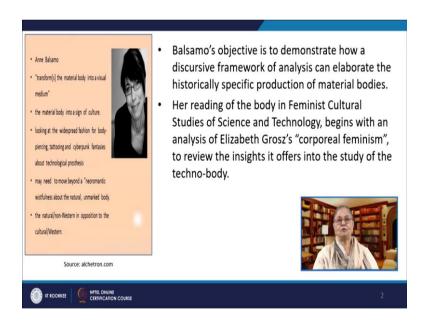
## Contextualizing Gender Prof. Rashmi Gaur Department of Humanities and Social Sciences Indian Institute of Technology, Roorkee

## Lecture - 50 Feminist Cultural Studies of Science and Technology in Anne Balsamo's Technologies of the Gendered Body

Welcome dear friends. In the previous module we had discussed the virtual body in the cyberspace where body is represented as a machine interface. In the current module we shall discuss the role of the body in Feminist Cultural Studies of Science and Technology. In the segment of her work Balsamo begins her analysis by referring to 'corporeal feminism'- an area of feminist research first identified by several Australian feminists most notably Elizabeth Grosz.

Balsamo has reviewed different approaches to produce a wholesome pedagogy through all parts of the cultural apparatus that construct gendered bodies.

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Her objective is to demonstrate how a discursive framework of analysis can elaborate the historically specific production of material bodies. It is in this context that Balsamo refers to Elizabeth Grosz in the conception of corporeal feminism in order to review the insights it offers into the study of the techno body. Grosz's widely written on body politics, sexuality and materiality.

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She is a Professor Emerita of Program in Gender, Sexuality and Feminist Studies, Trinity College of Arts and Science since 2019. Some of her most notable works are 'Sexual Subversions, Three French Feminists' published in 1989, 'Volatile Bodies: Towards a Corporeal Feminism' published in 1994. 'Space, Time and Perversion: Essays on the Politics of Bodies' published in 1995.

She assumes conception of 'corporeality' to be crucial to the formation of subjectivity, valorizing the notion of sexual difference for feminist thought. As Kate Mehuron comments, Grosz also proposes the Mobius Strip; the simplest non orientable surface as a promising model of corporeality that sidesteps the Cartesian dualism implicit in the metaphors animating almost all philosophical frameworks.

Grosz's notes on 'corporeal feminism' discuss the theories of the body and corporeality as they appear in various fields of body politics and body discourse. In the next slide we have a video. It is an excerpt from a keynote lecture by Grosz delivered at the feminist theory workshop which was organized by the Duke Trinity College, Durham.

She discusses the problem of morphological bifurcation in the role of production in feminist theory and critical thought.

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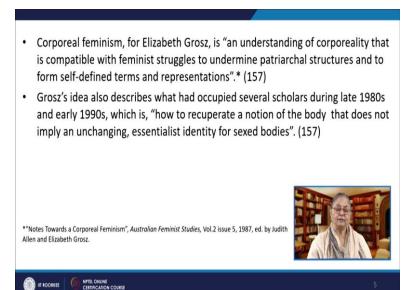
"Feminist theory is the production of concepts relevant to understanding women, femininity and social subordination more generally and welcoming their transformation. Feminist theory is the production of new concepts outside be beyond or at the very limit of those concepts that have defined men, women and their relations up to now.

Both patriarchal and feminist theory address each in their own different ways an intractable and irreducible problem and this is why feminism is never going to go away. The problem of sexual difference, the problem of morphological bifurcation, the problem of the creation of two different types of bodily form and two different types of subject who radically do not understand each other.

Whatever we might say and this is the universal problem of culture how to relate the two sexes to each other and this is a problem to which there is no solution. And this is why feminism I believe will be necessary for ever because the two sexes will not go away there may be variations there may be evolutionary transformations of them, but difference is only further elaborated and never eliminated if we are speaking in evolutionary terms life never gets simpler it always gets more complicated".

Balsamo further extends Grosz's views into the reading of the techno body to highlight the process of gendering in the 'Cultural Studies of Science and Technology'. She establishes Grosz's approach to theorizing sexuality as a mood to deconstruct the sociocultural construction of gender.

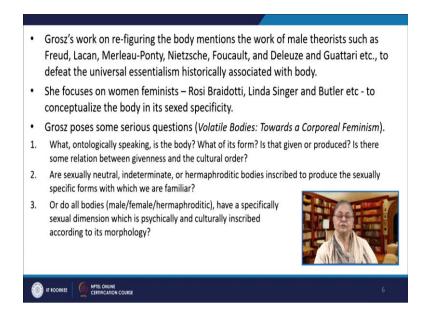
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For Elizabeth Grosz 'corporeal feminism' is "an understanding of corporeality that is compatible with feminist struggles to undermine patriarchal structures and to form self-defined terms and representations". Grosz's idea also describes what had occupied several scholars during late 1980s and early 1990s too which is how to recuperate a notion of the body that does not imply an unchanging essentialist identity for sexed bodies.

Grosz uses the corporeality of sex and sexual difference as a framework and a starting point for a feminist discussion of subjectivity and challenges the hierarchical gender duelist thought. Grosz refers to various theorist in her work on refiguring the body.

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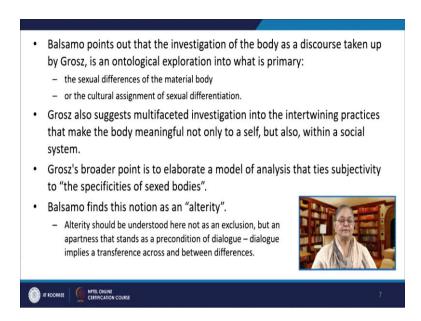


She refers to the work of male theorists such as Freud, Lacan, Merleau-Ponty, Nietzsche, Foucault and Deleuze and Guattari etcetera to defeat the universal essentialism historically associated with the body. She also focuses on women feminists particularly Rosi Braidotti, Linda Singer and Butler etcetera to conceptualize the body in its sexed specificity.

Grosz poses some serious questions. Firstly, what ontologically speaking is the body what of its form is that given or produced is there some relation between givenness and the cultural order? Secondly, are sexually neutral indeterminate or hermaphroditic bodies inscribed to produce the sexually specific forms with which we are routinely familiar.

Thirdly or do all bodies male or female or hermaphroditic have a specifically sexual dimension which is psychically and culturally inscribed according to its morphology. Some of these questions will be taken up further in later modules. Balsamo quotes Grosz to open an ontological inquiry into the sex bodies and categorization of sex as a human construct also as a humanist enterprise.

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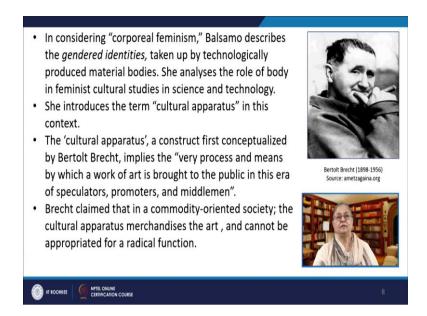


Balsamo points out that the investigation of the body as a discourse taken up by Grosz is an ontological exploration into what is primary- is it the sexual differences of the material body or is it the cultural assignment of sexual differentiation. Grosz also suggests multifaceted investigation into the intertwining practices that make the body meaningful not only to the self, but also within a social system.

Grosz's broader point is to elaborate a model of analysis that ties subjectivity to the specificities of sexed bodies. Balsamo finds this notion as an alterity. An alterity can be understood here not as an exclusion, but an apartness that stands as a precondition of dialogue. Dialogue implies a transference across and between differences.

Balsamo describes that 'corporeal feminism' has taken a techno turn where the bodies are read in the discourse of the cyber narrative, female body building, cosmetically enhance bodies, body in the cyber sphere. Balsamo introduces the term 'cultural apparatus' to transport the use application and theorizations on technology to move into the cultural discourse from its mechanical genealogy.

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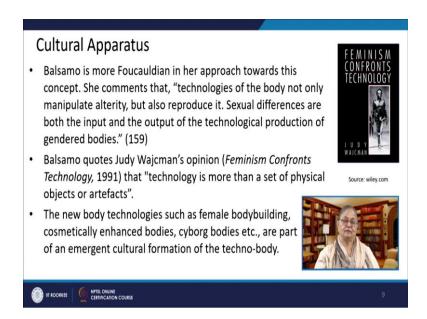
In considering 'corporeal feminism', Balsamo describes the gendered identities taken up by technologically produced material bodies. She also analyzes the role of body in feminist cultural studies in science and technology, it is in this context that she has introduce the term 'cultural apparatus'.

The cultural apparatus, a construct which was first conceptualized by Bertolt Brecht implies the very process and means by which a work of art is brought to the public in this era of his speculators promoters and middlemen. Brecht had claimed that in a commodity-oriented society the cultural apparatus merchandises the art and cannot be appropriated for a radical function.

As a concept the cultural apparatus also played a formative role in the work of the Frankfurt School. While the Frankfurt School theorized the effects of the cultural apparatus on the people Brecht had explored the role of an intellectual in the cultural apparatus. At this point Balsamo presents a very significant argument.

She opines that the technology and its various interfaces are part of the cultural discourse and it is more than its mechanical or technical parts in the 21st century. Technology is now not just limited to machines, it moves across social, economic and institutional practices.

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We can say that Balsamo is more Foucauldian in her approach she comments that technologies of the body not only manipulate alterity, but also reproduce it. Sexual differences are both the input and the output of the technological production of gendered bodies. Balsamo has quoted Judy Wajcman's opinion that technology is more than a set of physical objects or artefacts.

The new body technologies such as female bodybuilding, cosmetically enhanced bodies, cyborg bodies etcetera are part of an emergent cultural formation of the techno body. Thus, Balsamo reads the techno body as part of the cultural apparatus and not in the dialectics of science and technology.

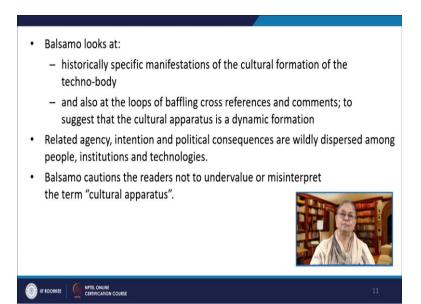
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Discursive elements of this formation include dissimilar forms from newspaper reports and magazine images to medical research and pages from the sears catalogue. The particular configuration of social relations, institutional practices, forms of discourse and systems of logic are termed as cultural apparatus through which the body can be read.

In a phrase which is reminiscent of Foucault Balsamo comments that such structured phenomenon produces is specific material effects at the level of the body also challenging the boundaries of scientific determinism. Balsamo discusses gender and feminism as cartographies of the intersections of the techno bodies and the renewed gender engagement of the contemporary technological narratives.

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Balsamo looks at historically specific manifestations of the cultural formation of the techno body and also at the loops of baffling cross references and comments to suggest that the cultural apparatus is a dynamic formation. Related agency intention and political consequences are widely dispersed among people institutions and technologies.

Balsamo cautions the readers not to undervalue or misinterpret the term cultural apparatus. The abstraction of the supposed gender differences hegemonize the cultural apparatus as one often takes gender to be monolithic.

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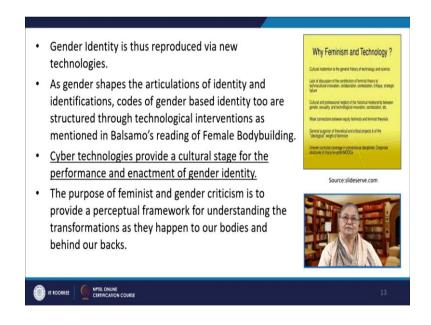


The range of technological embodiment available in postmodern culture depends on and indeed contributes to the repression conceptual fragmentation and commodification of the material body. Technologically fragmented body is determined through the system of differences that traditionally attributes differential value to different bodies. The abstract concept of gender differences is reified as discrete gender identities by the cultural apparatus. In tracking the development and deployment of new body technologies.

Balsamo describes the different technological mechanisms whereby traditional narratives of gender identity are replicated and reinscribed on material bodies. She situates the purpose of the cyber technologies as a tool to depict gender performance and the feminist critical thought. She opines that new and emergent technologies are being used to propagate and disseminate conventional gender identities.

We have seen how the visualization technologies used in cosmetic surgery are articulated with traditional and ideological narratives about gender. An articulation that keeps the female body positioned as a privileged object of a normative case.

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Gender identity is thus reproduced via new technologies. As gender shapes the articulations of identity and identifications codes of gender-based identity too are structured through technological interventions as mentioned in Balsamo's reading of female bodybuilding.

Cyber technologies provide a cultural stage for the performance and enactment of gender identity. The purpose of feminist and gender criticism is to provide a perceptual framework for understanding the transformations as they happen to our bodies and behind our backs. Thus, Balsamo clearly establishes that in our scientific discourse the material body has a definite meaning and relevance.

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It can be said that Balsamo's work functions on certain objectives which can be listed as follows to connect the seemingly isolated discourses into a narrative that enables us to make sense of transformation as they emerge. Reading textual maps, to study the scientific and technological formations, to study the development and deployment of new technologies which will impact gender formation, to study the ideology and technology that are circulated in popular culture.

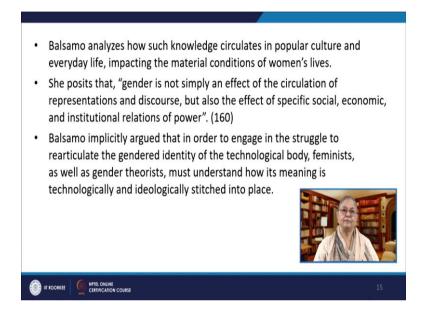
In this context fictional narratives have a definite importance. Firstly, they can schematize cultural occupations. We can take the example of cyberpunk science fiction that presents masculinist heterosexual constructions. Secondly, they serve as expressive resources that offer cognitive maps of emergent cultural arrangements.

For example, Margaret Atwood's 'The Handmaid's Tale' a dystopian novel set in near future depicting a patriarchal totalitarian theocratic state. Balsamo contributes to the new age postmodern post human feminist thought as an interventional base to highlight the

gender narrative in the phallocentric discourses, mainstream culture and in the construction of the techno body.

She suggests that the structured relations of power and knowledge are the foundation for the practices of science and medicine and also for the development and organization of new technologies. Feminist cultural studies and gender theorists must investigate into these.

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Balsamo analyzes how such knowledge circulates in popular culture and everyday life, impacting the material conditions of women's lives. She posits that gender is not simply an effect of the circulation of representation and discourse, but also the effect of specific social, economic and institutional relations of power.

Balsamo implicitly argued that in order to engage in the struggle to rearticulate the gendered identity of the technological body feminists as well as gender theorists must understand how its meaning is technologically and ideologically is stitched into place.

Therefore, it is vital to dissect the working of the body and the technology and the bodies in the technological domain as part of the renewed feminist engagement. On the one hand we have body and the technology. On the other hand, we have bodies in the technological domain and it is vital to dissect their working as a part of the renewed feminist engagement.

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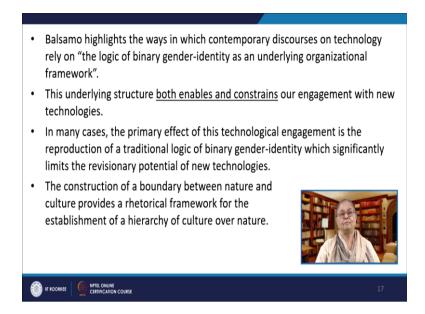
Anne Balsamo offers the phrase "technologies of the gendered body" to describe the interactions between bodies and technologies.
 She has treated the body "as a site of the mutually constitutive interaction between discourses about the body and materiality of specific bodies.
 The body serves as the locus for thinking differently about both feminist histories and feminist futures, and the political aims of feminist cultural criticism more broadly. (162)
 Gender, like the body, is not a boundary concept. It moves beyond and across.
 She suggests that gender is both a determining cultural condition and a social consequence of technological deployment.

Balsamo offers the phrase technologies of the gendered body to describe the interactions between bodies and technologies. She has treated the body as a site of the mutually constitutive interaction between discourses about the body and materiality of specific bodies. The body serves as the locus for thinking differently about both feminist histories

Gender like the body is not a boundary concept it moves beyond and across. She suggests that gender is both a determining cultural condition and a social consequence of technological deployment. Balsamo's critique of the cyber female bodybuilding cosmetic surgery body in the cyber sphere and the role of the body in feminist cultural studies of science and technology highlights the ways in which contemporary discourses of technology and gender identity formation interact with each other.

and feminist futures and the political aims of feminist cultural criticism more broadly.

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Balsamo highlights the ways in which contemporary discourses on technology rely on the logic of binary gender identity as an underlying organizational framework. This underlying structure both enables and constrains our engagement with new technologies. In many cases the primary effect of the technological engagement is the reproduction of a traditional logic of binary gender identity which significantly limits the revisionary potential of new technologies.

The construction of a boundary between nature and culture provides a rhetorical framework for the establishment of a hierarchy of culture over nature. According to Balsamo the socially constructed hierarchy reassures our technologically over stimulated imagination that culture or man will prevail in their encounters with nature and women.

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Balsamo's work thus illuminates the work of ideology in progress where new technologies are invested with cultural significance in ways that augment dominant cultural narratives and break them as well. The meaning is produced through texts narratives institutional structures economic forces and bodily practices. Such effects establish a set of possibilities for the further development and deployment of new technologies.

They also shape ongoing ideological struggles for post human studies. Interchangeability of sexual difference and gender as well as the gendered status of thought in science and technology remain fundamental concerns. Further, new technologies complicate the supposed gender binaries on screen and off screen in reality and in the virtual sphere.

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New technologies of communication such as virtual reality and computer networks serve as cultural stages for the performance and enactment of gender identity. In the cybernetic realm of techno senses, the technological transformation of gender identity is more virtual than real. Promises of bodily transcendence gender neutrality and race blindness are the main planks of the ideology of the information age; the representation of gender is supposed to have given way to its technological effacement.

But as Balsamo cautions us gender distinctions still persist in the new social spaces of virtual worlds. Balsamo has presented before us a map of contemporary cyber culture. It is a needed signpost to contextualize gender today. As we are driving on uncharted highways of technology towards ever more increasing cultural and biological interchanges with machines.

Balsamo thus repositions the female body from passivity to active interpretive agency and her work proves that the computer simulations of the body replicate traditional gendered identities. (Refer Slide Time: 24:58)



Although computer mediated communication networks are often promoted as the means to the realization of democratic ideals, the cultural politics enacted on these technological stages are. In fact, deeply conservative. Therefore, Balsamo's process of reading the bodies at the forefront of culture showcases, the need to demarcate gender study and feminist critical thought from the hegemonized phallocentric narrative.

To conclude we can say that Balsamo's engagement with contemporary technological narratives and the shaping of gender opens a world of post human possibilities. This aspect shall be further discussed in the upcoming lectures. In the next week we shall discuss the body the gendered body is an apparatus of biopolitics and our major constituent of the biopolitical narrative.

The next week shall attempt to understand the biopolitics of the gendered body by situating the writings of Jemima Repo, Donna Haraway and other critics.

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Thank you.