

DEAR JOAN

HERE IS MY PAPER IDENTIFYING THE KERNEL OF ^{ANY ONE} ~~ANY~~ OF YOUR HOMOMORPHISMS, NAMELY $\text{Ker}(p_\omega) = [\mathcal{O}_\omega, \mathcal{A}]$ WHERE $\mathcal{O}_\omega = \{ \text{ALL MAPPING CLASSES IN } \mathcal{M} \text{ WHICH FIX THE QUADRATIC FORM } \omega \text{ ON } H_1(M, \mathbb{Z}_2) \}$. IT ALSO GIVES A CONJUGACY CLASSIFICATION, INCL., OF JERRY'S SUBGROUPS. I WORKED LIKE A DOG ON THIS PAPER, BUT I'M AFRAID IT IS STILL TOUGH TO READ, MAINLY BECAUSE OF ALL THE PRELIMINARY MACHINERY IN SECTIONS 2 & 3. THE RESULTS ARE NOT HARD TO UNDERSTAND, THOUGH, AND I THINK THEY ARE INTERESTING.

YOU SUGGESTED I SEND "QUADRATIC FORMS AND THE BC HOMOMORPHISMS" TO TOPOLOGY, BUT I ALREADY HAD SENT IT TO TRANS. OF AMS, SINCE THAT IS WHERE I SENT THE FIRST PAPER ON YOUR HOMOMORPHISMS. WHERE DO YOU THINK I SHOULD SEND THIS ~~PAPER~~ PAPER AND THE PREVIOUS ONE (THE ONE ON THE TORUS)? KIRBY SUGGESTED SENDING THEM BOTH TO THE SAME PLACE & MENTIONED SPECIFICALLY JOURNAL OF LONDON MATH. SOC. AND MATH. ANNALEN. WHAT DO YOU THINK? I WOULD APPRECIATE IF YOU GET A CHANCE TO LOOK THROUGH THESE AND TELL ME IF I'VE MADE ANY OF MY USUAL ERRORS IN PROTOCOL.

I'VE FINISHED THE WORK FOR 4 OTHER PAPERS BUT IT SEEMS AS THOUGH I WILL NOT BE ABLE TO WRITE THEM UP. I'M SOMEWHAT DISCOURAGED WITH DOING MATH NOW. IT SEEMS THAT NO ONE IS GOING TO BE INTERESTED IN THESE REVIEWS EXCEPT YOU AND YOU ARE BUSY WITH YOUR OWN WORK; THE LACK OF EXCHANGE WITH OTHER PEOPLE IS BEGINNING TO TELL ON ME. IT IS MADE WORSE BY THE FACT THAT THEY DON'T WANT ME TO DO MATH HERE AT WORK, SO I FEEL THAT IN ORDER TO JUSTIFY DOING IT I MUST GET FANTASTIC RESULTS IMMEDIATELY, WHICH IS NOT THE CASE — SO FOR THE STUFF I'VE DONE HAS NOT SOLVED ANY PROBLEM OF DIFFICULTY, E.G. THE QUESTION OF \mathcal{A} BEING F.G., OR FINDING INVARIANTS FOR HOMOMORPHISMS

IF YOU SKIM SECTIONS 3 ~~AND 4~~ (AND SECTION 2 EARLY) JUST TO GET THE DEFINITIONS THE REST SHOULD BE NOT TOO HARD, ESPECIALLY IF YOU DO THE PROOF.

OR EVEN AN EXPLICIT DETERMINATION OF P . UNDER THESE CONDITIONS
IT IS DIFFICULT TO JUSTIFY CONTINUING TO WORK. I HOPE YOU'LL
KEEP ME NOTIFIED OF YOUR LATEST RESULTS THOUGH — THEY ALWAYS
HELP TO GET ME REINTERESTED IN THINGS, AND GIVE ME LOTS OF IDEAS TOO.

Dennis (5/21/81) H