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A word on variable subscripts

In an accident scenario there are certain, specific instants of time that need to be referred to clearly. The four main instants are 0 (prior to initial braking), *i* (initial, just prior to impact), *f* (just after impact), and *e* (end, when vehicles have come to rest after the collision). This is a departure from the often-used procedure for analyzing an impact, where the numeral 1 is used for *i* and 2 is used for *f*.

There are also normally two vehicles that need to be referred to clearly. Also departing from the often-used system of designating these vehicles with the numerals 1 and 2, I refer to them as A and B.

It is my opinion that using the numerals 1 and 2 to refer either to the instants of time prior to and immediately after impact or to the vehicles involved is confusing. It is confusing to look at V_{21} and to have to ask always, "is this the post-impact velocity of vehicle 1 or the pre-impact velocity of vehicle 2?". It breaks the train of thought. Instead V_{Bi} is unambiguous. When one sees this in equations, he/she does not have to interrupt his/her train of thought to understand it.

As a note, even this is somewhat dissatisfying to me. If a VW is struck by a Ford, it would be convenient, perhaps, to refer to $V_{VW\text{-}i}$ or $V_{F\text{-}f}$. Thus one does not have to interrupt his/her train of thought to pose the question, "now, is vehicle A the VW or the Ford?", something I have often found myself checking as I perform accident-reconstruction calculations. In defense of the A/B subscripting, however, one can say that it is sometimes useful to use generic vehicles when discussing a particular accident, and A and B are well suited for this purpose.

In any case, it is a big step forward to refuse to use the numerals 1 and 2 in the subscripts of any accident-reconstruction variables.