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Thomas W. Tucker* (ttucker@colgate.edu), 406 Williston, PO Box 163, Sagamore Beach, MA 02562. *Unfaithful Maps*. Preliminary report.

A map M on a closed surface is *unfaithful on vertices (respectively, edges or faces)* if $\text{Aut}(M)$ has a non-identity element that fixes every vertex (respectively, edge or face). For example, an n -cycle in the sphere is unfaithful on both vertices and faces. In fact, it is *simultaneously* unfaithful on vertices and edges, since there is a non-identity automorphism that fixes every vertex and every edge. When n is odd, the Petrie dual of this map has only one face, so it is simultaneously unfaithful on vertices, edges, and faces. We classify maps that are unfaithful on vertices, maps that are unfaithful on edges, maps that are simultaneously unfaithful on both vertices and faces. All these maps involve multiple edges or loops in the primal or dual map. (Received January 31, 2018)