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Medieval Paint Mediums

Most, and perhaps all, people like to paint, either by finger painting or with a brush. But what causes paint to stick and dry onto the panel or paper? The vehicle, typically the liquid that carries the paint color, is called the medium. The medium is the binder, the pigment is the coloring agent, and the process/technique of mixing is one way that the word tempera is defined. Painters have always experimented to find the best medium that evenly suspended their paint pigments, held the pigments to the chosen papers or panel, and protected the color(s). Although earlier painters used egg white as a medium, 13th and 14th century Byzantine painters primarily used egg yolk as a binder, until the preferred medium of egg-oil emulsions began to be used. But why did medieval painters just use eggs (yolk or white), rather than water or oil? Which one stuck best, had a good color, washed off easily, and was the toughest in humid, cold, and heat? Did medieval painters really use the best binding agent, or were those painters as uninformed about that as they appeared to be about the highly toxic pigment Vermillion (made from mercury ore) that medieval painters used? This experiment produced data supporting why the painters preferred egg yolk and/or egg yolk/oil mixture to egg white or water, although I thought that the egg yolk mixture produced the best clear, smooth, slightly shiny color. The best environment was room temperature.