Composing causation

There is a consensus that certain events—Vendlerian Accomplishments, most saliently—are in fact composed of two sub-events, chained together in a causal relationship: *John opened the door*, for example, has a causing sub-event e1, and a result sub-event e2. Various proposals have in common an operation which chains events causally, allowing a straightforward expression of the insight that John is the Agent of only the first, causing, sub-event, e1; this event then is ‘chained’ with e2, of which the Theme is predicated (Pustejovsky (1995), Higginbotham (2000), Ramchand (2008)). While these proposals allow for insightful analysis of structural and semantic properties of complex events, it is important to note that such advances come at the cost of introducing a novel rule of composition; it would be more desirable to express the connection between an event e1 and its result sub-event e2 in a way that made use of existing rules of composition.

There are also empirical challenges to this event-chaining approach to complex events. The event-chaining hypothesis entails that e2 is an inevitable consequence of e1, and that e2 exists. However, there are many cases in natural language where there is an Agent doing something (e1) which would normally (ceteris paribus) be the causing sub-event of a second happening sub-event, but the happening (e2) is non-existent, or the wrong kind of happening (e.g. progressives, non-culminating accomplishments, etc.). Possible worlds can be recruited to make up for this deficiency, but such recruitment of course complicates the theory.

In this talk I will present a proposal (Copley & Harley 2012) that treats an event as a function from an initial situation to the situation that results ceteris paribus. States are treated as situations. This conception of events and states corresponds to the traditional (Comrie 1976, e.g.) idea that what Davidson thought to be events are actually forces (whose ceteris paribus effect can nonetheless be nullified by other forces) while states do not involve energy at all. This treatment of events, which has some principles in common with the system developed in van Lambalgen and Hamm (2004), is helpful in addressing the issues mentioned above. Firstly, because an event is a function, an event and its result situation can be linked without recourse to anything other than Functional Application. Secondly, since the ceteris paribus condition is part of the definition of an event (force), the empirical challenges to event-chaining can be accounted for without additional machinery; in effect, causal chains of forces (events) and situations (states) are used to construct possible worlds. A distinction is suggested between metaphysical causation (the development of the world) and informational causation (adding propositions to the common ground, cf. work by Asher).