The use of direct reactions of the (d,p), (\(^3\)He,d) etc. type for nuclear spectroscopy has a long history. With the increasing availability of beams of exotic nuclei, there has been a resurgence of interest in the technique. Traditionally, the analysis of these reactions to extract spectroscopic information has been performed using standard DWBA, in either its zero-range (with various corrections) or full finite-range form.

While the DWBA is still useful, one needs to be aware of its limitations, as there are a number of cases where its use may be inappropriate. One of the most important of these is the (d,p) deuteron stripping reaction, a popular choice for probing single neutron aspects of nuclear structure, where the influence of the deuteron breakup channels can be important. Other cases occur when multi-step transfer paths are important and when the coupling to the reaction channels is strong, as the DWBA formalism is predicated upon the assumption that the reaction proceeds in a single step and is weakly coupled.

In this contribution, analyses of (d,p), (\(^6\)Li,d) and (\(^7\)Li,t) reactions will be presented to illustrate the use of techniques that go beyond the DWBA to include more of the reaction physics in an attempt to extract more reliable spectroscopic information. Some of the sources of uncertainty that remain in these extracted quantities will also be discussed, along with possible means of reducing them. The effect of transfer couplings on elastic scattering when there is strong coupling will also be discussed and illustrated by reference to the (p,d) pickup reaction.