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**Jane Gilman\*** (gilman@rutgers.edu), NJ. *Extending Harvey's Surface Kernel Maps*. Preliminary report.

Let  $S$  and  $S_0$  be Riemann surfaces of finite type with  $S$  a finite regular branched cover of  $S_0$ . Let  $G$  be a finite group of conformal automorphisms of  $S$  with  $S_0 = S/G$ . If  $U$  denotes the unit disc, let  $\Gamma$  and  $\Gamma_0$  be uniformizing groups so that  $S = U/\Gamma$  and  $S_0 = U/\Gamma_0$ . There is a group homomorphism of  $\Gamma_0$  onto  $G$  with kernel  $\Gamma$  and this is termed a *surface kernel map*. Two surface kernel maps are equivalent if they differ by an automorphism of  $\Gamma_0$ . In his 1971 paper Bill Harvey showed that when  $G$  is a cyclic group, there is a unique simplest representative for this equivalence class. His result has played an important role in establishing subsequent results about conformal automorphism groups of surfaces. We extend his result to surface kernels of maps onto arbitrary finite groups. (Received January 16, 2020)