RETRO CELLS

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An important property of bicategories is biclosedness, i.e. the functors giving composition have right adjoints in each variable. Most good bicategories are part of naturally occurring double categories, and this point of view often simplifies things considerably. However the internal homs, those right adjoints just mentioned, are not functorial at this level. The problem is that in the domain variable they are neither covariant nor contravariant, but a combination of both. To remedy this failure we introduce retro cells. We will discuss their properties and point out some open questions.