The Chemistry is Right

Alfred Hitchcock sure knew how to frame a shot. In North by Northwest there's a seduction scene on the train. Cary Grant leans forward to light Eva Marie Saint's cigarette. The shot lines up with the dining car window, we see only their hands in front. He moves the lighter. She lights up. He moves slowly back. She moves his hand toward her again, in the erotic pavane of flame, hands, frame on frame. Why don't I remember the scenery (it was between New York and Chicago) that goes by outside? If I know Hitchcock, it too was probably picked as part of the dance.

What is right between Cary Grant and Eva Marie Saint is the chemistry. The phrase is one of the chemical metaphors that have entered common parlance.

Wait a moment. Science, dull chemistry, used as a metaphor? Of course, why not? First of all, we desperately need metaphor. There's no way a human being can look at an object or an emotion he or she does not understand, yet deeply desires to understand (and communicate to others), without making a mapping to something familiar, something one does understand. But metaphors from chemistry? Chemistry is a continuing coming into being of the new, and so a rich source of metaphor. Two hundred years ago, the English poet Samuel Taylor Coleridge said that when he was in want of metaphors, he went to see the demonstrations of his friend, the chemist Humphry Davy.

Other chemical metaphors in our every day language (in English, at least) include: "the litmus test," "crystallized" (as in "my ideas have crystallized"), "precipitated", "sublimation" (see the incredible final passages of Michel Tournier's Les Météores), "the acid test," and "catalyst." And then there is the metaphor richest of all, explored in all its bounty in this book, the bond.

There is a tension inherent in these metaphors. It is the tension of stasis and change, of believing and not believing, of holding on and letting go. That the metaphors be tense makes sense, for chemistry is the craft, art, business, and science of substances/molecules and their transformations. And change may be risky. The bond holds atoms together, for sure. But the bond may be, has to be, often is, broken.

Carl Gustav Jung said (in his Modern Man in Search of a Soul) that “the meeting of two personalities is like the contact of two chemical substances: if there is any reaction, both are transformed.”

Roald Hoffmann