "annoyed"   "ενοχλητικός" "annoying"

"Λυπάμαι που σας απογοήτευσα." "I'm sorry to disappoint you."
[I-regret that you I-disappointed.]
"Ειμαι απογοητευμένος μαζί σου." "I'm disappointed with you."
"Τα νέα ήταν απογοητευτικά." "The news has been disappointing."
"Με εκπλήττεις!" "You surprise me!" [Me you-surprise.]
"μια έκπληκτη ματία" "a surprised look"
"εκπληκτική ομολογία" "[a] surprising admission"

The Dependency Function

An effect is a mental or physical state which arises from some past external cause. A *dependency* is a state which may arise from some cause in the future. It is usually physical in nature. The corresponding transitive verb places its patient in a state of dependency on the cause, and can be agential, instrumental, or passive. The cause is not the agent or instrument of the dependency. The following examples are listed by the type of transitive verb:

agential

"Parliament subjected this law to the Human Rights Act."
→   "The law is subject to the human rights act."

instrumental

"Subsidence places the building at risk of collapse."
→   "The building is at risk of collapse (from subsidence)."
"The storm endangered the boat." → "The boat is in danger of sinking (from the storm)."
"Smoking is a threat to health.   → "Health is under threat from smoking."

passive

"The window was opened/closed to the elements."
→   "The window is open/closed to the elements."

If the transitive sentence is instrumental, a dependency is also an effect. There are also dependencies for which no transitive verb is obvious:

"I am waiting for a letter from him."
"The Society is dependent on donations."
"I'll come provided I receive an invitation."

If the subject of the dependency is a person, it may be involuntary or intentional. If it is intentional, the transitive sentence may be reflexive:

"He put himself at risk of bankruptcy with the loan."/
"The loan put him at risk of bankruptcy."
→   "He was at risk of bankruptcy from the loan."

A patient can also be relieved of a dependency through the action of an agent or instrument. The resultant sentence of such an action is that the patient is no longer subject to the risk:

"The army defended the town from marauders."
→   "The town was defended from marauders."
"The shelter protected the travellers from the wind."
→   "The travellers were protected from the wind."
"Flying buttresses protect the cathedral walls from collapsing."
→   "The walls did not collapse."

The cause of the dependency is still present ("marauders", "the wind"), but is neutralised though the *relief* action. The agent or instrument of the relief is evidently different from the agent or instrument of the original dependency.

Examples of general participles of dependency or relief transitives are "risky", "dangerous", "threatening", "protective", and "defensive".

The Appliance Function

A great many transitive sentences describe the application of a human artefact for its intended purpose. The artefact is represented by a noun called an *appliance*. English has the facility of constructing the appliance as a transitive verb, with the meaning "apply the artefact to":

"He brushed the yard clean."	(brush)
"She telephoned the message to her friend."	(telephone)
"We painted the fence green."	(paint)
"She sawed the log in half."	(saw)
"The judge imprisoned the convict."	(prison)
"She stored the china for future use."	(store)

These sentences take the form of a simple transitive sentence with resultant. The resultant sentence need not necessarily refer to the appliance: "The yard was (brushed) clean"; "The fence was (painted) green", etc.

In a similar way to English, Italian forms an appliance verb from a noun, usually with "-are". Indonesian/Malay uses the prefix "men-" and suffix "-kan":

"brush"	"spazzola"/"spazzolare"	"sikat"/"menyikat"
"telephone"	"telefono"/"telefonare"	"telpon"/"menelpon"
"saw"	"sega"/"segare"	"gergaji"/"menggergaji"
"gaol"	"prigione"/"imprigionare"	"penjara"/"memenjarakan"
"store"	"deposito"/"depositare"	"gudang"/"menggudangkan"
"stage"	"palco"/-	"pentas"/"mementaskan"
"plan"	"piano"/"pianificare"	"rencana"/"merencanakan"

Alternatively, Indonesian/Malay can form an appliance with the prefix "pe-":

"menenangkan"	"calm"	"penenang"	"sedative"
"merangsang"	"stimulate"	"perangsang"	"stimulant"

Indonesian/Malay appliance verbs may possess separate transitive and participation forms ("balut" is "bandage"):

"Perawat membalut lukanya dengan kain." "The nurse bandaged his wound with a cloth."
[Nurse bandaged wound-his with cloth.]
"Perawat membalutkan kain ke lukanya." "The nurse wrapped the cloth around his wound."
[Nurse bandaged cloth around wound-his.]

Russian also forms an appliance verb from a noun:

<u>noun</u>		<u>verb</u>	
"saw"	"pila"	"saw"	"pilit'"
"telephone"	"telefon"	"telephone"	"telefonirovat'"
"stock"	"zapas"	"store"	"zapasat'"

However, the more common means in Russian is to derive the appliance noun from a corresponding verb:

"soap"	"mylo"	"wash"	"myt'"/"myt'sya"
"drill"	"sverlo"	"drill"	"sverlit'"
"switch"	"vyklyuchatel'"	"switch off"	"vyklyuchat'"
"loader"	"pogruzchik"	"load"	"pogruzhat'"
"paint"	"kraska"	"paint"	"krasit'"
"motor"	"dvigatel'"	"move"	"dvigat'"
"transmitter"	"peredatchik"	"transmit"	"peredat'"

Similarly, English appliance nouns such as "dishwasher", "pollutant", "sedative", "indicator", and toothbrush are formed from verbs:

"The dishwasher ran for an hour."
"The pollutant leaked into the river."
"The sedative calmed him down."
"The indicator pointed the direction."
"He threw away his old toothbrush."

The Identification Function

A number of transitive and intransitive sentences express the conversion of the patient to another form, represented by the resultant in the form of a noun:

"George Washington was elected President."
→ "George Washington was President."
"The priests mummified Rameses II."
→ "Rameses II had become a mummy."
"The bones of the dinosaur were fossilised."
→ "The bones had became fossils."
"She was trained to be an accountant."
→ "She was a trained accountant."
"Birmingham grew to be a city in England."
→ "Birmingham is a city in England."
"A young swan is called a cygnet." → "A cygnet is a young swan."
"The sea east of Britain is called the North Sea."
→ "The North Sea is the sea east of Britain."

The outcome of the conversion is that the patient is identified with the resultant noun, when previously that was not the case. The resultant sentence is therefore a statement that the two nouns are now identified, which we can call an *identification*. Since its function is to assign an identification to the subject, the subject is the topic.

An identification can also identify two general entities:

"New Yorkers are citizens of the United States."
"A chair is an item of furniture for sitting on."

The subject of an identification must be definite, in accordance with the rules on discourse in Chapter 1. The predicate can be definite or indefinite. If it is definite, the sentence means "The subject and the predicate are the same entity", and the subject and predicate can be reversed:

"The President was George Washington." "A young swan is a cygnet."

If it is indefinite, it means "There is a particular instance of a class of entities described by the predicate; it is the same as the subject". The subject and predicate can then not be reversed. The following are incorrect or artificial:

*"The fossils were bones." *"A trained accountant is she."
*"A city in England is Birmingham." *"Citizens of the United States are New Yorkers."

If the subject is an individual noun, it is definite by its nature. "Louis XIV was king of France" means "Louis XIV was a person; there was an office called king of France, and Louis XIV held it."

If the subject is not individual, its definiteness must be established by prior context. "The king of France was Louis XIV" means "There was a unique office called king of France; at the time that this sentence was true, the office existed; it was held by Louis XIV."

Provided that the word order of an identification sentence clearly distinguishes the subject and predicate, and the subject is definite, no verb is needed. This occurs in many languages:

Turkish: "Kızın adı Fatma." "The girl's name is Fatima." [Girl-of name-her Fatima.]

Indonesian:

"Rumah besar itu rumah Tomo." "That big house is Tomo's."
[House big that house Tomo.]
"Harimau itu binantang liar." "The tiger is a wild animal." [Tiger the animal wild.]

However, many languages distinguish between identities with a definite and an indefinite predicate. In Russian identification statements, an identity which is represented as permanent is nominative (an unmodified noun) and an impermanent (nonspecific) identity may be in the instrumental case:

"Po professii on byl botanik." "By profession, he was [a] botanist (nominative)."
"Vo vremya voiny ya byl ofitserom." "During [the] war, I was [an] officer (instrumental)."

In Arabic, a definite predicate contains a repeated pronoun:

Arabic: "al-ʕamalu li-l-rajuli šarafun" "Work is for a man an honour."
[The-work for the-man honour.]
"naḥnu fallāḥūna" "We [are] farmers."
"hāʔulāʔi hunna banātī" "These are my daughters." [These they daughters-my.]

Irish distinguishes an attribute and identification by different words for "be": "tà" for an attribute and "is" for an identification, or variants of those words:

"Tá na garsúin thall ansan sa pháirc." "The boys are over there in the field."
[Are the boys over there in-the field.]
"Is é an leabhar mór an duais." "The big book is the prize." [Is it the book big the prize.]

However, if the predicate of an Irish identification is indefinite, it precedes the subject, reversing the sequence of topic and comment:

"Is maith an múinteoir é Séamas." "James is a good teacher."
[Is good the teacher he James.]
"Is mór an cúnamh comhairle mhaith." "Good advice is a great help."
[Is great the help advice good.]

Similarly, Spanish uses different auxiliary verbs for an attribute and an identification:

"Está parado desde febrero." "He's been out of work since February."
[He-is unemployed since February.]
"París es la capital de Francia." "Paris is the capital of France."

Chinese distinguishes between identities with a non-individual subject, which use the auxiliary verb "shì" ("be"), and those with an individual subject, which do not:

"Zhè shì Wáng xiāngsheng." "This is Mr Wang." [This is Wang-Mr.]
"Wǒ Yīngguó rén." "I am an English person." [I England person.]

In addition to being a sentence, an identification may be a restrictive or non-restrictive qualifier. This is called an *apposition*:

"My neighbour, a teacher, is at work today."
"The Iguanodon bones were discovered as fossils in the Isle of Wight."

Rather than an identification occurring between two entities, it can occur between a characteristic of two entities. This is called a *similarity*:

"My wife and I are similar in our hobbies."

This sentence means: "My wife and I have the same hobbies, and in that respect we are similar." The similarity is "hobbies".

A lack of identification between two characteristics is a *difference*:

> "My wife and I have different temperaments."

This means: "My wife and I do not have the same temperament, and in that respect we are different". The difference is "temperament".

Similarity statements are often expressed less precisely: "My love is like a red red rose." This means: "There are features in common between my love and a red rose"; the listener is left to infer what they are. If a difference or lack of identification refers to a physical entity, it can be measured: "The population density of France is 0.45 that of the UK."