Task: How has "objectivity" been differently defined and deployed by diverse practitioners of the sociology of science/science studies?

The perspectives that I will present in this answer do not have a lot in common. Perhaps they only share a 'negative' trait – they are all non-functionalist in comparison to Merton's model of a sociology of science. Some of them might define their enterprise explicitly as critical of science in its current shape, while others try to be 'objective' in a reflexive way. To see if and how these perspectives can be combined so that it is possible to develop a more adequate story of science and objectivity will be the final task in answering this question.

With regard to Bloor's <u>Strong programme in the Sociology of Knowledge</u> I want to try to drive home a point that I was somewhat in the background of one of the answers that I gave in the last exam. Bloor makes an interesting move in that he investigates the prototypical realm of the production of objectivity, science, while at the same time claiming to set up a program that "would be impartial with respect to truth and falsity, rationality or irrationality, success or failure" (7) – that is, it deploys one of the most prominent moves towards objectivity: impartiality. To avoid the pitfalls of circular reasoning, Bloor introduces the notion of reflexivity into his program. This frame then allows careful investigations into the realm of the production of scientific knowledge and a refutation of theories that depict science as a privileged realm, the realm in which objectivity is located by grace of the empiricists and Sir Karl Popper. The strong programme with its emphasis on symmetry does not seem to allow room for a specific kind of knowledge production in science, that is inherently different from the production of knowledge in other realms. Bloor states that "naturally there will be other types of causes be other types of causes apart from social ones which will cooperate in bringing about belief" (ibid.) This program is very well designed and tightly shut, at least this is the impression that it makes on me – I am not completely comfortable with the way in which he presents the notion of reflexivity. In my view the reflexivity of the strong programme appears to be more of a move to sustain the logical coherency of his model than a move towards opening science studies to self-reflexive practices, i.e. critical reflections on the role of scientific methodology. Bloor seems to use 'objective' scientific methods to see how theories/knowledge are generated, instead of getting into the real mess and looking at what he himself does when he dissects science with sciences own tools. I think I miss more emphasis on *processes* of interaction, instead of being "causal, that is, concerned with the *conditions* which bring about belief or *states* of knowledge" (ibid. my emphasis.)

To be mischievous one could try to apply Porter's (<u>Quantification and the Accounting Ideal in Science</u>) metaphor of the technology of distance (640-643) to Bloor's notion of impartiality. Porter makes an investigation into the realm of accounting, and he describes the arguments that were raised in the discourse about how accounting should be practiced: Either as a flexible method suited to the specific requirements of a business or other

economical unit, or as highly regulated and universal method that allows for more (centralized) control of accounting practices. The latter method won, and using this model of accounting was conceived as being a route to a more objective science of accounting. The refined sets of rules that practitioners of accounting had to subject themselves to were co-produces by the setting in which accountants work. "Accountants, operating in a highly contentious domain, lack the status and credibility that would permit them to rest their claims mainly on wisdom and insight." (638) Are accountants and practitioners of science studies in a similar position with regard to their lack of status and credibility? This would be a kind of folding back or self-reflexivity that I would like to see in Bloor's strong programme. Scientific methodology itself should be included in reflexive acts; claiming impartiality is a move that is well suited to certain circumstances…

Circumstances that you examine in depth in your book. From a constructivist perspective you describe cases that, taken together, constitute a very lively and feature-rich landscape, which is in turn the setting for the shifting boundaries surrounding science. Objectivity becomes a rhetoric tool that is deployed to define the boundaries of science; it might be used to restrain the territorial fusion of science with other realms like indigenous knowledges, it might be marshaled in establishing new territory for a science that is occupied with the shape and dimension of skulls, or it can organize the resistance against a burgeoning social science that is defined as a threat, which could possibly invade the realms of reason. By reconstructing the different contexts in which objectivity is raised you demonstrate a crucial aspect regarding the embeddedness of objectivity – it is not a static pre-defined entity, instead it is a flexible concept that can be fit into many schemes; it could be deployed from within science and from the outside of what is considered to be science (perhaps it can even be the border itself, the line which different tear and push backwards and forwards.) However, from the constructivist perspective that you chose it is very difficult to actually conceptualize the 'substantialities' that are attached to the term objective. Objectivity becomes a rhetorical practice – flexibly used in the interactions between different groups that shift around boundaries. One might wonder if there is more to objectivity than rhetorics, and if so, what that would be, and in how far that would influence the way in which objectivity is raised. Nonetheless, if there is a concept in science that is tied up closely with the social construction of discourse, it is probably the very abstract idea objectivity, i.e. it seems to be almost exclusively a discoursive practice, not so much a 'material' practice in the sense that experimenting and measuring are material practices.

Haraway (Situated Knowledges: The Science Question in Feminism and the Privilege of the Partial Perspective) approaches objectivity as a construct – she is conscious of the way it is used and she not completely comfortable with the way in which it is deployed. She tries to find the precarious balance between a conceptualization of objectivity, which ends up in a cynical approach to truth. "All truths become warp speed effects in a hyper-real space of simulations [… But] for political people, social constructionism cannot be allowed

to decay into the radiant emanations of cynicism." (184) From this starting point in her critique, she proceeds in an inventive way. Haraway points out that the discursive games played in science are real practices that are components of the power fields in which human action and science are embedded – they are not 'just' rhetorical construct that float above the problems of real, i.e. political life and problems (to do justice to your book, this is certainly a point that you make; shifting the borders between science and other realms is almost always embedded in a territory, which is also shaped by interests, power etc.) However, Haraway still is nervous when she encounters the social constructivist agenda that is represented in the strong programme and its offsprings (185). Her tacit solution is to abandon some of the absolute authority that is connected to the concept of objectivity; instead, she proposes bundles of relative authority, that stem from the self-reflexive positioning of scientists in a highly complex field of power relations, injustices, material practices etc. This sounds somewhat familiar; it resembles the move made by Marx, who claims that the situatedness of his critique of capitalism actually is the source of its power and legitimity. But this parallel has a very important limitation: Haraway denies Marx' claim that taking a certain position could allow access to a historical totality – critique is partial and specific and no single position could determine what is truth. She is not looking for the juggernaut or the mob; she is looking for the trickster (199).

Finally, Pickering's (<u>The Mangle of Practice: Time, Agency and Science</u>) account of objectivity is approaching the subject from a different perspective. For him objectivity is produced in 'mangling' practices, theories, machines, social relations, measurements etc. It is a result of complex and agentic processes that make up scientific practice. As he formulates it, it is a dialectic of resistance and accommodation, "where resistance denotes the failure to achieve an intended capture of agency in practice, and accommodation an active human strategy of response to resistance" (22). This dialectic is an effect of the interaction of humans with their environment – an environment that is produced by them, but which is also independent of them. It allows certain practices to achieve certain effects, it can be modified in a multitude of ways, but it will always offer resistances to modifications that science as a practice can try to overcome. To emphasize this point: the 'environment' in this context includes nature and society, and this peculiar product of human action, the machine, which in turn mediates between the actors in this field or network. In those acts of mediation, the machine has two sides, it helps in overcoming resistances, but it also generates resistances of its own. Pickering makes another point regarding his conceptualization of objectivity as being the temporary product of multiple practices: he also constructs it as a critique of other, traditional accounts of objectivity, where "objectivity is seen as stemming from a peculiar kind of mental hygiene or policing of thought" (197). He seems to be bolder than Bloor, who defended his strong programme against potential criticism from Popperians; he directly attacks their set of methodological rules that should be used in securing objectivity. His own enterprise seems to be one of subversion or a subtle, skillful and esthetic practice of redefining what science could be.