Conceptual definitions of semantic notions like state, activity, progressiveness, imperfectivity, perfectivity, accomplishment, achievement, completion, duration, etc. are used by aspectologists. A theory of aspect must give the exact extension of such concepts and must also explain how these grammatical concepts are interrelated. Other notions like ingressiveness, inchoativeness, terminativeness, semelfactivity, iterativity, etc. can be derived from the more basic notions of state, event and process. Our purpose here is to explain why it is essential to take the basic trichotomy state/event/process into consideration when analyzing aspectual constructions in natural languages. There are two principal approaches to the basic aspectual concepts. The first approach, represented by Galton (1976), Kamp (1979), Bennett (1981), Vet (1985), Langacker (1987), Thelin (1990b), Pottier (1993), Koseska-Toczewa & Mazurkiewicz (1992), claims explicitly or implicitly that state and event are fundamental concepts in the treatment of the categories of aspect and tense. The second approach, represented by Dahl (1973), Comrie (1976), Lyons (1977), Mourelatos (1981), Desclés (1980, 1989), Guentchéva (1990), considers the trichotomy state/process/event as basic.

We shall argue that the notion of process is necessary to discuss and explain the differences between the two linguistic expressions in (1).
We consider the distinction to be aspectual: (1a) carries the aspectual meaning of state, more specifically a state of activity but (1b) carries the aspectual meaning of process in progress.

We will discuss some examples in English, French and Bulgarian in the third section.

1. States, events and process in progress. Referential situations denoted by utterances are viewed by speakers as either static or dynamic: there is a distinction perceptible through the senses. Some predicates (like: know, contain, belong, look ill, be tall, be ill, be silly...) may be viewed as having a stative meaning; other predicates (like: drive, run, go, give ...) may be viewed as having dynamic interpretation. Besides, from the intrinsic meanings of lexical predicates, we can always predict the aspectual meanings of the utterances when they occur in discourse. There is an interaction between lexical and grammatical meanings but grammatical meanings are superordinated (Chvany,1988). It is a widely recognized fact that a number of aspectual operators construct linguistic expressions denoting dynamic situations from stative predicates as in (2) or linguistic expressions denoting stative situations from dynamic predicates as in (3):

(2) a. He is silly (stative situation)
    b. He is being silly ("is ...ing" constructs a dynamic situation)
(3) a. The train is now arriving at platform six (dynamic situation)
    b. The train has arrived at platform six (stative situation)

To denote a situation by means of an utterance, the speaker localizes the situation in his referential space so that the listener may reconstruct the denoted situation. The speaker's referential space involves the oriented flow of time. Thus, the denoted situation is temporally related to the Speech Situation. The temporal zero-point $T^0$ of the Speech Situation is the first instant of the not-yet-realized domain. When the speaker pronounces utterances, the denoted situation can be "true" at certain intervals of time and "false" at other instants of time. We use a topological framework and the elementary notions of punctual instant, interiority, exteriority and boundary of an interval to represent the perceptual opposition between
stative situations and dynamic situations and to give a conceptual definition of state, event and process (Desclés 1980, 1989; Guentchéva 1990). In our view, it is necessary to take into account the open or closed boundaries of intervals.

Let us give the definitions of state, event and process in progress.

A STATE (or stative situation) is characterized by the absence of discontinuities: all scanned phases of the stative situation are equivalent. The state does not involve any change or motion. In a state, the speaker considers neither an initial instant, nor an ending instant. A state is true at an open interval. When a denoted situation is a state, the speaker indicates neither an initial boundary, no final one; since change is excluded from states, boundaries become irrelevant. A state is characterized by means of the following subinterval property: every open subinterval J of an open interval I where a state is true, is also an interval where the same state is true (this property has also been quoted by Smith (1991:37)).

An EVENT is an occurrence that introduces a salient singularity inside a continuous and stative background. Every occurrence of an event is a single whole viewed independely of what happens before or after. Every event is true at a closed interval. Every event is commensurable with a duration, it is true at a finite closed interval. Every punctual event is an event whose duration is null. The following examples in Bulgarian, French and English denote non punctual events:

(4)  a. Bg. Toj caruva (Aorist, Imperfective) trideset godini
     b. Fr. Il régna (Passé simple) pendant trente ans
     c. Eng. He reigned for thirty years

Other events can be included inside a non-punctual event. Two events are linked by different relations: simultaneity (the events are concomitant), succession (an event is located before or after another), mereologic inclusion (an event is a part of another event). Interval properties related to events will be presented in another publication.

A PROCESS in PROGRESS (“processus en développement” in French) is a dynamic situation where all phases are not equivalent; it is a change that is oriented from an initial stative situation (before the process) towards a final stative situation. The process is always characterized by an initial instant (the starting instant of the process). Every process in progress is true at a half-open interval where the left boundary is always closed and the right boundary is open. In Desclés (1980), it has been shown that an act of speech is the prototype of a process in progress. Furthermore, ”it is linguistically significant that an act of speech is not
punctual but has a brief temporal duration" (Langacker 1991:243). Thus, the act of speech is a process with a starting instant and an open boundary: $T^0$; this instant $T^0$ is not the "instant of speaking" but it is the right boundary of the act of speech, i.e. the first instant which is not yet realized. The dynamic situation denoted by (5a) is true at interval $[f,o]$ closed to the left and open to the right (a figurative representation is given in (5b)); the interval is located before $T^0$, the first instant of the non-realized.

(5) a. John was driving his car  
    b. $\cdots [f\cdots o\cdots T^0$  

The change through different phases of a process can be continuous or not. Thus (6) is an instance of a continuous process but (7) is a non continuous process.

(6) John is walking in the garden  
(7) Mr Green is writing (* writes) another book, but at the moment he is out playing golf  

When two processes are concomitant, the two boundaries on the right are the same. Thus, a process that is concomitant with the process of speech is such that the right boundary is $T^0$. When a process in progress $P$ is not concomitant with the act of speech, there is a boundary $T^1$ at the right of $P$ such that $T^1$ is different from $T^0$ as in sentence (8):

(8) When I arrived home, Mary was playing a Beethoven' sonata  

A continuous process has the following property: if a continuous process is true at half-open interval $I = [f,o]$ closed to the left and open to the right then the same process is also true at any subinterval $J = [f, o']$ of $I$, where the first instants $f$ of $I$ and $J$ are identical.

2. *Process in progress and state of activity.* The starting instant of a process is the first instant where the process is true. It is a mereologic part of the beginning of a process, from which the process expands. This instant introduces a discontinuity by cutting a local continuous background into two domains: one is located before the process and the other constitutes the inside of the process. Let us designate by $I$ the interval where a process is true; the inside of the process is true at the "interior" of $I$, designated by $\text{int}(I)$; in the topology of intervals, $\text{int}(I)$ is an open interval which excludes the starting instant and the beginning of the process.
Let us consider a physical process $P$. A cognitive conceptualization of $P$ is first represented by means of $R_p(P)$ where all phases of $P$ are viewed as non equivalent. Thus, the representation $R_p(P)$ takes into account the internal dynamic character of $P$. But it is possible to conceive another cognitive representation $R_s(P)$ of $P$ by excluding the starting instant and the beginning of the process. In this representation $R_s(P)$ all phases of $P$ are now viewed as identical. The representations $R_p(P)$ and $R_s(P)$ are aspectual representations of the same physical process $P$: $R_p(P)$ is a process in progress, $R_s(P)$ is the state of activity associated with $P$. Therefore, a state of activity is related both to a state and to a process since it is associated with an underlying process. The distinction between process and state of activity is a crucial point for the present discussion.

The conceptual distinction between “descriptive state” (or simple state), process in progress and state of activity can be summarized as follows. A “descriptive state” (like "John is happy") denotes an intrinsically stative situation; there is no underlying process. When the aspectual meaning is a process in progress, the speaker encodes the dynamic character of the denoted situation; hence, all phases of the denoted situation are not equivalent. We can therefore understand why a process involves an initial change i.e. a starting instant. When the aspectual meaning is a state of activity, the speaker does not encode the dynamic character of the denoted situation. The aspectual value will then be that of a state: all phases of the denoted situation are conceived as being equivalent though the denoted situation is intrinsically dynamic. The state of activity is associated with a dynamic activity which affects the predicative relation to which the aspectual operator applies. It excludes the event of the change related to the beginning of the dynamic activity. This event $EV$ is a transition between the initial situation $S$ before the process and the inside of the process. The state of activity $SA$ is located in the inside of the process (see the figurative representation in (9)).

![Figurative representation](image-url)

We give truth conditions related to states of activity:
A state of activity $SA$ is true at an open interval $J$ if and only if there exists a process $P$, which is true at interval $I$ (closed to the left and open to the right) such that (i) $SA$ is associated with $P$; (ii) the interval $J$ is included in the interior $\text{int}(I)$ of $I$.

If a process in progress $P$ is true at an interval $I$ then the associated state of activity $SA(P)$ is true at an interval $J$ but intervals $I$ and $J$ do not coincide.

If a sentence ($s_1$) with an aspectual meaning of process in progress is true, then there is a paraphrastic sentence ($s_2$) such that ($s_1$) entails ($s_2$), and ($s_2$) entails ($s_1$); however, the two sentences are not true at the same interval: ($s_1$) is true at interval $I$ which includes its left boundary ($I$ is closed to the left) whereas ($s_2$) is true at the open subinterval $J$ of $I$.

3. **Linguistic differences between state of activity and process in progress** Is the distinction between state of activity and process in progress legitimate? We feel it is. Although these notions are obviously linked, they do not describe the same concept. Furthermore, some linguistic data require this conceptual opposition. Sentences like:

(10) a. The airplane is in flight  
    b. The airplane is flying

can be used to denote exactly the same referential situation $SIT$: (13a) represents $SIT$ as a state of activity: “the airplane is in the state of flying” but (13b) represents $SIT$ as a process in progress: “the airplane is the object of a continuous movement from a starting instant and oriented towards an ending instant; the movement is represented as being concomitant with the speaking process”.

If one accepts the relevance of the following semiotic principle: "differences in linguistic forms encode differences of meaning" then one must be able: (i) to give two different interpretations of (10) and (ii) to relate these two paraphrastic interpretations. The different truth domains of (10a) and (10b) are represented respectively by figurative diagrams (11a) and (11b) respectively:

(11) a. 
    b. 

In the state of activity (10a), all phases of the denoted situation $SIT$ are construed as being effectively equivalent which is characteristic of a state. In the process (10b), all phases of
SIT are construed as being different. The two intervals are the domains where the same referential situation SIT is true but the aspectual viewpoints are not identical: the representation construed by the speaker is static in (10a) and dynamic in (10b).

There are a number of examples like (10) across natural languages. For instance, the following sentences in French are standard oppositions between state of activity and process in progress. Gradual adverbs such as "little by little" and intensive adverbials such as "quickly" can be combined with a process in progress (12d, 13d) but not with a state of activity (12b, 13b).

(12) a. L’armée est en marche / en déplacement
   The army is on the move
   b. *L’armée est rapidement en marche / en déplacement
   c. L’armée marche / se déplace
      The army is moving on
   d. L’armée marche / se déplace rapidement
      The army is moving rapidly

(13) a. Pierre est en prière
       Lit. Peter is in the state of praying
   b. *Pierre est en prière avec ferveur / intensément
   c. Pierre prie
      Peter is praying
   d. Pierre prie avec ferveur
      Peter is praying fervently

Let us take examples of the same oppositions in Bulgarian:

(14) a. Bg. Marija e na pazara
       (descriptive state)
       En. Mary is on the market-place
       Fr. Marie est au marché
   b. Bg. Marija e na pazar
       (state of activity)
       En. Mary is out shopping
       Fr. Marie fait ses courses au marché
   c. Bg. Marija pazaruva / pazari
       (process in progress)
       En. Mary is doing her shopping
       Fr. Marie est en train de faire des courses

(15) a. Bg. Ivan e na polet
       (state of activity)
       En. John is in flight
       Fr. Jean est en vol (? vers Paris)
   b. Bg. Ivan leti kam Pariz
       (process in progress)
En. John is flying to Paris
Fr. Jean est en train de voler vers Paris

We have different criteria to establish a distinction between process in progress and state of activity. For instance, in French, the aspectual verbs "commencer" (to begin), "continuer" (to continue), "finir" (to finish) cannot be combined with states of activity (16a) but only with processes in progress (16b).

(16) a. Fr. * Pierre commence à / continue à / finit d'être au travail
   Lit. Peter is beginning to work / is going on working / is finishing working

   b. Fr. En ce moment, Pierre commence à / continue à / finit de travailler
      Lit. Peter is beginning his work / is going on with his work / is finishing his work

The distinction between state of activity and process in progress gives some useful conceptual tools which lead to a number of cognitive representations of different constructions observed across natural languages like English, French or Bulgarian. The two notions are very close but not identical. Every state of activity is associated with an underlying process but: (a) the process in progress implies an aspectual viewpoint on the situation: the process is viewed with its internal dynamic character, i.e. with the starting instant and the successive changes inside the situation; (b) the state of activity is an aspectual viewpoint on the situation as stative without taking into account the starting instant, the different changes and the dynamicity of the situation. A state of activity is not a simple state (or a descriptive state): it cannot express the dynamicity of an underlying process in progress.

Should progressive processes be considered to be in progress or to be statives? Some scholars (Vlach 1981, Dowty 1986, Langacker 1987, 1991:209) suggest that there is the equivalence between progressives and statives. Vlach (1981:274), for instance, asserts that: "the function of the progressive operator is to make stative sentences, and, therefore, there is no reason for the progressive to apply to sentences that are already stative". Arguments have been given against the stativity of progressive forms in English by Bertinetto (1992) and we fully agree with them. However, some questions arise: Why do scholars have such different conceptions about progressiveness? Are there different cognitive devices? Is it possible to understand why linguists give such different answers in their analyses of the same data? On the other hand, the grammars as well as some scholars claim that progressives are non stative. Let us quote Comrie (1976:41): "It was noted that progressivity is intimately bound up with the
The inherent nonstativity of the situation being described" and Leech & Svartvik (1975:69): "The progressive aspect refers to activity in progress, and therefore suggests not only that activity is temporary (i.e. of limited duration), but that it need not be complete." The intuitive dynamicity of progressive forms is also expressed by Carlson (1981:45): "What the progressive form of a simple sentence picks out is periods of some dynamic condition or activity manifesting or bringing about whatever the simple sentence describes. (...) Progressive sentences will belong to the aspect class dynamic".

In our conception of aspectuality, a process in progress is essentially a non static notion. Some occurrences of progressives may be considered eventually as states of activity but never as simple states. Most of the progressive occurrences are instances of processes in progress and every state of activity is associated with the inside of a process in progress. We agree with Bertinetto (1992) that progressive forms often have "a detelicizing effect " and that "the progressive morphology is a way of destativizing stative verbs". Let us give examples of destativization:

(17) a. He is sick
Fr.  Il est malade
b. He is being sick (in the bathroom)
Fr.  En ce moment, il est malade (= il est en train de vomir dans la salle de bain)

(18) a. He looks like his father
Fr.  Il ressemble à son père
b. He is looking more and more like his father every day
Fr.  Il ressemble de plus en plus chaque jour à son père

In these examples, the discontinuous morpheme "is-ing" is a morphological operator which is an indicator of process. Its use gives the possibility of opposing a simple state (or a descriptive state) to a process. It is difficult to analyze the above examples (17b) and (18b) as simple states or even as states of activity since the speaker takes into account the progressiveness of successive changes. There are other examples, (19b) - (21b), that express processes in progress and not habit, permanent ability or permanent iteration:

(19) a. She plays well
   She is a good player
b. She is playing very well
It is well known that English Progressive forms can be used to express other notions like "planning" and "intentionality" (examples (22) to (24)).

(22) I’m leaving tomorrow
    Fr. Je vais partir demain (j’envisage de partir demain)

(23) I was coming tomorrow; but now tomorrow you will come and see me
    Fr. J’avais envisagé de venir demain mais, maintenant, c’est vous qui viendrez me voir

(24) What are you drinking? Scotch, please
    Fr. Qu’est-ce que vous prenez (voulez prendre) ? Du Scotch, s’il vous plaît.

We do not agree with Vlach who asserts that progressives lack the subinterval property (Vlach 1981: 280):

"A sentence $s$ is said to have the subinterval property if and only if whenever $s$ is true for an interval $I$ it is also true at every instant in $I$ (and therefore true for every noninstantaneous subinterval of $I$).$(…)$

"Someone walks into a theater, points to an empty seat and asks "Is someone sitting here?". The question being asked can only be whether anyone is sitting here for the evening; it is obvious that no one is sitting here at the moment .$(…)$ The sentence can be true for the interval but not true at a moment contained in the interval. $(…)$ The example just given shows that the sentence Someone be sitting here does not have the subinterval property "

In our semantic analysis, "Someone be sitting here" does not express a stative situation but rather a process that is oriented towards the intended state "someone be sitting here", which is not realized at instant $T^0$; the process has started and is advancing towards the intended state (see the figurative representation given in (25)):
Since "Someone be sitting here" is a process and not a state, we can understand why Vlach's subinterval property (i.e. the interval property related to state) has proved a failure and why the interval property related to a continuous process is successful. The expression "Someone be sitting here" carries an intentionality, it is true at every half-open subinterval of the half-open interval where it is true, with the following condition: the two starting instants of intervals are identical.

We claim that English progressive forms never express simple states. Some progressive may mean a state of activity (related to an underlying process) and other forms are explicit signs of process in progress. Other notions, like modality, intentionality, planning, explicit relations to the speaker, etc., are combined with the above basic aspectual notions to express the different meanings of progressive forms. Thus, in the following examples (26)-(28), it is very difficult to argue for the aspectual meaning of state of activity. The aspects in (26-28a) are states but in (26-28b) they are processes in progress where an agent executes operations which change progressively his mental state.

(26) a. I think it's a good idea
    b. I'm thinking about it

(27) a. I like fish
    b. I'm liking this fish / *I'm liking fish

(28) a. I forget your name / * I forget my Spanish
    b. I'm forgetting my Spanish / * I'm forgetting your name

The above discussion of the progressive clearly entails that our analysis of Progressive in English is similar to that of Dowty (1979:151-159). However, there is an important difference concerning the notion of process in progress. Dowty considers time itself to be branching rather than linear: for any given instant there may be not just a single future course of time, but multiple possible futures. We agree with this analysis but, for us, when a process in progress is concomitant with the act of speech, the instant $T^0$ is the first instant of the branching time: the process in progress is only true at an interval of time before $T^0$; this interval is localized in the realized area of time; however, the process may be extended beyond the boundary $T^0$ and
may go on up to an intended state or an intended event. Thus, we explain why a Progressive form can imply planning and predetermination.

4. **Progressiveness and completed process.** As we have seen, the Progressive can be associated with a destativization operation in transforming states into processes. A process can be viewed in its progressiveness but when the process breaks up, it can lead to a resultant state. Indeed, we analyse the meanings of Perfects (Present and Past Perfects in English, Perfects in Bulgarian, some examples of Passé composé in French) as resultant states that arise from a process that is broken up. When the process **reaches his goal**, it is a completed process (in French "achevé") as in (29 a). When the process is only broken up at an instant, we say that it is **stopped** (in French "accompli") as in (29 b) but not completed:

(29) a. Fr. Il a peint le mur de sa chambre en deux heures
   He painted the wall in two hours
b. Fr. Il a peint le mur de sa chambre pendant deux heures
   He painted the wall for two hours

The distinction between processes that are completed and processes that have stopped is crucial for understanding the meanings of Bulgarian Imperfective and Perfective Aorists: the aspectual value of the Imperfective Aorist is an event (it is an aoristic form) but this event is generated only by a finished process while the meaning of a Perfective Aorist is an event that is generated by a completed process (Desclés & Guentcheva (1990), Desclés(1991), Guentcheva (1985,1990)):

(30) a. Bg. Toj pisa (Imperfective Aorist) pismo(to)
   He wrote a / the letter
   It entails that a / the letter is written
b. Bg. Toj napisa (Perfective Aorist) pismoto
   He wrote the letter
   It entails that the letter is now written, the writing was completed

Our conceptualization of process is not affected by the "imperfective paradox". It is well known that from (31a) we cannot infer the event (31b) but from (31c) we can infer (31d).

(31) a. Max was building his house
b. Max built it
c. Max was running when I arrived
d. Max ran
The sentences (31a) and (31c) both denote processes. However, the process denoted by (31a) is telic with an intended state ("the house was built"). While the process is going on, the intended state is not yet realized; thus, the listener must construe a possible world where the intended state can be realized but this possible world may become reality. If the possible world does not become the actual world, the listener cannot infer the event (31b) from the process in progress in the past (31a) (see the figurative representation in (32a)).

On the other hand, the process denoted by (31c) is atelic: no intended state can be conceived. When the process "was running" has stopped, there is a boundary $T_1$ (the last instant of the process) located before $T_0$; thus, the finished process becomes an event that is located before the act of speech (see the representation in (32b)).

(32) a. \[ \begin{array}{c}
\text{--was building his house--} \\
\text{in the real world} \\
\text{-----------------------------------} \\
\text{--built his house --------> the house was built -------->} \\
\text{in a possible world} \\
\end{array} \]

b. \[ \begin{array}{c}
\text{--was running --} \\
\text{in the real world} \\
\text{-----------------------------------} \\
\text{--T_0-- T_1--} \\
\end{array} \]

Utterance (31a) expresses an underlying progressive process, represented by Prog(Max-build-his-house) where Prog is an aspectual operator which acts on the predicative relation "Max-build-his-house" and where the linguistic marker of Prog is "is...ing". The semantic properties associated with the predicate "build" imply that the underlying process as progressively constructing an referential object "house". In this case, we attempt to give a formal definition of the meaning of the operator Prog.

The instants are designated by $t$, $t'$, $t_1$, $t_2$...; the symbols ‘$P$’, ‘$b$’ and ‘$a$’ designate respectively a two place predicate (whose semantic type is of the type as "build"), a changing object and an argument unchanged by the process. The predicative relation is noted by a prefixed expression "Pba". When "Pba" is true at the instant $t$, we write: $Eval (Pba,t) = true$, i.e. the evaluation of the predicative relation ‘Pba’ at the instant $t$ is true.
"The Progressive Prog(Pba) is true at t and realized with respect to the instant t" means that the predicative relation "Pba" is viewed as a process in progress, noted Proc(Pba), which is true at t, realized with respect to t and such that:

1°/ there exists an instant $t_g$ (a beginning) where the process Proc(Pba) starts;
2°/ a progressive change affects the argument b;
3°/ a telic term of the process in progress is intended but not yet realized at the instant t.

The above conditions are formalized by means of a topological language (see the figurative representation in (33)) as follows:

1°/ There exists a half-open interval I (with the closed boundary to the left $t_g$ and the open boundary to the right t) such that there exists an open interval U where $t_g$ belongs to closure of U and
   (i) for every $t'$ that belongs to U: ($t' < t_g$) $\Rightarrow$ $Eval(Pba,t') = false$ & Proc(Pba) is false at $t'$
   (ii) Proc(Pba) is true at $t_g$

2°/ For every half open subinterval J of I (with the closed boundary to the right $t_g$ and the open boundary to the right $t_j$) the following condition holds:
   for every $t_{j1}$ of J there exists $b_{j1}$, for every $t_{j1}$ of J there exits $b_{j2}$ such that:
   (i) $b_{j1}$ and $b_{j2}$ are mereologic parts of b (i.e. in Lesniewski's sense of ingredience);
   (ii) $(t_g \ t_{j1} \ t_{j2} \ t_j) \Rightarrow$
       (b$_{j1}$ is a part of b$_{j2}$)
       & Proc(Pba) is true at $t_{j1}$ and $t_{j2}$ and realized with respect to $t_{j1}$ and $t_{j2}$

3°/ There exists a closed interval K where I is a subinterval of K (with the closed boundary to the left $t_g$ of K; the closed boundary to the right $t_k$ of K) such that the two following conditions hold:
   (i) $Eval(Pba,t_k) = true$
   (ii) for every $t''$ (where $t''$ belongs to the interval K-I):
(t  t''  t_k) => Proc(Pba) is not yet realized with respect to t''.

(33)

\[ b_g  b_{j1}  b_{j2}  b_j  b \]
\[ \text{---} \text{---} \text{---} \text{---} \text{---} \]
\[ t_g  t_{j1}  t_{j2}  t_j  t  t_k \]

\[ \text{<---- U ---->} \]
\[ \text{<----------------------------------------->} \]
\[ \text{<--------------------------- J ------------------------->} \]
\[ \text{<------------------------------------------------------------------- K --------------------------------} \]

It is interesting to note that Prog(Pba) focuses the attention on a single internal instant t, i.e. on one of the phases of the process (see Thelin, 1990a:35-43). However, we can deduce from above that if Prog(Pba) is true and realized with respect to t, then Prog(Pba) is true and realized with respect to every instant between the starting instant \( t_g \) and \( t \). Furthermore, Prog(Pba) is not true after this instant \( t \) even if a final state is intended. Thus, the evaluation of the predicative relation “Pba” will true only when the process will be completed, i.e. at the instant \( t_k \), and then the completed process will generate the event Event(Pba) at this instant \( t_k \).

Footnotes
We acknowledge Claude Rivière, Nicole Rivière and Jacqueline Guillemin-Fleischer for their insightful comments on an earlier version of the text and suggestions for its improvement.

1. We follow A. Culioli (1968, 1980) who uses topological intervals to analyse aspectuality. We agree with Bartsch's statement (Bartsch 1985:10) that "the topological notions 'open' and 'closed' were insufficient, and did not quite capture the intuition about what open situations and what closed situations are, with respect to imperfective and perfective aspect" but not with "open situations (...) namely processes, activities (...)". In our opinion, processes and activities are not open situations in which the starting instant and the ending instant are not taken into consideration. They are rather half-open situations with a beginning. Bennett (1981:15) relates open intervals to activities and closed intervals to performances but he does not take into account the dynamicity underlying progressives.

2. In French, the "passé simple" (simple past) is always a marker of the aspectual value of the event. In Bulgarian, the aoristic forms always denote events.

3. The phases of processes associated with some predicates remain equivalent by means of an exterior input of energy given by an agent or by an other cause.

4. We must establish a clear distinction between the representation of a physical process and its aspectual representations. A physical process results from the perception of the external world. An aspectual representation is a cognitive construe of a physical process. Every physical process is viewed by the observer and encoded by the speaker either as an aspectual process in progress or as a state of activity or as an event or as a resultant state.

5. The intuitive dynamicity of progressive forms is also expressed by L. Carlson (1981: 45):" What the progressive form of a simple sentence picks out is periods of some dynamic condition or activity manifesting or bringing about whatever the simple sentence describes. (...) Progressive sentences will belong to the aspect class dynamic".

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