On the question of -

Antagonism in Democratisation of Technology

Programme:

Philosophy of Science, Technology and Society

Track:

Philosophy of Technology (PoT)

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Master thesis, University of Twente, August 2010

Dedication

To,

Foundation University of Twente Scholarship

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Chapter 1 - Introduction

1. 1 Preamble: “The philosophers have only interpreted the world in various ways—the point however is to change it”, these immortal words of Karl Marx are resonating ever since in the sphere of political philosophy. Marx believed that the freedom entails complete democratisation of the society and the state. Certainly he wasn't the first person to unleash the idea of democracy unto this world. Democracy is a prized possession in the hands of individuals' back since from thousands of years, when Greek thought brought it into *praxis*. The root meaning of *Demokratia* arising from the Greek words *demos* (people) and *kratos* (rule), has witnessed several, violent or peaceful, transformations and appropriations in Western political thought. Nonetheless, the discourse opened up by Marx is unmatched in its originality. What he dreamt of was as radical condition as 'end of politics'. It wasn't merely then an ontological or ethical change for politics, but equally perhaps an aesthetical one. But what was the condition of possibility for what Marx had envisioned? Unequivocally he sought an egalitarian era, where freedom arises out of creation of the 'classless society'. And his protagonist were to be the overwhelming majority of adults, who neither own or control the means of production, *the proletariat*. The 'dictatorship of the proletariat' will destruct the bourgeois class, and thus the need for organised political power will come to an end resulting in the 'reabsorption of the state by society', Marx proclaimed. His critique of the liberal democratic state was undergirded by the fact that, in an industrial capitalist world, the state could never be 'neutral' or the economy 'free'.

Max Weber ingeniously enmeshed sociology, politics, and philosophy in his analysis of the industrial capitalism, characterising it as a distinctly Western phenomenon having a basis in the 'rationalization'. To him 'rationalization' meant, the extension of calculative attitude of a technical character to more and more spheres of activity. Weber thought that rationalization will be inevitably accompanied by the spread of bureaucracy. He agreed with Marx that bureaucracy is essentially undemocratic in nature since it is not accountable to the population, but at the same time he concluded that the organisational effectiveness and stability required by the modern economic systems and mass citizenship makes it an indispensable organ. A central question for Weber was how to keep the overwhelming bureaucratic power under check. He used this concern as a way

to critique socialism - “State bureaucracy would rule alone if private capitalism were eliminated. The private and public bureaucracies, which now work next to, and potentially against, each other and hence check one another to a degree, would be merged into a single hierarchy” (Weber, 1978, p.143). Thus far from ending domination, socialism would necessarily suppress all expression of legitimately conflicting interests, and will result in a complete bureaucratic state. Weber's analysis certainly proved prophetic in relation to Marx's conception of the 'dictatorship of proletariat', which unfolded in twentieth century political movements epitomised by Lenin and Mao.

Andrew Feenberg, an American philosopher of technology, has over the last three decades consistently articulated a position that calls for both – democratisation and rejection of rationalitsation that is imparted by bureaucracies – albeit in a different sphere, the one of technology. Feenberg's formulation largely operates from the Frankfurt school tradition, and his critical theory of technology is both a response to and continuation of analysis that underlies Weberian and Marxian critique. In our modern societies, more and more of social life is organised by technically mediated institutions such as state agencies, multinational corporations, transportation systems, and medical establishments, where technical hierarchy appears to seamlessly merge with the social and political one. Therein the technocratic assumption of technological imperatives becomes true, and an overarching generalisation to manage the affairs of society as a system through 'neutral' instrumental rationality takes its root. Feenberg (1999) rejects this deterministic premise which holds “that technical necessity dictates the path of development, and that that path is discovered through the pursuit of efficiency” (p. 77).

Feenberg questions the Weberian view that technical progress follows an unilinear course, a single sequence of necessary stages dictated by an autonomous functional logic. Equally, he disapproves the Marxian readings of technology that believes that technical progress is necessarily humanity's advance and society must reorganise and adopt to practices that are required for the employment of technology. Observing from the viewpoint of the constructivist sociology of technology, Feenberg claims that *technology is ambivalent* and the design of actual devices is not determined by technical principles alone. Technical design incorporates both the social meaning of a particular technical object, as well as broader assumptions about social values. Accordingly, “Technological development is constrained by cultural norms originating in economics,

ideology, religion, and tradition” (p. 86). However, among the many possible configurations that technologies may come to realise, the dominant social forces select and concretise only those forms which bring technologies into the conformity of their own interests.

Nevertheless, since technologies impose normative demands and have wider social implications on its organisation, they are inherently open to the cultural and political struggles. Lay initiatives, and public interventions have historically forced technical experts to accommodate and address public concerns about technologies. In his theory of democratic rationalisation, Feenberg argues that the various social movements such as in the field of computers, medicine, and the environment that involve citizens in the affairs of experts, demanding changes in technology, is indeed the process of democratisation of technology. Accordingly, the intervention of the informal or outsider publics into the matters of decision-making concerning technologies results in democratisation of technology. It must be acknowledged that, Feenberg in his critical theory of technology provides a positive articulation that upholds the democratic nature of technology and calls for the subordination of technology to society. Appreciating its normative demand to democratise technology, this dissertation deals with a particular scenario in regard to the politics of technology, which Feenberg has articulated in his theory, wherein the multiple social groups with antagonistic conceptions are involved in the contestation over the form of a technology. The central concern here is – what kind of a normative ground will lead to democratisation of technology in such contestation.

1.2 Introduction: The philosophy of technology holds a great debt to Marx and Weber, who explicitly brought to the surface the role of 'means of production' and the expert driven 'bureaucracy' in the modern industrial society. These two thinkers have shaped up directly and indirectly the terms on which technology is 'problematized'. Of course, the first widely registered response to technology came from the early nineteenth century Luddites, who questioned, though for socio-economic reasons, the liberal faith in progress symbolised by the embrace of 'machine' and thus technology. It implicitly became the foundation for the classical philosophy of technology that promulgated the thesis of 'alienation'. The relation between technology and the way in which human beings interact in their world, has since remained the core question of exploration for the philosophy of technology. Irrespective of the school of thought, it is agreed that technology is indeed a

contextual element in human interaction. Technology has per force become, at least due to its materiality, part of human culture – rather on radical terms, our culture is technological. If this assumption can be held as true, then there is a concrete reason for the philosophy of technology to not shy away from explicating the political entanglements of technology on its own terms.

Twentieth century has just passed by, which enacted the dialogue of 'revolution' and 'fears' articulated by Marx and Weber, respectively. This historical dialogue after a long and painful ideological journey culminated in the abandonment of trenches as symbolised by the fall of 'Berlin Wall'. As a result, today, more than any time in the history, democracy as an idea has become a cynosure of political thought. Not perhaps coincidently, but the last century is also the same time when technology at large has changed, if not completely transformed, the material environment of human society. The form of post-modern hyper mediated society, as reflected in the cultural ethos of Western world could not have transfigured without technology. And that is why a 'question concerning technology' must be scrutinised – on political subjection too. In a bit Marxian sense, if the world has changed, and that too due to technology, then the philosophy of technology must go beyond just interpretation and ask - on what kind of political terms this change has been brought forth by technology? Has it traversed on democratic terrain, the one we value and espouse in the modern societies, or got spindled away in oblivion to it? In his works *Critical Theory of Technology*, *Alternative Modernity*, and *Questioning Technology* the American philosopher of technology, Andrew Feenberg, has put forward this appraisal of technology. He insists that technology is ambivalent in nature and can equally be cast either for 'conservation of hierarchy' or 'democratic rationalization'. This dissertation will mainly review the conception of the politics of technology that Feenberg elaborates in his theory[1], and build up a critique of his thesis that centres around the contestation over the form of a technology.

1.3 Democracy and Technology: 'Rule of the people, by the people, for the people', is how the President of USA Abraham Lincoln characterised democracy in a pithy. Although the scope of the democratic principles remains even today a highly contestable matter, but there seems to be an agreement that, as the British Primer Minister Winston Churchill said, democracy is the worst form of government except for all the others that

1 Feenberg's instrumentalization theory of technology is not the subject matter of this dissertation.

have been tried. The idea of the rule *by the people* has taken a deep root in our modern societies now, and any alternative idea is not in sight at least for the foreseeable time. Notwithstanding the debate between the instrumental and the intrinsic justifications of democracy, at minimal it can be viewed as a procedure for making political decisions that are *legitimate* by definition. The problematic that this dissertation focuses on is – how the notion of democratisation of technology can resolve the *question of legitimacy* that arises in a situation when people *disagree* with each other (and sometimes antagonistically) in the sphere of technology.

Even if there might be disagreements within the people, the state in the public sphere acts as a coercive agent subjecting the population to the rules made by it. Equally technologies are normative too. As Bruno Latour (1992) eloquently describes – a spring that is part of the door closer mechanism, now materialises the obligation to close the door. However, the problems become more difficult when the rotating glass doors intended to keep off the draft of cool air from entering into the building, also ends up keeping away the wheel-chaired people. These 'technical codes', as Feenberg calls them, are the subject of disagreement in the sphere of technology. And as Feenberg observes, most often design of a technology can be modified to accommodate the demands of those whose concerns were previously excluded (e.g. modern barrier-free design of buildings). But what if, if the height of the doors is antagonistically contested, as was the case in the Narmada dams controversy[2] (height of the doors determined the water storage capacity of the dams, and thus the size of the catchment area and the number of villages which will get submerged). How to resolve these disagreements in the sphere of technology? This thesis argues that resolution of such antagonistic contestation requires a normative ground so as to ensure that technology is indeed democratised.

1.4 Thesis Organisation: Feenberg draws on a number of intellectual traditions – hermeneutics, critical theory, cultural theory, constructivism – to articulate his thesis. In order to appreciate his position, it is first necessary to put into the perspective various schools of thoughts that are important to the discourse of philosophy of technology. Second chapter provides that overview of the philosophy of technology, and puts forward Feenberg's argument that technology cannot be seen as 'neutral' or apolitical. The central concern of this dissertation is the underlying micropolitics of technology highlighted in

2 This controversy will be elaborated in the subsequent chapters.

Feenberg's thesis vis-a-vis its claim of democratisation of technology. Third chapter will present Feenberg's theory of democratisation of technology and associated technical micropolitics. Public involvement in politics is central to Feenberg's conception of democratic rationalisation. However, the role of public agency that he emphasises in his critical theory of technology deserves close scrutiny, since mainstream political theories have raised criticism against such conceptions. The concept of issue politics, which shares commonalities with Feenberg's approach in relation to public involvement in politics, will be elaborated in the fourth chapter to identify the tensions within the politics of technology that Feenberg espouses.

Fifth chapter will present the main argumentation of this disssertation. Using the insights gained from the concept of issue politics and its relevant criticism, technical micropolitics will be questioned for its assumptions. It will be argued that, in order to resolve disagreements that arise in the process of democratisation of technology, a normative ground becomes necessary. Arguing from the critical theory perspective, which is also the basis of Feenberg's work, it will be suggested that law provides us this normative resource. Concluding chapter will discuss various aspects of the notion of *legitimate rationalisation*, that this dissertation puts forward in relation to Feenberg's theory of democratisation of technology.

Chapter 2 - Reform of Technology

2.1 Things: 'The thing things', Heidegger wrote. What things i.e. artefacts do in our modern technological societies – the role that technology plays in human existence and the way in which human beings interpret reality – is a constant theme pursued by the philosophers of technology. Marx's call to go beyond such 'interpretation' that philosophers engage into hovering around 'perception' and 'experience', pushes human beings to realise 'actions' and 'existence' in their own ways. However, technology is unique; entangled with materiality, causality, and culture there is a relationship with which human beings are constantly engaged in. Reform or transformation of technology without understanding this relationship is bound to bring disasters. That is why *action* and *perception* as well as *experience* and *existence* have to be appreciated in their interrelationship vis-a-vis human beings and technology. In this chapter first an overview of some major thoughts in the philosophy of technology is presented. Further it summarises Feenberg's argument as to why technology needs to be understood as the object of politics. It then concludes with the observation that, Feenberg's theory of democratisation of technology provides us an positive and critical articulation of human society's relationship with technology and deserves a close scrutiny.

2.2.1 Classical Philosophy of Technology: Alienation of human beings from their own selves, environment, nature and otherwise was the deeply anathematised reading accorded to technology by the classical works in philosophy of technology. These thinkers, it must be mentioned, were situated in the historical context that was dotted with crisscrossing of mass production into the traditional society, and punctuations of World Wars. German existential philosopher Karl Jaspers bemoaned 'demonism of technology' that transforms human society into 'mass rule', threatening the existence of what he called 'the authentically human'. According to Jaspers (1951) technology has made possible the growth of population, which in turn is now completely dependent on technology for the supply of mass produced commodities requiring greater *mechanization* of the labour, and as a consequence human population is interlocked in wheel-work of which each worker is one of the cogs. Jaspers remarks, in order to smoothly maintain this order an extensive *bureaucracy* had to be created and the resulting society is nothing but 'the Apparatus'. The apparatus determines how daily lives

of human beings are carried out, creating a 'mass rule' or 'mass order' that fosters a homogenisation of the material environment and reduces human beings to interchangeable fulfillers of functions. In this mass life, Jaspers warns, human beings are no longer capable of authentically 'being themselves', and technology poses a threat to the 'bond between human beings and the world'. According to Jaspers, technology that was summoned into existence by human beings has now become an independent power with demonic nature.

Martin Heidegger, a German philosopher, who approached technology from a hermeneutic perspective remains till date the most influential thinker in the philosophy of technology. Technology according to Heidegger (1977) must not be understood as a means to an end but as 'a way of revealing'. He elaborates his conception on ontological grounding. Reality, Heidegger explains, is not something that human beings can ever know once and for all, but is relative in its relationship with human beings. However, the way reality is revealed to us is not arbitrary, and is preceded by the 'way of unconcealment' which holds the understanding to what 'being unconcealed' means in a particular epoch. Starting with Plato 'being' came to mean 'essence', in Christian thought it began to mean 'shaped by God', and in modern time as Nietzsche described - it took the form of 'being usable for the Will to Power'. For Heidegger, the revealing that rules in modern technology is a challenging-forth, everything is ordered to stand by (*Bestand*). The 'way of being' of reality in the epoch of technology is 'enframing' (*Gestell*) that lets come to presence revealed as standing-reserve. In contrast to the ancient Greeks who viewed 'bringing-forth' of being as not solely the act of human beings but also indebted to something 'over and beyond', within the epoch of modern technology reality appears as what is makeable and controllable. Heidegger characterises the 'enframing' as posing 'the greatest danger' to the humanity. He provides two reasons for such conclusion; first, because in the 'enframing' *being* comes to the very brink of treating itself as a standing-reserve, and second, when 'enframing' holds sway it drives out every other possibility of revealing. Heidegger appends that since 'enframing' reduces everything to human domination and control, any deliberate attempt by human beings to disclose reality in a different way will be the 'will to power' of the 'enframing'.

This gloomy and negative qualification of technology as such was shared by many other thinkers. Technology thus was presented as a condition in which human beings are

trapped inescapably. There was no consensus though about the resolution of the situation. In his later works Jaspers (1953) radically changed his position in viewing technology as 'neutral' in itself. He contended that, in order to overcome 'the demonism of technology' we must realise that technology is a collection of means, which are neutral in themselves, for the ends set by us. Heidegger (1977) opposed this position in saying that, “But we are delivered over to [technology] in the worst possible way when we regard it as something neutral; for this conception of it, to which today we particularly like to do homage, makes us utterly blind to the essence of technology” (p. 4). According to Heidegger, because essence of technology is nothing technological and rather must be understood as a verb, we must engage in 'essential reflection' where essence of technology is not *what* technology is but *how it is present*. Thus he suggests adoption of a specific attitude towards technology – 'releasement' (*Gelassenheit*) – that will allow us to use technical devices without becoming enslaved to them and provide us 'openness to the mystery' offering “the possibility of dwelling in the world in a totally different way” (Heidegger, 1966, p. 55). Heidegger contends that while the 'instrumental' approach to view technology as 'a means to an end', or 'anthropological' approach to see technology as 'a human activity' are indeed 'correct', they do not go deep enough since they are not yet 'true'. In any manner it is clear that classical philosophy of technology tends to bundle all technological artefacts under the single umbrella of 'Technology' and presents the case as of binary choice. This feature is the basis for critique levelled by contemporary thinkers, who approach technology in what is referred to as 'the empirical turn' in philosophy of technology.

2.2.2 Contemporary Philosophy of Technology: Being aware of the fact that the negative judgement accorded to technology has much to do with the rapid changes society underwent during industrialisation, contemporary philosophy of technology did not completely withdrew itself from the questions posed by the classical philosophy of technology. The new approach rather than singularly reducing technology to nontechnological things finds virtue in analysing technology itself through concrete technological devices and artefacts. The American philosopher Albert Borgmann, although strongly influenced by Heidegger, focuses his analysis on the patterns that technological artefacts give rise to in human lives. His 'paradigmatic' approach adopts the notion of paradigms for analysing technology, and holds that modern technology conduces “a characteristic and constraining pattern to the entire fabric of our lives”, a

'pattern' or 'paradigm' that “inheres in the dominant way in which we in the modern era have been taking up with the world” (Borgmann, 1984, p. 3). Borgmann calls this pattern the 'device paradigm', which he suggests bears a relationship to the Enlightenment promise. Accordingly, technology emerged not as a desire to 'dominate nature', but “with the aim of liberating humanity from disease, hunger, and toil, and of enriching life with learning, art, and athletics” (p. 36). This meant that our world moved toward an ever more technological character, keeping us focussed on what technology promises rather than on the accompanying social changes brought upon. Borgmann adds, technologies liberate human beings from needs and burdens by making available things that are difficult to acquire or realise. This *availability* is made possible by devices. However, devices differ from pretechnological *things* because they promote consumption of commodities requiring no engagement that things demand, cutting human beings off from social and material contexts. Borgmann does not suggest that the alternative way to 'the good life' lies in radically rejecting technology, but rather calls for reforming it. In his vision technology must make a transition from devices to 'focal things', which would invite engagement with themselves and promote 'focal practices' that “are concrete, tangible, and deep, admitting of no functional equivalents” and are “unprocurable and finally beyond our control”.

Don Ihde, an American philosopher, approaches technology with his praxis-perception model of phenomenology or simply the 'postphenomenology'. Postphenomenology rejects the dichotomy between subject and object, and holds that reality cannot be entirely reduced to interpretations, language games, or contexts. Ihde suggests that things are not neutral but active *mediators* of the relationship between humans and world. He terms this mediating role of artefacts as *technological intentionality* i.e. technologies have a certain directionality that shapes the ways in which they are used. Accordingly, Ihde holds that the 'intentionalities' of technologies coshape and determine contact between human beings and their world. However, he cautions that this ability to coshape must not be interpreted as an intrinsic property of the artefact itself; for it would mean adopting a realism that allows to talk of technology independently of the humans who engage with it. Ihde (1993) explains, “Were technologies merely objects totally divorced from human praxis, they would be so much 'junk' lying around. Once taken into praxis one can speak not of technologies 'in themselves,' but as the active relational pair, human-technology” (p. 34). Thus, technologies cannot be separated out from their context, they have no

essence. Technologies derive their identities in their concrete uses, and the same artefact can possess different identities in different use contexts. Ihde terms this context dependency as 'multistability' of technologies.

In a sense, contemporary philosophy of technology has attempted to locate technology in its cultural complexity. While Ihde visualises technological world as 'pluriculturalism' where a single interpretive framework is no more a possibility, Borgmann rejects 'pluriculturalism' and rather looks at technology as an enabler of the 'device paradigm' which promotes 'a definite style of life' marked by 'consumption'. Nonetheless, instead as a priori judgemental framework of alienation, contemporary philosophy of technology prefers to see technology in terms of its concrete engagement with human beings. A similar but much more radical approach has been undertaken by science and technology studies (STS) during past few decades.

2.2.3 Science and Technology Studies: Science and technology studies (STS) approach science and technology as being thoroughly social activities. The origins of STS can be traced back to the philosophy of science, where 'logical positivism' as articulated by the Vienna Circle in the early twentieth century and later Karl Popper's 'theory of falsification' attempted to define the nature of science, particularly the epistemic dimension. However, the fundamental ground for STS came into form with Thomas Kuhn's, a historian of science, thesis of the 'scientific revolutions'. Kuhn's idea of a shared scientific 'paradigm' opened up the space for analysing science as a practice. In this backdrop the 'strong programme in the sociology of knowledge', set out at Edinburgh during the 1970s gave the first impetus to STS. The four tenets of the strong programme - causal, impartial, symmetrical, and reflexive – put to the judgement the 'content' of science and technology on social and cultural terms. STS holds that, “The sources of knowledge and artefacts are complex and various: there is no scientific method to translate nature into knowledge, and no technological method to translate knowledge into artefacts” (Sismondo, 2004, p. 10). With the assumption that science and technology are *social*, *active*, and *not themselves natural,* STS takes an anti-essentialist position. This position was further elaborated by Pinch and Bijker in relation to technology. Their 'social construction of technology' (SCOT) theory underlines that since no single object can be said to have only one potential use or function, there is a kind of *interpretive flexibility* available as to define what an artefact is or does in a particular context. Thus, STS

embraces what is largely referred to as 'social construction' of science and technology.

During the late 1980s a distinct STS framework to understand science and technology in terms of 'actor networks' emerged in the works of Michel Callon, Bruno Latour, and John Law. Actor-network-theory (ANT) is a general social theory which approaches *technoscience* as being the creation of larger and stronger networks. ANT is a materialist theory, according to which science and technology work by successfully translating the actions, forces, and interests within a network built by heterogeneous actors (p. 66). Moreover, ANT is also built on a relational ontology that defines objects vis-a-vis their places in networks. Importantly not only technoscientific objects but also the social groups are seen as an outcome of the process of network-building. So while the 'strong programme' adheres to 'symmetry' by using the same type of resources for analysing truth and falsity of beliefs, ANT introduces another type of 'symmetry' that treats both the social and material worlds as the products of networks. This symmetrical treatment accorded by ANT to human and non-humans equally, has drawn criticism from 'constructivists' on the grounds that, ANT construes agency as an effect of networks and not prior to them, and ignores distinctly human subjective factors such as cultures and practices. Latour on the other hand views social constructivism as implausible since it involves a violation of fundamental assumptions in regard to cause and effect. Nevertheless, keeping aside the debate on the exact dimensions of social influence, it can be agreed that STS as a whole has certainly brought down science and technology from hallowed heights, and has squarely put the question of technoscience in its relation to the society and culture. Critical theorists have traditionally focused on these dimensions, although with an abstract theoretical stance that is in contrast to the local context rich analysis offered by STS.

2.2.4 Critical Theory: Primarily critical theory engages into examination and critique of society and culture. In particular, critical theorists associated with what is called as the 'Frankfurt School' have had for long put the entanglement of technology and society at centre in their analysis. German-American philosopher Herbert Marcuse diagnosed modern capitalism and industrialisation as the force that creates 'one-dimensional' thought in society, suppressing any opposition to itself. This position has been achieved with the spread of instrumental reason, which concerns itself with the efficiency of different means with respect to pre-given ends. Marcuse, however, suggested that the

instrumental reason is historically contingent, and believed that human action can change the epochal structure of 'technological rationality' and the designs which flow from it. He thus envisioned a new disclosure of being through a revolutionary transformation of basic practices. Marcuse (1969) explained, “In order to become vehicles of freedom, science and technology would have to change their present direction and goals; they would have to be reconstructed in accord with a new sensibility – the demands of the life instincts” (p. 19). This he believed would lead us to treat nature as another subject instead of as mere raw materials, bringing humans in harmony with nature than instigating conflict.

Jurgen Habermas, a German philosopher, holds that technology is 'neutral' in its proper sphere, and only when it crosses that sphere various social pathologies of the modern societies come to an occasion. Habermas advances a concept of transhistorical essence of technical action in distinguishing between the logic of 'work' and 'interaction'. Accordingly he suggests that 'work' is a form of 'purposive-rational action' oriented towards *success* and aimed at controlling the world. In contrast 'interaction' is concerned with communication in the pursuit of the common understanding. While acknowledging that, “social interests still determine the direction, functions, and pace of technical progress”(Habermas, 1970, p. 105), Habermas rather conceives technological development as a 'generic project'. He attributes this 'project' not to a particular historical epoch or a social class, but “a 'project' of the human species *as a whole*” (p. 87). In his theory of 'communicative action' Habermas calls for a process of 'communicative rationalisation' that will enhance human freedom, which has been obstructed by the ongoing trajectory of modern development. Technocracy thus for him, is not an outcome arising from nature of technology but rather is due to an imbalance between two action-types i.e. work, and interaction. Habermas rejects Marcuse's vision of the new science and technology as a romantic myth. However, his own view that technology is neutral also stands challenged by the recent works in STS. Notwithstanding, critical theory at large articulates a cultural critique that 'problematizes' way of being of our societies in far more sharper terms.

2.3 Looking Back at Technology: Reminding ourselves of Marx's slogan to 'change the world', it could be said that the last century was most empathetic to it. Purely for analytical reasoning it appears that the twentieth century was crown studded with all

forms of political thought – monarchy, imperialism, communism, fascism, nazism, authoritarian militarism, anarchism, totalitarianism, socialism, liberalism, theocracy, and democracy. Apart from this spectrum of political thought a powerful force had also been developing, which both quietly and violently was changing human society. These changes were foremost about the material transformation unleashed by technology, but undoubtedly also effectively influenced the socio-economic realities of human society. In this backdrop a brief sketch of how the philosophy of technology has interpreted and understood technology itself and its relation to humans, portrayed in the last sections reveals no less than a spectacular thought. However, the pertinent question is, where does technology stands in the political sphere?

Technology as a matter of fact was never much of a concern to political thought. Even the modern political theory, as the American philosopher of technology Langdon Winner explains, subsumed technical activity under the heading of economy. Common sense *instrumentalism* treated technology as a neutral means, thus it had no bearing on basic normative questions that consumed political thinkers. Feenberg explains, Marx and Darwin influenced the progressivism thought: the thesis that technical progress is humanity's advance towards freedom and happiness, and thus is universal and autonomous in nature. The thesis of progressivism equated idea of progress with the promise of technology and thus notion of *technological determinism* took its root. And since it was assumed that the ends served by technology are the features of biological constitution, technology received immunity from political controversy. Technology was thus thought as being a neutral means that shortens rather than alters the ends. However, the visible success of the modern technology soon ensured it a forceful entry into politics, as Lenin remarked, “communism is Soviet power plus the electrification of the whole country”. Thus, the idea of technocracy charting out the most efficient course of action, which could replace the traditional public sphere was born; something that Weber had feared. Politics thus became subjected to technical paradigm.

Technology is:	Autonomous	Humanly Controlled
Neutral (complete separation of means and ends)	Determinism (e.g. traditional Marxism)	Instrumentalism (liberal faith in progress)
Value-laden (means form a way of life that includes ends)	Substantivism (means and ends linked in systems)	Critical Theory (choice of alternative means-ends systems)

table 1: The Varieties of Theory

Romantic protests that historically stood against mechanisation, took opposition to this technocratic trend. Feenberg (1999) observes, this view became reflected in the 'substantive' theories of technology (table 1) (p. 9). Sharing affinity with determinism, *substantivism* maintains that technology has an autonomous character, but in addition argues that technology is not neutral and embodies specific values inherently biased toward domination. Importantly, substantivism holds that there is a single 'essence' of technology, and any attempts to correct flaws of technology would not yield success. Heidegger's position largely echoes this stance. A strand of critical theory shares the substantivist view that, technology isn't just a means that serves independently chosen ends but is also a way of life. The Frankfurt School thinkers held that technology is a materialised ideology. However, critical theory refutes that technology is autonomous or has single essence, and stresses the possibility of restructuring social systems so as to do away with the present technical domination of social organisation. This paves the way for philosophical reflection on social control of technological development – wherein technology is recognised as political.

2.4 Backdrop to Feenberg: Feenberg in his *critical theory of technology* articulates a significant understanding of technology and the terms of politics therein. But in order to situate Feenberg's work it is important to take into the account historical context that provides the backdrop. During the late 1960s and the early 1970s, all across the democratic world the popular anti-technocratic movements held a sway. Feenberg himself took part in The French May Events, which arose in the spring of 1968 put into the motion by national student protests in Paris. These socialist movements were loosely tied to the traditional Marxism marking the formulation of New Left, and challenged the technocratic control of society as well as rejected the cultural elitism of *substantivism*. Feenberg

(1999) takes his point of departure from these movements, which he holds had “anticipated a new micropolitics of technology which engages the issue of progress in concrete struggles of a new type in domains such as computers, medicine, and the environment” (p. 5).

Another lineage that must be traced is Feenberg's association with the Frankfurt School which is rooted in Marxism, and the tradition of critical theory that he operates from which draws on from the Weberian thought. Feenberg is the pupil of Herbert Marcuse who was closely associated with the Frankfurt School and is also famously referred to as the founder of the New Left. While Marcuse was the pupil of Heidegger, they both studied under Edmund Husserl who is deemed the founder of phenomenology. Also, while Jaspers was a contemporary and colleague of Heidegger, Ihde is the current leading explorer of hermeneutic thought working from the phenomenological tradition of Husserl and Heidegger, and Borgmann works closely with Heidegger's philosophy. And since 1960s Habermas has come to heavily influence the Frankfurt School thought. Feenberg's work thus needs to be located in this shared philosophical heritage.

2.5 Third Alternative: Feenberg argues that technology is normative, in that it impacts how human society organises its everyday life. For example in our modern transportation systems, technology mediates and organise a large number of people without discussion; they are just expected to follow the rules. However, there is no singular universal rationality that must take precedence in development of technologies, but instead culturally and politically particularised values have and can always intervene to steer an alternative path of technological development, as the constructivist studies inform us. Nonetheless, specific technical choices do have political implications. The highways in the Netherlands prescribe a maximum speed limit of 120 kmph, while the neighbouring German *autobahn* at several stretches do not prescribe any limits at all. The Dutch policy has certainly evolved from the conviction of minimising road fatalities as well as the active stance in promotion of public transportation system.

Feenberg (2002) complains that both the *instrumental* and *substantive* theories share a 'take it or leave it' attitude toward technology (p. 8). If technology is merely instrumental, bereft of any values, then technological design can not be an issue of political debate barring dimensions of range and efficiency of its applications. On the other hand, if

technology is a vehicle for cultural domination, as substantivist believe it to be, then the only available options are to either pursue condemned advancement or retreat to primitive life. Accordingly, for both these theories '*technology is destiny*'. Equally the pessimistic view of modernity characterised by Weber in his theory of rationalisation that sees society being lead to 'iron cage' of bureaucracy, assumes that unique form of technical thought will erase out the non-technical traditional values. On the other hand, constructivism and STS takes a narrow empirical stand confining it to the actions of specific local groups without paying attention to the macro-sociological or political context. Feenberg argues,these world-views either end up celebrating the triumph of technocracy over society or cling to a gloomy prediction of techno-cultural disaster.

Feenberg (1999), however, argues that there is a third alternative available to us that finds its basis in 'ambivalence' of technology instead of surrendering to either technocracy that is characterised by “a wide-ranging administrative system that is *legitimated* by reference to scientific expertise rather than tradition, law, or the will of the people” (p. 4) or romantic anti-dystopian ideology. Feenberg defines ambivalence of technology as – “the availability of technology for alternative developments with different social consequences, its ambivalence” (p. 7). Accordingly, there is no unique correlation between technological advance and the distribution of social power. Feenberg summarises the ambivalence of technology in the following two principles:

> 1. Conservation of hierarchy: social hierarchy can generally be preserved and reproduced as new technology is introduced. This principle explains the extraordinary continuity of power in advanced capitalist societies over the last several generations, made possible by technocratic strategies of modernization despite enormous technical changes.
> 2. Democratic rationalization: new technology can also be used to undermine the existing social hierarchy or to force it to meet needs it has ignored. This principle explains the technical initiatives that often accompany the structural reforms pursued by union, environmental, and other social movements (p. 76).

Feenberg argues that the second principle signifies that there are ways of rationalising society that result in democratisation than centralise control. He argues that the popular movements which arose during the 1960s reflected the unwillingness of public to leave its affairs entirely in the hands of experts. He holds that increasing number of social

movements such as environmentalism and the changes in technology that they demand would lead to *rationalisation.* Although citizens involvement in the affairs of experts might be seen as irrational, Feenberg argues, this type of public participation rather leads to the *democratisation of technology*. Technological design often has to face disputes over definition of technology, and amongst the many possible configurations its final shape adopts the form in close conformity of the dominant social forces to achieve *closure.* Technologies thus come to adopt not only the social meaning of individual technical objects but also reflect significant social values in its design. Feenberg calls this socio-cultural reflection as 'technical code' of technology that defines "*the object in strictly technical terms in accordance with the social meaning it has acquired*" (p. 88). e.g. as Pinch and Bijker (1987) describe, the bicycle design in the 1890s adopted the technical code of 'safety' to accommodate women and mature riders privileging it against the technical code of 'fast' reflected in the earlier high wheelers design. It also becomes possible to see here that while technology is potentially flexible in its configuration, it cannot be neutral. As Feenberg (1999) observes, "Technology is thus not a merely a means to an end; technical design standards define major portions of the social environment, such as urban and built spaces, workplaces, medical activities and expectations, life patterns, and so on" (p. 97). His conception of technical micropolitics finds its basis in the democratic rationalisations that seek to harness ambivalence of technology for accommodation of wider social interests.

2.6 Reform of Technology: After dethroning the crown studded with variety of political thoughts, today, even with its plethora of conceptions, democratic form of governance stands as the most agreeable political mechanism. Law thus now remains under human control. Similarly, the market was for long believed as an alien rational force that transcends the will of peoples and nations. Today, the shape of modern societies is so much dependent on the control of their economies, that giving up the control over the market is beyond imagination (even loosening of oversight means a crisis as was amply demonstrated by the 'subprime mortgage' crisis of 2008). Similarly, if technological design influences how our everyday lives are configured, then their form is a kind of legislative authority. That is why it is not out of place to ask for subordination of technology to society. We do not need to reject technology; rather we must seek ways for technology to incorporate the interests and concerns of human society. That is why Feenberg's question is not just rhetorical when he asks – "But if technology is so powerful,

why don't we apply the same democratic standards to it we apply to other political institutions? By those standards the design process as it now exists is clearly illegitimate" (p. 131).

How do we imagine to democratise technology? Can a representative periodically elected by the people ensure that technology is democratised? Feenberg thinks such representative system is not sufficient in the sphere of technology and suggests that people must themselves be involved in the process. Public involvement in politics is central in Feenberg's conception of the micropolitics of technology. These public interventions are typically triggered by lay activist who provoke technical controversies or interests groups engaged in creative appropriation of technology, who attempt to influence the public opinion and demand that their concerns be accommodated in technical design. Technological reforms are thus realised when "social groups excluded from the original design network articulate their unrepresented interests politically" (p. 94). These concrete local struggles for technological reform are legitimate democratic interventions for Feenberg.

But this micropolitics is not without its problems, specially when claims of democratic legitimacy are made, because they end up contesting the legitimacy of established central democratic institutions. Moreover, it can not be always said that the the outcome of a technical controversy corresponds with the public will. Rather such controversies might altogether bypass the route of central democratic institutions and arrive at a settlement which might be questionable for its legitimacy. However, Feenberg (1998) argues that public involvement in technical change is intrinsically democratic, because it offers opportunity to citizens "to enhance participation and agency by reforming the procedures of government, business, education, and other social spheres". Accordingly, as more and more of social life becomes framed by technical systems, so does grows the need for public participation and consultation to veto powers claimed by technocracy.

However, the pertinent question is – does the micropolitics of technology always heralds democratisation? As the constructivists have shown, could it not be the case that technological design settles with the dominant social forces in these public interventions? And more importantly – which is the central question that this dissertation explores – if multiple social groups are engaged in the struggle over technological design, on what

grounds it becomes possible to say that the democratisation of technology has indeed been achieved in this contestation? Democratisation or reform of technology through the route of politics can not discount the disagreements occurring in the process. These considerations will be further explored in the subsequent chapters while closely scrutinising the conception of technical micropolitics put forward by Feenberg.

2.7 Conclusion: The philosophy of technology over a century has theorised a deeply critical understanding of relationship between human beings and technology. Earlier simplistic notions of technology being 'neutral' means is no more valid. Substantivists belonging to the classical tradition, critical theorists, STS, and the contemporary philosophy of technology reject the disposition that technology can be treated as an 'neutral' element. Feenberg takes this understanding to further explore the human significance of technology. If technology is not 'neutral' then it inherits certain 'bias' powerfully influencing our societies. Feenberg rejects polemical stands that either subject humans to technology or reject technology altogether. He carries further this position to our technological societies from the critical theorist vantage point. Instead of politics being subjected to technical paradigm resting on technocracy, he marshals a critique of technology that squarely unravels its political nature, and brings sets again technology as the object of politics.

Questions pertaining to transformation of technology, so as to democratise it, now becomes interlinked to politics. The technical micropolitics Feenberg envisages to democratise technology thus deserves a closer scrutiny. In the next chapter, Feenberg's theory of democratisation of technology and the nature of politics therein will be elaborated upon. Further, emphasis will be accorded to public involvement in politics which is central to Feenberg's conception. This agency that he relies on and wants to reinvigorate through democratic rationalisations, would then be presented as a principle aspect requiring close scrutiny.

Chapter 3 – Democratisation of Technology

3.1 May Vision: “Do not confuse the TECHNICAL division of labour and the HIERARCHY of authority and power. The first is necessary, the second is superfluous and should be replaced by an equal exchange of our work and services within a liberated society”, read the pamphlet 'Amnesty of Blinded Eyes', a representation of what were to become the virulent French May events of 1968 (Feenberg, 1999, p. 26). The postwar years were characterised by many as a period of faith in the central institutions of society, according authority and legitimacy to them. The value or social consensus reflected in 'social democratic' theories, and the 'caring state' formulation realised in terms of the interventionist Keynesian politics characterised what the American political sociologist Seymour Lipset termed 'end of ideology'.

The May events, however, were a surprising rupture to the perceived 'consensus'. Lipset (1963) had argued that within Western democracies, “the ideological issues dividing left and right have been reduced to a little less government ownership and economic planning” (p. 441), and as a corollary it “really makes little difference which political party controls the domestic policies of individual nations” (Held, 2006, p. 188). More brazenly, Lipset held that the fundamental problems of industrial revolution have been solved: “the workers have achieved political citizenship; the conservatives have accepted the welfare state; the democratic left has recognized that an increase in overall state power carries with it more dangers to freedom than solutions for economic problems” (Held, 2006, p. 188). It is in this backdrop that the writing on pamphlet appears rebellious - “Let's categorically refuse the ideology of PROFIT AND PROGRESS or other pseudo-forces of the same type. Progress will be what we want it to be” (Feenberg, 1999, 26).

Herbert Marcuse rejected the 'end of ideology' thesis, and rather provided an interpretation of postwar political life that he defined as the 'one-dimensional society'. Marcuse's (1964) analysis pointed that the multiple forces aiding the control of modern economy have resulted in a highly repressive order. He argued, growing private bureaucracies fuelled by the concentration of capital and the radical changes in science and technology; expansion of the public bureaucracy due to the increasing regulation of free competition through state intervention; and the reorganisation of national priorities in relation to international events and the threat of Cold War; are in collusion sustaining

the 'end of ideology' thesis while threatening to engulf the social life. As a consequence, Marcuse remarked, 'depoliticization' of the public life has been achieved, where political and moral questions have been replaced by the obsession with technique and the efficiency. To Marcuse, this state of affair was far from being based on consent, and was the result of ideological and coercive forces undermining the idea of 'rule by the people'.

Marcuse added, the cult of affluence and consumerism shaped by mass media that is driven by the advertising industry, has, as an upshot created the modes of behaviour that are adaptive, passive, and acquiescent. Thus his one-dimensionality thesis held that in the process, a complete integration of the modern societies has been accomplished. But the May events and build up of the protest movements in the 1960s and 1970s equally remain inexplicable on Marcusean terms as they were to 'end of ideology' thesis. As one graffiti on the walls of Paris said, “Do not serve the people. They will serve themselves” (Feenberg, 1999, p. 25) . Nonetheless, Marcuse's analysis signified the development of a crisis of the liberal democratic state, and became the ground for articulation of New Left.

Critical theorists like Marcuse held that, “transcending demands would have to come from 'without' (art, philosophical critique, the instincts, the Third World)” (p. 107), thus leaving almost no scope for agency. Feenberg, however, locates the agency within these anti-technocratic movements that took place in the Western democracies. He holds that these movements had “anticipated a new micropolitics of technology which engages the issue of progress in concrete struggles of a new type in domains such as computers, medicine, and the environment” (p. 5). In this chapter Feenberg's conception of the micropolitics of technology will be presented. Specifically the role of public agency in democratisation of technology will be explicated. It concludes with the observation that Feenberg's technical micropolitics conceptualises a central role to public participation, and thus it needs to be placed against the critique levelled by the mainstream political theories.

3.2 The Question of Agency: For New Left the orthodox Marxist and Leninist vision of the replacement of the state by institutions of direct democracy or self-management is a problematic and erroneous conception. Thus, New Left emphasized that for transformation of politics in the West and East, “the state must be democratized by making parliament, state bureaucracies and political parties more open and accountable, while new forms of struggle at the local level (through factory-based politics, the women's

movement, ecological groups) must ensure that society, as well as the state, is subject to procedures which ensure accountability" (Held, 2006, p. 211). In the wake of the public movements, New Left model of 'participatory democracy' articulated a form of politics that reduces a sense of estrangement from power centres and fosters human development. But what kind of a space it imagined for the politics of technology? Given that our everyday experience of being a dweller, traveller, employee, patient, consumer and many such roles are concretely dependent on how the technologies are structured, this question certainly requires due attention. As Winner observes, if technology is power in modern societies, "technology should be considered as a new kind of legislation, not so very different from other public decisions" (Feenberg, 1999, p.131). Feenberg (1999) joins Winner and remarks, "The legislative authority of technology increases constantly as it becomes more and more pervasive" (p. 131). Therefore, do we not need to apply the democratic standards to technology, Feenberg asks poignantly.

Does the public has any right to intervene into the matters of technological design? The de facto answer from technocratic perspective is: No. As Feenberg explains, "In the technical sphere, it is commonly said, legitimacy is a function of efficiency rather than of the will of the people, or rather, efficiency *is* the will of the people in modern societies dedicated all to material prosperity" (p. 131). Political theory hasn't yet formulated a way to seriously engage with politics of technology despite the fact that the 'good life' in our modern societies is per force co-defined by technology. Equally, neither the classical or contemporary philosophy of technology has undertaken any concrete analysis of technology in terms of its political implications on human society[3]. The anti-technocratic movements such as the May events have been largely interpreted as the problem of representation and thus the concepts such as 'self-management' and 'participatory democracy' have been promoted as alternatives. Feenberg argues, "But these movements are also haunted by a tension between their *populism* [emphasis added] and the unavoidable reliance on expertise in any modern society" (p. 132). He adds, while the argument for direct democracy remains persuasive, Rousseau himself believed that the direct democracy was possible only in a small-scale setting. Thus there is no practical alternative available to the representative democracy in contemporary practice given the large scale geographies and populations.

3 with the exception of Langdon Winner

Nonetheless, how can in practice the administration of the modern societies, that remains concentrated in the hands of technical experts, be democratised? There must be influential forces which keep away ordinary people from achieving political participation in technical institutions. Feenberg notes that in our societies, “Expertise legitimates power on society at large, and 'citizenshp' consists in the recognition of its claims and conscientious performance in mindless subordinate roles” (p. 101). This feature is well recorded in the core of the Frankfurt School thought; Adorno's 'total administration', Marcuse's 'one-dimensionality', and Habermas' 'technization of the lifeworld' concept precisely talk about this issue. As Feenberg summarises, “*The fundamental problem of democracy today is quite simply the survival of agency in this increasingly technocratic universe* [emphasis added]” (p. 101). He explains – the problem of identification of agency while is easily dealt by the Right in terms of the market or the foetus, for the Left difficulties arise due to the interactions of the individuals and the technocratic structures e.g. politics of sexual identity. Then what kind of agency is needed to build resistances in the technical sphere? How and who can democratise technology in this context?

3.3 Democratisation of Technology: In order to appreciate Feenberg's conception of technical micropolitics, work of few other thinkers who have dwelt on the issue of technology in relation with political theory needs a brief review. Benjamin Barber has advocated a position what he terms 'strong democracy'. According to Barber, the prevailing liberal democratic occupation with the individual rights contributes to demobilisation and privatisation of communities, and thus is 'thin' by nature. To uphold democratic values and goals, Barber calls for reinvigoration of communities while maintaining the representative system. Feenberg thinks that, while the Barber's conception gets us closer to an adequate account of the central role of citizens' action and the public interventions, his neglect of technology as an object of politics and the emphasis on strong leadership does not help us to address technical problems of management and expertise. He holds Barber's theory of 'strong democracy' among those which originate in populism based on demand for direct democracy.

Richard Sclove has articulated a well developed conception of strong democracy particularly in relation to the technical sphere. Sclove argues for supplementing the representative system with autonomous local communities as supportive participatory institutions. More notably, he has argued for adjusting technological design to the

requirements of strong democratic community, by making design criteria open for public discussion and decision-making. Feenberg finds convergence with Sclove's proposal and observes – “We agree that where the public is involved in technological design, it will likely favor advances that enlarge opportunities to participate in the future over alternatives that enhance the operational autonomy of technical personnel” (p. 135). Sclove's (1995) 'democratic design criterion' reads, “Seek relative self-reliance. Avoid technologies that promote dependence and loss of autonomy” (p. 98). In a sense Sclove attempts to tread a path between the one accepting the administrative claims to universality, and the other rejecting them as an unacceptable form of domination.

However, Feenberg holds that when technology is factored into the political equation, agency, representation, and locality there remain problems with the populist approach. He explains, “For example, in modern technological societies the 'people' are not just locally defined. They are also fragmented into subgroups organized by specific technical mediations. For the most part they can only act in the technical sphere through those subgroups, whether they be factory or clerical workers, students, patients, or soldiers” (Feenberg, 1999, p. 135). This fragmentation of technical publics does not gel well with the idea of traditional politics organised around geographically bounded units, and thus renders them politically impotent.

The American philosopher John Dewey had anticipated in the 1920s the problems posed by the 'machine age'. He correctly argued that the extreme mobility offered by modern society in effect brakes down the traditional local community. Dewey, however, believed that the free and cosmopolitan communication aided by the modern technology will revitalise local community. Feenberg, however, is critical about Dewey's fixation to “large-scale technical systems as the form of our technological future, and local community as the site of democratic deliberation” (p. 136). How can this fragmentation be dealt with that isn't tied to local communities? Feenberg takes these considerations in his theory of democratisation of technology and elaborates on the enabling concept of the micropolitics of technology.

3.4 Participant Interests and the Micropolitics of Technology: What kind of a representation needs to be envisaged in the realm of technical sphere? If technology is power and its design a kind of legislation, then it ought to represent interests. Feenberg

argues, the medium of technology is different from law, and the traditional approach to technical representation is prone to be regarded as populism by political theorists. Politics that is bound by geographies always shapes the governmental institutions on spatial parameters of societies. The face-to-face authority of the tribe or the peoples assembly in Athens was confined to the geographical unit. Feenberg, however, postulates that “space does not play the same role for technical authority” (p. 138). As long as technologies are simple, no matter how large are the societies, they are necessarily under individuals' control. That is not the case in our modern technological society. A kind of direct democracy in the technical sphere enjoyed by the pre-modern societies, where ordinary people could create and appropriate technology is no longer possible. Hence, Feenberg explains, there are temporal parameters rather than spatial ones behind the shape of authority.

While technology is not completely closed it certainly favours specific interests and ideas about the 'good life'. Feenberg argues, interests which are embedded and carried forward by design as a heritage, reflect a covert representative form. The spatial parameters can hardly be of any help here for organisation; instead an alternative principle could be to organise around technical networks, the large-scale technical systems. Thus in the technical 'global' settings of networks, its 'local' network is an unit that unites individuals'. Feenberg elucidates, “Insofar as they are enrolled together, they have what I call 'participant interests' in the design and configuration of the activities in which the networks engage them” (p. 140). The concept of 'participant interests' incorporates diverse impacts of technology in relation to individuals'. The labour movement is one such example of technical politics, however, often unions have narrowed it to job security.

Large scale movements in the 1970s took the anti-technocratic struggle as a model of political revolution. However, Feenberg notes that in contemporary politics activism is far more modest, and has emerged as 'micropolitics' – a situational politics arising out of the smaller interventions in social life. This micropolitics offers no global challenge to the society, but is based on local knowledge and action. Feenberg thinks that this approach is of particular relevance to the technical sphere, where totalizing strategies of change cannot be imagined. The micropolitics of technology differs in that the public actors involved may not be citizens as such, but are those individuals directly affected by a particular technical decision.

Feenberg elaborates on this new politics of technology using various case studies: environmental movement, which in a particular case relating to the issue of nuclear power generation in the USA, rejected the technocratic claims of absolute safety; the struggles of terminally ill AIDS patients in the USA, that forced the FDA to change the procedures for access to experimental drugs; appropriation of French videotex (Minitel) system by the users for anonymous personal communication, instead of just sticking to the prescribed function of accessing public information as was envisaged by the state telephone company (p. 121-128). Feenberg terms these public interventions 'democratic rationalization', which arise as a consequences of technology itself, where the social groups constituted by technical mediations “turn back reflexively on the framework that defines and organizes them” (p. 105). Feenberg elaborates, “it is this sort of agency that holds the promise of a democratization of technology” (p. 105); the new technical politics in which technology will emerge from new types of public consultation. He thus envisages a constructive public involvement in the politics of technology that informs and supplements existing representative democratic arrangements.

3.5 Deep Democratisation: While Feenberg doesn't think that the classical democratic idea of local control needs be completely abandoned, he writes, “It seems to me necessary to get away from unrealistic notions like the use of national electronic town hall meetings to decide technological questions, or redesigning technology so it fits neatly into the local framework of real town hall decision-making” (p. 145). To him, preoccupation with community ends up delegitimating forms of intervention that are not based on the principle of majority rule. This way he criticises the Rousseauist idea as well as Dewey's emphasis on community. Feenberg notes, “All too often, public interventions into technology are dismissed as nonpolitical or, worse yet, undemocratic because they mobilize only small minorities” (p. 134). In his view, incorporating the model of strong democracy in the technical sphere is an ambitious idea in nature, and he suggests some other moderate alternatives instead.

To overcome technocratic control, ideas like formation of collegial organisations of certain professionals and the extension of 'citizenship to all participants in major technical institutions' appears more concrete to Feenberg. He observes, “What is perhaps more worrisome is the lack of pressure to democratize public technical institutions in which everyone has a large stake, institutions such as utilities, medicines and urban planning

that are only loosely controlled by elected officials today, if at all” (p. 146). Only when the public becomes aware of the profound changes effected by technology, it is likely to demand electoral checks on policy-making bodies concerned with governing technology. Feenberg argues, the operational autonomy aiding elite control must be countered by subordinates' tactical initiatives, this was what members of the public in the course of the May events had demanded. Feenberg calls this alternative to technocracy 'deep democratization': “As distinct from 'strong' democracy, I will call a movement for democratization 'deep' where it includes a strategy combining the democratic rationalization of technical codes with electoral controls on technical institutions” (p. 147).

3.6 Conclusion: Feenberg rightly notes that in contemporary politics the fundamental problem is the survival of agency. Particularly in the sphere of technology he points out that technocracy wields authority and legitimacy without being accountable to the subjects on whom it acts. Further he points out that technology also brings with it the problem of fractured polity, that may not remain so conducive to the traditional conception of representative arrangements. More importantly, Feenberg underlines that representation in technology is to be build around the concept of 'participant interests' i.e. embodiment of social and political concerns in the 'technical codes'. He argues, public interventions into the matters of technology should neither be dismissed as nonpolitical, nor be termed undemocratic for the fact that it mobilise only small minorities. However, it is important to understand as to why mainstream political theories question or raise objections against public participation.

In the next chapter, the concept of issue politics which closely resembles with technical micropolitics will be discussed. In particular since issue politics involves public participation, criticism raised against this concept by the political scientists becomes pertinent to Feenberg's conception. Using the recent work of Noortje Marres where she finds interrelationship between issue politics and Dewey's conception of democracy in technological societies, some insightful understanding will be derived to open up a space for critique of Feenberg's technical micropolitics. This space will be further utilised in the subsequent chapters to put into question the problem of disagreements that might arise in the sphere of technology.

Chapter 4 – Issue Politics

4.1 Issue Politics: 'from the Great Society to the Great Community' was the famously rendered slogan by the American philosopher John Dewey. Dewey's work during the 1920s is of significance to reformulate the conception of democracy in the backdrop of ongoing globalisation in our technological societies. His pragmatist stance that 'unexpected and unattended consequences of collective actions', are the object of concern to the public and thus *pragmata* of politics, has received resonance with what has been dubbed issue politics. In today's political democracy issues are by and large seen as an organising principle. This new kind of politics has been characterised as open and informal. Noortje Marres (2005) in her doctoral thesis notes, "...it is sometimes said that citizens today are less inclined to enter into a durable relation with ideological programmes, and instead commit to a particular matter of concern: a railway, immigration laws, abortion, open source software — the concern for which is then mediated by the multi-faceted political strategies pursued by the new organisations" (p. 68). However, the practice of issue politics also brings with it another burden – new sites, form, and subjects of politics.

Marres in her thesis elaborates the Narmada dams controversy, that took place in the 1990s over the dams on the river Narmada in western India, as an exemplary case of what has been termed in social and political theory as 'the displacement of politics' (p. 1). The social protests took place in a transnational arena from local, regional, and national politics to a global forum. Along with American, European, and Japanese non-governmental organisations (NGOs), institutions like World Bank and German corporations became entangled in this issue, which was framed through news media and mediated via the protesting and 'submerging' bodies of the people of the Narmada Valley. In the process the techno-scientific nature of hydroelectric dams was also contested and rephrased as a social intervention aimed at depriving the poor. As the controversial Booker prize winner author Arundhati Roy (1999) put it, "[Big dams]...They're undemocratic...They're a government's way of accumulating authority (deciding who will get how much water and who will grow what where)...They're a brazen means of taking water, land and irrigation away from the poor and gifting it to the rich".

The wide range of entities who became host or mediator to the controversy put to the

relief the question of legitimacy and accountability. This displacement of politics away from the representative democratic arrangements has been widely viewed as the 'democratic deficit'. The multiple *subjects* and *sites* that became involved in the Narmada dams controversy "can be characterised neither as parties to the conflict nor as institutions that are supposed to provide a framework for its [issue] settlement" (Marres, 2005, p. 2). The democratic deficit arises because politics no longer remains contained in the established democratic arrangements; but equally, it occurs *after* the displacement of politics, which becomes possible only when we acknowledge 'the multiplicity of sites and framings of (democratic) politics' (p. 5).

According to Marres when politics is displaced the questions concerning subject, form, and site of (democratic) politics become open to question, and in this relative optionality of the who, how and where of democracy, we should direct our attention to the 'what' of democracy. As she puts it, "In the face of so many displacements of politics, an often forgotten protagonist of politics enters the picture: the issues at stake in controversies" (p. 5). Marres in her thesis presents a reinterpretation of Dewey's thought – conception of democracy as a practice dedicated to finding the settlement for affairs. Feenberg's technical micropolitics also shares strands with this formulation. First, alike Dewey he envisions public participation; second, public participation in Dewey's conception is aimed at a settlement of public affair, much like 'participant interests' aimed at reform of technical codes; third, technical micropolitics is most often enacted through controversies away from the representative democratic arrangements; fourth, like Dewey, Feenberg's technical publics is fragmented. These shared links, however, equally make relevant the objections and criticism of issue politics in relation to the Feenberg's micropolitics of technology.

In this chapter, first the reconstruction of Lippmann-Dewey debate elucidated by Marres will be presented. Secondly, the displacement of politics that issue politics brings along will be discussed. Thirdly, the criticism of issue politics put forward in the mainstream political theories will be elaborated. Finally, insights developed by Marres in her conceptualisation of issue politics will be appropriated for its relevance to technical micropolitics, and a critique of her approach will be put forward.

4.2.1 The Lippmann-Dewey Debate : In America during the 1920s a fruitfully recorded discussion on the fate of democracy in the technological society, what in political theory is known as the Lippmann-Dewey debate, took place. Walter Lippmann and Dewey shared the view that, with the rise of 'the Great Society' identified with developments like “the radio, the railway, telephone, telegraph, the flying machine, and mass production” (Ryan, 1995, p. 286), there was a need to rework the concept of democracy. Importantly they note that this re-conceptualisation is necessitated due to the proliferation of 'foreign entanglements', making public affairs of the Great Society prone to such transgressions. In his first book *Public Opinion* Lippmann, a strict pragmatist, concludes that since ideals of modern democracy are impossible to uphold in technological societies, only a government based on expertise could be a best solution. On the other hand, in his most famous stance Dewey presents inclusive public debate between citizens informed by information from experts, as *the* solution to problem of democracy in technological society. In the traditional readings of the Lippmann-Dewey debate, wherein Lippmann emerges as a proponent of technocratic government, Dewey is seen as a radical democrat who saved the ideal of participatory democracy.

However, recently Marres in her doctoral thesis has reconstructed the Lippmann-Dewey debate in a new perspective of what is now called as *issue politics*. John Dewey's work *The Public and Its Problems*, as Marres elucidates, holds two distinct strands – moral theory of democracy and his speculative history of state formation. In his work Dewey shifts between his protagonist approach to uphold the modern conception of democracy as a community of competent actors, and the historical (speculative) conditions that made the formation of community possible in the first place. Dewey's speculative account of state formation makes it possible to reinterpret his work in line with later work of Lippmann. In his second book *The Phantom Public,* Lippmann instead of affirming the modern classic ideal of democracy, as he did it in the *Public Opinion,* rather comes to question the tenability of those ideals, and breaks away from the assumption that democracy requires intelligibility of public affairs by people. He now emphasises that formation of opinion by people does not depend on accurate information. As he observes:

> “[I]t is in controversies of this kind, the hardest controversies to disentangle, that the public is called in to judge. Where the facts are most obscure, where precedents are lacking, where novelty and confusion pervade everything, the public in all its unfitness is compelled to make its most important decisions. The hardest problems are problems which institutions cannot handle. They are the public’s problems” (Lippmann, 1927, 121).

Lippmann now proposes that 'foreign entanglements' coupled with complex concerns must be appreciated as occasioning for public involvement in democratic politics. While the simple 'manageable' problems can be routinely taken care of by existing institutions, he stresses that 'hard to disentangle' affairs where 'the facts are obscure' are most suitable for public involvement. And Dewey, much like later Lippmann, can be accorded as arguing that the complexity of public affairs must not be seen as an *obstacle* to the democratic politics, and in the context of technological societies proliferation of affairs that cannot be effectively processed by existing institutions needs to be actively pursued by the public. As Dewey observes, “To form itself, the public has to break existing political forms' (Marres, 2005, 46).

This convergence between Lippmann and Dewey, where they argue for enactment of democratic politics by public getting involved in the decision-making processes about complex affairs, is surprising in texture. This specificity of the public is pertinent, as Lippmann (1927) explains, “Government consists of a body of officials, some elected, some appointed, who handle professionally, and in the first instance, problems which come to public opinion spasmodically and on appeal. Where the parties directly responsible do not work out an adjustment, public officials intervene. *When the officials fail, public opinion is brought to bear on the issue* [emphasis added]” (p. 63). As Marres (2005) remarks, “When issues risk to be deserted by the agencies that should take care of them, the public steps in as a caretaker of these affairs” (p. 47). This pragmatist conception of politics underlines the exclusive role of the public agency, that Feenberg attempts to revive in his technical micropolitics. Thus, it is especially relevant as to know how Lippmann and Dewy come to describe and define the public in their analysis. Particularly because their concern was the survival of democracy in a technological society, something that Feenberg himself alludes to.

4.2.2 The Public: Dewey's speculative history of the state formation furthers Lippmann's claim that the failure of existing institutions makes the public adopt the issue. In particular Dewey's characterisation of the public is of importance in several respects, which Marres sums up as “a grouping of actors who are affected by actions or events but do not have direct influence on them” (p. 48). This public, Dewey (1927) explains, comes to engage with an issue: “When a family connection, a church, a trade union, a business

corporation, or an educational institution conducts itself so as to affect large numbers outside of itself , those who are affected form a public which endeavors to act through suitable structures" (p. 28-29). Marres points out in Lippmann's view, the public is *not precisely implicated* in the affairs on which its opinion needs light. Public involvement to him is principally mediated by communication - "only when someone objects, does the public know that there is a problem" (Lippmann, 1927, p. 94). Further he remarks, while the public "has no duty to deal with the substance of affairs", it can have a secondary influence on actors in the affair. Lippmann thus views public as external to the affairs. He writes, "[Events] do not take shape until somebody protests, or somebody investigates, or somebody publicly, in the etymological meaning of the word, makes an *issue* of them" (Lippmann, 1922, p. 217).

Marres (2005) argues that since Lippmann characterises public as an externality, he cannot in a sense account for the commitment of the public toward settlement of issues (p. 50). By contrast, Dewey holds that it is issues, which *substantially* affect actors in indirect ways, that makes it possible for the public to derive stake in their settlement. Thus Marres notes, the public can be defined as consisting of those that are *jointly* affected by an affair (p. 57). For Dewey (1927) it is the effects of an action that define public, "The line between private and public is to be drawn on the basis of the extent and scope of the consequences of acts which are so important to need control" (p. 15).

However, for both Lippmann and Dewey it is the emergence of an issue that invites public involvement in politics. As Lippmann (1927) observes, "The work of the world goes on continually without conscious direction from public opinion. At certain junctures, problems arise. It is only with the crisis of some of these problems that public opinion is concerned. And its object in dealing with a crisis is to allay that crisis" (p. 56). Dewey (1927) is more precise in writing that, "the essence of the consequences *which call a public into being* [emphasis added] is the fact that they expand beyond those directly engaged in producing them" (p. 26-27). The definition of the public provided by Lippmann and Dewey breaks away from the Jeffersonian ideal in describing public that differs with the classical form of social community. As Marres (2005) comments, "What the members of a public share is that they are all affected by a particular affair, but they do not already belong to the same community: this is why they must form a political community, if the issue that affects them is to be dealt with ('those who are affected form a public')" (p. 51).

Interestingly Lippmann and Dewey have both criticised the Rousseauist assumption of the public as an abstract entity. As Lippmann (1927) put it:

> "[The accepted theory of popular government] rests upon the belief that there is a public which directs the course of events. I hold that this public is a mere phantom. It is an abstraction. The public in respect to a railroad strike may be the farmers whom the railroad serves; the public in respect to an agricultural tariff may include the very railroad men who were on strike. The public is not, as I see it, a fixed body of individuals. It is merely those persons who are interested in an affair and can affect it only by supporting or opposing actors" (p. 67).

Capitalising on this understanding, Marres (2005) proclaims – "an issue may occasion the organisation of a political community dedicated to its articulation and to the identification of an addressee for the affair, and as part of this process, a public may or may not be called into being. We then introduce the rule: no issue, no politics, no public. The public may then be understood as an effect of particular political processes of issue formation" (p. 62). According to Marres, the state of being affected by an issue must then be understood as a process of 'learning to be affected' wherein public forms itself. Secondly we don't have to completely reduce the public to a group of actors to account for its actions; it is the actual individuals who do the work of public. In this sense, as Marres remarks, "the public of Lippmann and Dewey is a living and breathing creature, in that it needs machines, the support of people, money, and access to institutional positions, in order to flourish".

This configuration of the publics that is called into being when jointly affected by a particular affair, is the exact agency that Feenberg refers to in his technical micropolitics described in terms of 'participant interests'. Equally, Lippmann and Dewey's identification of this public agency with specific individuals than an abstract entity, makes it possible to support the claim of Feenberg that the local struggles undertaken in the technical sphere cannot be adjudged as undemocratic. With the understanding of Lippmann and Dewey's characterisation of public involvement in politics as a particular practice of issue formation dedicated to its settlement, it now becomes possible to appreciate and critique Feenberg's conception of the micropolitics of technology. The foremost consequence of issue politics, as was hinted in the first section of this chapter, is that it brings along with it 'the displacement of politics' i.e. the site of politics is no more the representative democratic arrangement.

4.3 Displacement of Politics: In a manifesto written in the year 1995, Dutch political scientist Mark Bovens identified six displacements of politics that have taken place in last decades: internationalisation, regionalisation, bureaucratisation, technologisation, individualisation, and juridisation (Marres, 2005, p. 6). It called for the extension of democratic arrangement to encompass these displacement. Marres in her thesis discusses various accounts of the displacement of politics put forward by political thinkers. Ulrich Beck, a German sociologist, in his work titled *Risikogesellschaft* originally put forward the thesis of the displacement of politics. He held that the socio-economic sectors joined with citizen initiatives are causing a fundamental shift in the prime loci of politics. Beck characterised this development as a process of 'Entgrenzung' — the becoming un-bounded — of politics. Beck (1986) argued, while the institutions of national representative democracy loose power over the socio-economic domain in the process, civil society actors would take it upon themselves to control this displaced power. For him, the displacement of politics was one aspect of a wider process of the reorganisation of the society as a whole. Central to this shift in Beck's view was – the crisis of modern institutions of rational control.

Political theories of globalisation put forward by Jurgen Habermas and David Held have also addressed the issue of the displacement of politics. Focussing their analysis on the current scenario of globalisation, they hold that political issues transgressing the boundaries of the nation-state need to be addressed by a 'transnational fora'. They argue that the displacement of politics is a legitimate development and there is a 'normative requirement' for establishment of trans-governmental fora. Accordingly, increase in economics and social exchanges and the related large-scale social-economic development signified by the globalisation call for the new democratic arrangements. In his essay 'The Postnational Constellation and the Future of Democracy', Habermas (2001) argues that transnational politics posits a serious democratic deficit, and robust procedures to contain displaced politics need to be installed.

Another conceptualisation of the displacement of politics has evolved in the domain of science and technology studies (STS). Bruno Latour, has argued that science can be understood as the pursuit of 'politics by other means'. Techno-scientific interventions thus for Latour are intrinsically political as they result in radical reconfigurations of society (and nature). The political effects of techno-scientific interventions represent a huge

democratic deficit given the fact that, scientific and technological practices are largely exempt from political control, and the effects their intervention produce are understood as a 'faits accomplis'. This conception is very much in line of what Feenberg has argued in his thesis. In our modern societies mediated by science and technology, Latour's (1988) work suggests that the democratic arrangements around techno-scientific institutions can only generate legitimation after the fact, instead of securing control over their practices.

To be sure, to affirm the displacement of politics is not to declare that the edifices of national democracy stand abandoned. Marres explains, but at the same time the assumption that politics is contained in fora of national representative democracy is now untenable. Beck, Habermas, Held, and Latour do not question the fact that the nation-state is an important site and resource for the pursuit of politics, but what they affirm is that politics today is pursued in multiple locations. The question is, as Marres (2005) sums up: “The displacement of politics beyond established democratic arrangements grounded in the nation-state yields a politics marked by a lack: lack of legitimacy, lack of accountability, and/or lack of control” (p. 10).

Habermas (2001) thinks that the transnational democracy should not follow the model of national democracy but rather various sites in which politics is pursued should become interconnected with each other, and proposes that 'democratic legitimation' “may be provided by way of procedural arrangements, ones that secure the inclusion of citizens in deliberation about public affairs in 'variously interrelated' public spheres” (p. 111). Held suggests that the transnational politics necessitated by economic, social, and cultural globalisation must operate within the principle of inclusiveness or 'subsidiarity'. Held (2004) argues, “those whose life expectancy and life chances are significantly affected by social forces and processes ought to have a stake in the determination of the conditions and regulation of these, either directly or indirectly through political representatives” (p. 100).

By contrast, Beck (2002) in his later work *Macht und Gegenmacht im globalen Zeitalter* has argued that the displaced politics is a 'politics of self-legitimisation', and has re-endorsed the representative model of democracy. Beck argues that the proposal to add legitimacy to *ongoing* displacement of politics ends up describing democracy as something that occurs 'after the fact'. Marres (2005) on the other hand argues that the

proposals of Habermas and Held do not sufficiently account for the 'partiality and disputability of the sites, subjects, and forms of democracy' (p. 16), as was evident in the Narmada dams controversy. Latour's conception of politics is largely 'latent', 'which is pursued without anyone necessarily recognising it as politics' (p. 28), that entails a naturalist understanding of politics, Marres remarks[4]. She proposes that instead of looking at the displacement of politics as the structural shift in the locations of politics as Beck, Habermas, and Held suggests, we must rather appreciate it as a particular practice; much closer to Lippmann-Dewey's conceptualisation and so does to Feenberg's notion.

4.4 Micro-[Sub]-Issue Politics: Feenberg in his work also acknowledges the parallels between his approach and Ulrich Beck's theory of the 'risk society' and the associated notion of 'sub-politics'. The risk society, Beck posits, “arises in...autonomized modernization processes which are blind and deaf to their own effects and threats” (Feenberg, 1999, 109). The one-sided pursuit of goals such as profits and growth also brings to appearance a new situation, the 'reflexive modernization' that has the capacity to transform politics. Within the risk society, “Normal politics increasingly loses its political character as it becomes a form of system management, while new 'sub-political' forces emerge in the interstices of the society, contesting the consequences of reflexive modernization in many spheres, and most especially in relation to technology and the environment where the contradictions appear with particular clarity” (p. 105). Beck concludes, if technology frees itself from the narrow military and economic institutions to become an autonomous subsystem, it would be opened up to a fantastic constructivism. Feenberg believes that 'sub-politics' like democratic rationalization represents a wider range of human and natural concerns.

Feenberg's micropolitics of technology is centred around democratic rationalisation of technology. Feenberg criticises political theories that usually pay 'lip service' to the informal requirement of a lively public sphere in the democratic arrangements. He writes, “Disarmed by its emphasis on representation and the central role of majorities in electoral politics, conventional democratic theory tends to devalue or ignore actual public participation by smaller numbers and tacitly to accept the mass mediated shadow for the substance of public life” (p. 133). However, Feenberg accepts that Dewey was the first

4 Feenberg's work in the sphere of technology refutes such understanding, and rather opens up technology for its political implications. Marres' critique mainly applies to STS domain in that sense.

philosopher to appreciate the significance of technology in democratic societies, and finds him a predecessor of note. Public involvement in politics, as Marres has recently elaborated, needs to be appreciated as a particular practice. The democratic rationalisations, Feenberg argues, would arise out of the world-defining technical struggles that bring together the networked locales of 'participant interests' (p. 141).

Feenberg echoes Dewey in pointing out that in the “modern technological societies the 'people' are not just locally defined. They are also fragmented into subgroups organised by specific technical mediations” (p. 135). This is what Marres terms, following Dewey, publics *jointly* implicated in an issue. Feenberg believes that by changing the structures of communicative practices, corporations and government agencies will be forced to operate under public scrutiny, and thus authoritative claim over rationality will become diminished. Technical controversies, innovative dialogues, and creative appropriations that have become inescapable aspect of our contemporary political life, Feenberg underlines, are a sign of opening up of technical 'issues' for a general democratic debate. This is what Marres substantiates in her thesis by articulating the process of issue formation, that characterises public involvement in politics as a feature of issue politics which is dedicated to a settlement of an issue.

Thus, it is not be unreasonable to say that the micropolitics of technology almost unproblematically coincides with the conceptions of 'sub-politics' and 'issue politics'. These shared links, however, also mean that the objections raised in relation to sub-politics or issue politics are equally relevant to the micropolitics of technology that Feenberg proposes. In the 1960s and 1970s 'agenda setting' theorists, as Marres observes in her thesis, had developed a line of critique of issue-based practices of politics pursued within national governments, in arguing that they undermine the political democracy from the inside out. In particular Feenberg's geographically fragmented but 'networked locales' and the 'issue network' of agenda setting theorists share some commonalities which demand attention. Their strong rejection of issue politics needs to be held in perspective in order to understand the current practices of issue politics.

4.5.1 Agenda-Setting: Hugh Heclo originally proposed the term 'issue network' to describe 'the broadening of organisational circles' that was taking place in the 1970s under the Carter administration. Heclo observed that the 'issue-experts', 'issue-activist',

and 'issue-watchers' were forming a loose alliance with the American government institutions and were increasingly defining the public affairs and government policies toward them. Since the issue-people get to articulate the political affairs well before others, he argued, the distance between politics and citizens grows, as the government officials and representatives become more bound to the issue definitions of policy networks, separating them from ordinary citizen (Marres, 2005, 72). Eric Elmer Schattschneider, an American political scientist, in his work *The Semisovereign People,* made a powerful argument that not only issue politics undermines the ideals of participatory democracy, but also has come to become the principle organising force of governmental politics. For him issue politics is about power: “Since the development of cleavages is a prime instrument of power, the party which is able to make its definition of the issues prevail is likely to take over the government” (p. 76).

Steven Lukes, a British sociologist, in his work *Power: A Radical View* used Schattschneider thesis as the basis to develop a critique of actually existing democratic politics. Lukes argued, if in the governmental institutions power is indeed exerted in the ways Schattschneider describes, then we must acknowledge that the practices of democratic politics observed in Western societies fail to deliver on its promises. In that sense, if the established democratic arrangements do not assure that citizens' interests will be furthered then the role of issues becomes much starker. Lukes then introduces the concept of 'non-issues', referring to all those concerns and problems of people, “that are kept from even becoming political issues by the play of forces that determines political agendas” (p. 77). Thus by substantially broadening the category of issue politics with the introduction of non-issues, he comes to develop a powerful critique of existing democratic arrangements. As Marres sums up, “The agenda theorists described issue politics as a politics that is driven by special interests, dominated by experts, oriented towards policy, and/or regulated by struggles for power, and for this reason they considered it incompatible with ideals of strong democracy” (p. 70).

4.5.2 Issue-Networks and Public Involvement in Politics: In a wider debate sketched above that took place within the political science about the issue networks during the 1960s and 1970s, the corrosive effects of issue politics on the ideals of political democracy were brought to light. Both Schattschneider and Lukes described this devaluation as an intrinsic aspect of governmental politics. Marres points out,

interestingly Heclo had described two alternative ways in which interest groups has had achieved alignment with governmental decision-making. The first being 'iron triangle', lobbyism mediated by stable formations that “linked executive bureaus, congressional committees, and interest group clienteles with a stake in particular programmes” (Marres, 2005, p.79). The second being the 'issue network', in which “public policy issues tend to be refined, evidence debated, and alternative options worked out”, “in broad and ever-changing configurations of activists and experts, in a relatively uncontrolled and unorganised way” (p. 79). He observes that the issue networks are much more open to membership, enabling a loose gathering of actors who “identify the issue as their interest” (p. 79). However, he believed that the existing representative democratic arrangements are most suitable form of organising politics, and they must resist the influences forced upon by the issue networks.

Similarly, Schattschneider does also hints about another account of issues than power-reductionist conception. He uses the term 'socialization of conflict' in his early part of the book and writes, “Everything changes once a conflict gets into the political arena — who is involved, what the conflict is about, the resources available” (p. 86). Thus, none of the actors can be said to have an absolute control over the process of issue formation. While citizens participation in governmental politics comes to be determined by what Schattschneider terms 'conflict about conflict', he had defined two categories in relation to it - the socialisation of conflict versus its privatisation, the former being democratic politics in his view. In relation to socialisation of conflict, Marres observes, he could be seen as defining it in terms of the *public-isation* of affairs: “the attempt to expand a conflict over a specific issue so as to include more and more members of the political community in it, so that the balance of force within that community may shift ” (p. 76). This crucial distinction between the processes of issue formation that take a detour via a greater political community, and those that do not is insightful.

Marres notes, whereas understanding of public involvement in politics qua practice was not imagined by the agenda setting theorists, they did elaborate on how governmental politics is organised by issues. She, however, criticises that, while agenda setting theorists remain idealists about democracy in talking about arrangements that should facilitate public involvement in politics (valued as *formal arrangement* in their interpretation), they take a realist stance in describing actual practices of policy-making

in Western democratic governments (in describing and criticising the issue-politics). Marres suggests, the Lipmann-Dewey debate can serve here as a guide to understand issue formation as an important 'vector of public involvement in politics' (p. 87). Their suggestion that after existing institutions fail to address an affair, it is only public involvement which can take care of its settlement is a key. As Marres puts it, “In proposing this, Lippmann and Dewey had already set the arguments of the agenda theorist on their head, before the latter were even developed” (p. 88).

Describing the motto 'no issue, no public' she derived from the work of Lippmann-Dewey, adorned with 'no politics' in the middle, as a way to underscore the fact that 'to organise a public around an issue takes time and effort', Marres asks us to acknowledge that the organisation of publics around an issue is a practical endeavour. That is to say, “it is absurd to expect that publics come into existence overnight” (p. 88). Accordingly, when we appreciate this practical constraint on public involvement in politics, the critique of exclusivity of issue groups, as not being born out of a mature political community (i.e. a public) at the first instance of processes of issue formation, gets dissolved. As Marres proposes, “However, we can now say that inclusive publics themselves must be understood as an outcome of organisational processes that are extended in time and in space” (p. 86). How does this public formation takes place? Can we assume that the public is singular in its form or is multiple in reality? Marres in her thesis provides us some important insights in this regard that are of relevance to the micropolitics of technology, and thus detailed in the following section.

4.6 Antagonism in Issues: How should we define democratic deficit when displacement of issues over multiple sites where (democratic) politics is enacted is to be accounted for? That is the central question which Marres explores in her thesis. She follows the trajectory of issue formation to answer this question, and comes across important insights that are of equal importance to technical micropolitics. Marres details a case study that explores the trajectory of *public-isation* of a specific issue, namely, “the insertion of the issue of climate change into a controversy surrounding the funding of fossil fuels by the World Bank” (p. 95). The Extractive Industries Review (EIR) study was commissioned by the World Bank in the year 2000 “to produce a set of recommendations that will guide involvement of the World Bank Group in the oil, gas and mining sectors” (p. 97).

Marres utilised the medium of World Wide Web to analyse the configuration of the issue networks surrounding the EIR. In opposition to Heclo's issue networks of Washington D.C., Marres thinks of, “issue networks on the Web as a useful heuristic to explore empirically how processes of issue formation may mediate public involvement in politics” (p. 98). She however adds that, just as of Heclo's network, these hyperlinked networks cannot as a matter of course be qualified as sites of political democracy. The controversy that was enacted on Web over the EIR is marked with divergent displacements of the issues of 'climate change' and 'development' that took place during the course. Marres argues, it thus is a mistake to conceive that public affairs are problems in which actors are *commonly* implicated in, as Dewey had suggested.

These issue displacements followed on the Web show that while actors' might be *jointly* implicated in affairs, as both the actors grouping, the one serving the issue of 'climate change' and the other with concern for 'oil-based economy', are affected by the fate of EIR, but that alone isn't the complete description. As Marres elucidates, both of these actor groupings affected by the matter of the World Bank’s funding of fossil fuels were involved in the issue at hand in *antagonistic* ways; they were gathered together in the EIR controversy because they were divided by the issues at stake. She notes, “In this respect, issue networks on the Web can be said to disclose actors’ partly exclusive 'associations:' actors’ associations with climate change do not tolerate actors’ associations with the oil-based economy, and vice versa” (p. 128). Marres thus revises Dewey's definition of public affairs to reflect this insight: “A public affair, we now say, is one in which actors are jointly and antagonistically implicated” (p. 130).

In relation to the public-isation and the privatisation of affairs, Marres suggests that we must describe these movements pertaining to public involvement, in terms of how they operate upon such associations or 'attachments'. She adopts the term 'attachment' from ANT researchers Emilie Gomart and Antoine Hennion, who have used it to characterise the relations of drug users and music lovers with the 'objects of their passion' (p. 128). The concerns that are introduced into the controversy by the actors in issue network, are due to the fact these actors have a relationship of 'active commitment' and 'dependency' with them. The environmental NGOs, IFI monitoring organisations, and EU bodies in the EIR network are associated with 'climate change', the concern that calls for 'a radical

reduction of CO2 emissions' and thus for 'a decrease in the use of fossil fuels' and 'the aggressive promotion of renewable energy'. On the other hand, issues of 'poverty reduction' or 'development' that are espoused by the International banks and the oil companies, depend upon the 'global economic growth' and thus the 'continued support for fossil fuel projects'.

Sustenance of these issues becomes possible only because of the active commitment of the actors, and their dependency on how these concerns are addressed and settled. As Marres remarks, “In some respects, actors’ relations to 'the climate' and 'fossil fuels' are also relations of undeniable subordination: it is not an exaggeration to say that their lives depend on these phenomena” (p. 129). Not only in the EIR controversy different actors were *jointly* implicated over the issue of World Bank’s funding of fossil fuels, they were also bound together by mutual exclusivities between their various attachments. From this perspective, “the great merit of controversy is that it provides an occasion to enact the irreconcilability of actors’ attachments” (p. 129). The EIR controversy describes a situation, in which an object of contention provided “an opportunity to enact the disagreement between various, entangled, exclusive attachments, over a specific, concrete, accessible question” (p. 129). It is these disagreements that are central to this dissertation, and this insight will be elaborated upon in relation to the sphere of technology in the subsequent chapters.

4.7 Object of Politics: We must acknowledge the fact that politics today is pursued in multiple locations. The thesis of the displacement of politics makes it untenable to hold that politics is contained in a singular democratic arrangement. The central question Marres asks in her thesis is: how to define democratic deficits in the context of the displacement of politics. Following Lippmann and Dewey, she conceives democratic politics as a particular practice of issue formation. Issues which occasion public involvement in politics dedicated to their settlement, provide her a required point of departure.

Marres argues, “The big scandal is not that existing institutions fail to contain the issues of politics...The big scandal is the disarticulation of public affairs: the displacement of issues away from sites hospitable to their definition, which thereby undo the work of specifying what exactly is at issue, and cause publics that have organised around issues

to disintegrate, leaving behind a blur of inscrutable — un-, dis- and mis-articulated — concerns that are pursued without consideration of the attachments with which they are intertwined in antagonistic ways" (p. 152). Accordingly for her, in the context of the displacement of politics, the failure to achieve a settlement for a public affair is indicative of a democratic deficit. Marres concludes, "A democratic deficit must then be said to arise when bad issue displacements occur: when issues that depend on public involvement for their settlement are transported to locations that are inaccessible to publics, making their involvement in issue formation, and thus the settlement of affairs, impossible" (p. 140).

Although the displacement of politics is the basis of technical micropolitics, in a sense that the micropolitics of technology is often enacted away from the representative democratic arrangements or is directed against its administrative institutions, we can still question certain suggestions that Marres entertains in her thesis. First, she accuses the agenda setting theorists as being idealist in their position, and suggests that we need to be realist with respect to public involvement in politics. However, she equally remains 'idealist' in demanding that the issue i.e. the object of politics must be dealt with and settled in accordance with the demand of the 'publics' who organise around it.

It is easy to see starkness of her position with the second critique, which arises due to the fact of very antagonism of actors that she painfully elucidates in her thesis. That is to say, if issue gets settled in favour of a particular 'publics' among the multiple entities that are *jointly* and *antagonistically* implicated in, then in all likelihood the other 'publics' can perhaps rightly perceive that the issue has not reached settlement[5]. For example, the Supreme Court of India accepted the rightful arguments of the three concerned regional governments and the union government that, the construction of the Narmada dams is important to safeguard the irrigation, electricity, and drinking water needs of the vast population (whom they represent). Thus, secondly, politics marked by antagonism that remains irreconcilable will always show the feature of 'democratic deficit'.

Further, while Marres argues that the displacement of issues must be pursued to the sites that are hospitable to its articulation and settlement, she disregards a crucial fact that the site must also possess the power to enforce and realise a proposed settlement. For

5 Although, we must be realist to admit that in most cases democratic politics strives to resolve disagreements and achieve reconciliation.

example in the Narmada dams controversy, more than the World Bank, the Supreme Court of India had the legitimate power to enforce its decision on the state governments[6], as well as mechanisms to ensure that the rehabilitation and resettlement of the project affected people is realised according to its guidelines. Thus, thirdly, the displacement of issues not only requires a hospitable site but also the one which can enforce a proposed settlement legitimately.

4.8 Conclusion: Issue politics by occasioning public involvement in politics turns democracy into a problem. Observations made by the agenda setting theorists – that the practice of issue politics actively engages into keeping non-issues away from the agenda (i.e. when privatisation is pursued), and that the politics of issues undermines the established relations of popular sovereignty (through the displacement of politics) – can only be affirmed. But from Lippmann-Deweyian point of view, it is only when the existing institutions fail to address non-issues, that the public is called into being. Further, the unsettling effects of issue politics on relations of popular sovereignty, are inherent to public-isation of the issues and controversies, precisely because of the fact that public involvement in politics is called into being as a result of the failure of the governmental institutions to settle an affair.

Marres invites us to understand public involvement in politics as a particular practice of issue formation. When Feenberg argues that the democratic rationalisations need not be termed illegitimate, Marres provides a much needed support in observing that there are practical constrains and odds against issue politics qualifying as democratic politics. In doing so, she also discloses the arduous process of organisation of the public around an issue. In particular she makes it visible that actors' are not only jointly but antagonistically implicated in issues, which they care for, and are committed to their settlement. The micropolitics of technology described by Feenberg is rather a manifestation of issue politics, in that sense. Thus, we can extend the observations made by Marres to the space of democratic rationalisations that Feenberg has articulated. In particular the question of reform of technology, the idea which is central to Feenberg's critical theory of technology, would need to accommodate the antagonism of actors' over the form of a technology.

6 The World Bank too would have required their agency to observe the settlement, but had no unlimited authority over them.

While we can accommodate Marres concern for a settlement of public affair, how must democratisation of technology resolve the related antagonism? Precisely because, there are multiple actor groupings jointly and antagonistically implicated in an affair, we would need to know whose concerns will actually lead to democratisation of technology. Thus, a normative ground is necessitated to ensure that the process is indeed that of democratisation, and not what Heclo has come to describe as 'self-legitimisation'. Penultimate chapter will abstract this understanding and present a critique of Feenberg's thesis from the critical theory perspective.

Chapter 5 – Law as the Mediator

5.1 What's Right: 'keep our eyes on the prize' was a kind of a declaration that this famous phrase from a song of the American civil rights movement made. Marres suggests us that the Lippmann-Deweyian conceptualisation of democracy – as a practice dedicated to finding the settlement for affairs – makes the notion of issue politics sound much similar to the idea behind this slogan. The active stance of 'civil disobedience' in refusing to obey certain laws, demands, and commands of a government, using no form of violence was a defining feature of the civil rights movement. Back in the 1920s Mahatma Gandhi had much eloquently articulated the concept of 'civil resistance' that rejects the pacifist notion attributed to the idea of civil disobedience and enriched it with moral doctrine. The Indian independence movement was actively built around the idea of civil resistance or what Gandhi constituted as 'Satyagraha' (2010) - “Truth (satya) implies love, and firmness (agraha) engenders and therefore serves as a synonym for force. I thus began to call the Indian movement Satyagraha, that is to say, the Force which is born of Truth and Love or non-violence...”.

However, these movements were fighting against just one single entity or arrangement; in that they were aimed at recognition of their inalienable 'constitutional rights' and the right for 'self-determination or sovereignty', respectively. That is in no sense to mean that these movements were any easier undertaking; that will be a complete failure to grasp the significance of these movements. These long and painful struggles are the most important achievements of the 20th century politics, which beyond any doubt helped us to establish the values that are fundamental to human lives today. The point is to view that they were posited in normative grounds. Such normative basis is typically enshrined in the constitutional democratic arrangements of the modern societies.

But in our contemporary technological societies, the spread of bureaucracy and its multiple agencies that work independently from each other in regional, national, and transnational locations of our globalised world, it has become difficult to contain all political activities within the established institutional arrangements of democratic politics, on which the conception of nation state is based. While certainly this is not the 'crisis of the state', but equally issue politics has made transgression of the state a routine act as a matter of course, and thus legitimacy and normative basis of representative democratic

establishment is witnessing tensions within and without. In this chapter, various aspects in regard to technical micropolitics will be put to question. Using antagonism in issues as the point of departure, it will be argued that a normative ground is required to resolve the contestation that might arise in the sphere of technology. Then arguing from the critical theory perspective it will be proposed that such legitimate ground is provided by law. Further, based on this understanding a principle of legitimate rationalisation is proposed, and will be discussed using a case study. Finally it is concluded that democratisation of technology in antagonistic contestation is achieved only when it corresponds with law.

5.2 Democratisation without Populism?: Democratisation of technology in itself is so valuable argument in our modern societies that it will be difficult to marshal any criticism against this notion. However, as is the case with various conception of democracy itself, this principled stand in relation to technology will not go uncontested. In fact, Feenberg himself rejects Barber and Sclove's approach as populist. Instead of relying on the community organised in terms of geographical units which becomes often equated in political theories as populist, Feenberg elucidates 'network locales' enrolled together due to their 'participant interests', which he appears to assume that are immune from populism. But, as Lippmann had eloquently stated 'public is a mere phantom. It is an abstraction'. Rather Lippmann's (1927) conception of public is very similar to what Feenberg has in mind - “The public in respect to a railroad strike may be the farmers whom the railroad serves...The public is not, as I see it, a fixed body of individuals. It is merely those persons who are interested in an affair and can affect it only by supporting or opposing actors” (p. 67). The notion of the politics of technology that Feenberg sketches, although must be appreciated for the fact that fragmented publics not bound by geographical units is expressly given an agency, is no less populist.

Further, democratic rationalisations are also dependent on the social networks of actors that are *jointly* implicated in an issue. For example, in the case study of AIDS patients in the USA he explicitly notes the existence of such network:

> “At the time their disease was first diagnosed [AIDS patients], they belonged to social networks mobilized around gay rights that paralleled the network of contagion in which they were caught; not only were they already networked, they were accustomed to creating controversy...This struggle represents a counter-tendency to the technocratic organization of medicine, an attempt to recover its symbolic dimension and caring functions through democratic intervention” (Feenberg, 1999, p. 127).

The contestation staged by AIDS patients in regard to the paternalistic approach of the FDA in the USA coincides with the conception of the public affair that Lippmann and Dewey describe. While the account Feenberg narrates in his case study goes much closer to Lippmaan-Deweyian idea of public involvement in politics as a particular practice of issue formation, Feenberg criticises Dewey for his excessive confidence in science and technology and reliance on experts in certain issues.

Feenberg (2006) seems to summarily reject the consultation with experts that Dewey proposes, as he observes – “Now, this is not at all what I have in mind by the democratization of technology! Where are the *popular movements* [emphasis added], the suppressed needs of marginalized peoples, the insights of the laity ignored by a priestly cast of experts? ” (p. 206). However, in this particular intervention by the patients, consultation with experts for the access to experimental treatment of terminally ill AIDS patients was very much essential, and in the end it actually lead to the co-optation with experts (Veak, 2000, 231). More than that, Feenberg indeed sees the role of *popular movements* in his micropolitics.

As Kellner (2001) writes in his review of Feenberg's work *Questioning Technology* - “Feenberg spells out his concept of 'democratic rationalization' that includes *popular participation* [emphasis added] in the adventure of technology, inserts agency into technical systems and provides openings for the democratization of technology” (p. 159). And as Feenberg (2006) himself remarks against the criticism levelled by Borgmann - “But secondary instrumentalizations are not necessarily based on higher ideals. They often respond to quite banal technical or social requirements” (p. 200). The public out there in his micropolitics with 'participant interests' can only reaffirm that it does entail populism too.

Of course, the whole project of Feenberg's thesis is to demystify and reject the technocratic authority of experts and bring in the values of the people to bear upon development of technology, but then he is also aware that popular movements across geographical boundaries would be required to contest the hegemony in those particular issues that bring into being a *jointly* implicated community. Although in his micropolitics of technology 'we the people' may not always get enrolled, the specificity of 'issue affected' actors cannot be ignored. Coming together of *jointly* implicated community and

its struggle against hegemonic tendencies of the established institutions, is in no sense less populist – much like the living and breathing creature that Lippmann and Dewey's public is – the 'participant interests' also profess an inherent claim to 'the will of the people'. As Feenberg (1999) himself remarks in relation to his concept of deep democratisation - “Instead of *popular agency* [emphasis added] appearing as an anomaly and an interference, it would be normalized and incorporated into the standard procedures of technical design” (p. 147). This understanding of Feenberg's micropolitics in relation to populism now opens it for further critique. This chapter will specifically focus on 'disagreements' that it brings along.

5.3 Problem of Legitimacy: Referring to Sclove's 'democratic design criterion' that seeks relative self-reliance, Feenberg asks – What if this technical evolution towards local control turns out to be implausible? In that case, Feenberg (1999) asks, “Would we then have to conclude that public interventions into technology are either incompatible with modernity or fundamentally *undemocratic*” (p. 137). This problem of the representation, where unelected experts resist any external intervention and the traditional politics upholds the majority rule, public involvement into technical affairs faces the problem of legitimacy. Pluralist Rein de Wilde invokes this argument to reject populism and holds that, “the most authentic form of representation is electoral and the subordination of technical and administrative personnel to normal parliamentary government is the only possible 'democratization' of technology” (p. 137).

But on the reasons of principles, Feenberg argues, since the opposition to technocratic control is built by the concrete democratic subjects, formal questions of democratic sovereignty are of less importance in the context of technical micropolitics. But as Lippmann and Dewey suggests us 'when the officials fail, public opinion is brought to bear on the issue', i.e. in the process the legitimacy of the state is also challenged, the trust in that *moment* stands revoked. The anti-technocratic movements during the May events were one such occasion. Equally, even in the local struggles in which 'participant interests' call the publics into being, the decisions of the administration stands challenged for its legitimacy. Thus, there is a double-directional problem of legitimacy. On the one hand, the specific publics engaged in the micropolitics of technology is questioned for its legitimacy and the credential of it being democratic, on the other hand the public intervention ends up challenging the legitimacy of the administration. Both the

spectrum rely on a varying degree of populism, in their claim of being democratic. That means a normative ground is required to resolve this contestation in democratic politics.

5.4 Democratisation and Normative Resources: Gerald Doppelt has argued that Feenberg's nonessentialist philosophy of technology lacks the normative resources to realise the claims in practice that it envisions. He argues that Feenberg lacks a 'clear and plausible standard of what counts as the democratization of technology', and he fails to offer a 'substantive conception of democratic ideals'. Accordingly for Doppelt, the notion of 'participant interests' does not provide us sufficiently 'good reasons' to defend a conception of what technology ought to or should be. He argues, "Which participant interests should be accommodated within a democratized technology, or alternative modernity? This is the key ethical problem that requires exploration by a democratic critique of technology" (Doppelt, 2006, p.88). Doppelt phrases this problem in terms of – 'which interests' problem and the 'private property' problem.

Doppelt elaborates the 'which interests' problem in arguing that: "it is clear that not every participant interest, or challenge to technology is legitimate, morally justified, or a victory for democratization" (p. 89). Thus, in order to determine which interests will lead to democratic rationalization of technology, he suggests that an ethical standard is required that is lacking in Feenberg's argument for democratizing technology. On the problem of 'private property' Doppelt explains, "The rights of the designers to exercise authority rest not just on their expertise and the logic of efficiency, but on the rights of private property, and the Lockean moral code of ownership and free-market exchange" (p. 90). This powerful powerful moral code of private property that is ingrained in our modern societies apart from technocratic ideology, acts as an obstacle for translation of the participant interests into legitimate rights that can reshape technology.

Referring to the movement of barrier-free design of buildings to facilitate access to disabled people, Doppelt maintains that not only it required a demystification of technology but also "an ethical reconstruction of the ideal of democratic equality and the meaning of citizenship/personhood for the disabled" (p. 98). He concludes that, "The critical theory of technology cannot complete its mission without turning into a more thoroughgoing critical philosophy of liberal democratic values. The democratization of technology awaits the development of an alternative ethical understanding of the ends of

modern society” (p. 98).

Feenberg (2006), in his reply to Doppelt's criticism, rejects the understanding and assumptions about politics made by the traditional political theory, which remains fixated on a mythic account of the social contract (p. 197). Feenberg holds that politics must return to its social roots. Referring to the Berlin's concept of 'positive' and 'negative' liberty, Feenberg outlines a third conception of liberty that he thinks is reflected in his critical philosophy of technology. He thinks, arguments of political philosophers are not particularly compelling in their attempts to “derive normative criteria from Kantian or Utilitarian theories of moral obligation, or from ideal constructions of rational discourse” (p. 198). Feenberg traces the third conception of liberty, what he calls the 'humanist tradition', in Hegelian humanism that “seeks evidence in history that our destiny as human beings is a progressive unfolding of capacities for free self-expression, the invention of the human” (p. 199). Feenberg adds, the notion of realising human capacities does not rely on something pre-given in a speculative ideal, but rests on the emergence from 'the real process of struggle, piece by piece'.

This dissertation does not take qualms with Feenberg's argument in relation to Doppelt's criticism, but neither completely rejects the position put forward by Doppelt. Whether we can sufficiently devise an a priori universal framework to define what technology ought to be is debatable, but local struggles that lead to reform of technology and accommodate participant interests need not be seen as illegitimate. The concern of this dissertation is the normative ground that is required in the case of antagonistic contestation over the form of a technology. It is plausible to imagine that, even after establishing ethical standards or right based conception derived from liberal democratic values, there might be an occasion when multiple entities enter into contestation over a technology. The normative ground that this dissertation seeks is a requirement when 'heterogeneous' publics are involved in antagonistic contestation over the form of a technology. Following sections will elaborate on this aspect in a detailed manner.

5.5 Participatory Legitimation: Feenberg's theory of democratic rationalisation is in continuation of argument made by the Frankfurt School against technocracy, and is informed by the agency in the technical sphere that can destabilise the authoritarian structure. Feenberg criticises the tendency of economics and applied ethics to perceive

technology as a given constant against which individuals pursue their well being. He quotes Hans Radder to move beyond such conception: “What is at least as important [as 'moral choices,' 'adverse side effects,' and 'costs and benefits'] in a normative evaluation of (proposed) technologies is the *quality* of the natural, personal, and sociocultural world in which the people involved will have to live in order to successfully realize the technologies in question” (p. 141).

While Feenberg criticises Habermas for his scarce mention of technology, he sees implications of Habermas' recent work on the problem of technical representation (p. 143). Habermas has argued that the classical democratic idea of the state stands now much altered with the presence of vast administrative sector in modern societies, and as a consequence the ideal of transparent self-reflection of the will of the 'people' has become eclipsed. Whereas the administrative sector is primarily supposed to follow the norm of efficiency, in practice it is constantly forced to go beyond pragmatic choices. The engagement with inescapable issues, however, forces the administrative sector to also base decisions on normative grounds, and thus bringing its legitimacy to the question. As a consequence, state action, in several instances, isn't the reflection of the public will formulated in a central assembly.

How then its decisions be legitimated? Habermas' solution is participatory administration, which remains open to public influence. These public inputs will follow a fragmentary form of administrative action, intervening as needed than observing from general principles. Habermas (1996) explains, “Of course, participatory administrative practices must not be considered simply as surrogates for legal protection but as procedures that are *ex ante* effective in legitimating decisions that, from a normative point of view, substitute for acts of legislation or adjudication” (p. 441).

It is by now clear that technology just like the state administration affects the social sphere, and is not merely the question of efficiency. However, can Habermas' proposal for decision-making in administrative sector be applied to technical sphere? Feenberg (1999) argues, “It [technical decision-making] too has normative implications and requires legitimating mechanisms based on public inputs if it is to be incorporated into the framework of a modern democracy” (p. 145). He cautions that, mechanisms for technical decision-making must do away with arbitrariness or the bias toward covert interests, else

technology will become object of mistrust and contestation. Feenberg holds that in the technical sphere, “Democratic rationalisations are examples of such participatory legitimations” (p. 145) that Habermas envisages. Next sections will question some assumptions that Feenberg relies on in relation to democratic rationalisations.

5.6 Multiplicity: Dutch philosopher Annemarie Mol, defines multiplicity as a situation in which 'there are more than one, but less than many' of a given entity. Marres (2005) uses this definition as a helpful guide to approach 'the multiplicity of the sites, subjects, and forms of (democratic) politics' (p. 18), since it distinguishes between concept of multiplicity and plurality. According to Mol, we deal with plurality when different entities exist side by side, however in contrast, in case of multiplicity the entities involved remain enmeshed in one another though not reducible to one. In the case of the Narmada dams these multiple entities may be defined as: the citizens of India, the people of the Narmada valley, global civil society, the national governments represented in the Board of Directors of the World Bank, the international community, etcetera. This multiplicity has become a hallmark of our globalised society. Issue politics is a reminder that central institutions around which the nation state stands is not the only source of law; its legitimacy has become contestable. As Naomi Klein, a Canadian journalist and activist against neo-liberal globalisation, observes, “the best NGOs are loyal to their causes, not to countries, and they aren’t afraid to blow the whistle on their own governments” (p. 23). In this new reality, civil society has created a space for itself.

Religions and their various societies were the most visible entities that often took a cause against supremacy of laws emanating from the central assembly halls of democracy. Now organisations like Amnesty International, Greenpeace and etcetera have become acceptable organs in our dynamic societies. Thus, even before an event takes place or an issue arises we have in place dedicated groups that are 'permanently affected' by certain aspects of happenings in our society. In the process of becoming 'issue affected', this publics-in-the-making (as Marres terms) constellation of organisations creates a prime loci for public involvement in politics. Effectively thus, apart from the public and the private bureaucracies that Weber mentions about, our globalised civil society has created a third enactment of bureaucracy, which could be called 'civil bureaucracy'. This fluid 'civil bureaucracy' also manifests in itself the multiplicity of public interests. It is this multiplicity which also represents the antagonism, and thus the question of how to

accommodate these conflicting concerns in democratic politics. The concept of multiplicity will be applied in the subsequent sections to technical micropolitics in order to emphasise the antagonism.

5.7 Normativity and Antagonism: The technical sphere, as Feenberg has rightly argued, is systematically abstracted and regarded by political philosophy as a neutral background against which individuals and groups rationally pursue personal and political goals. However, constructivist studies of technology have amply demonstrated that technology is not neutral, but favours certain ends while obstructing others. And as Marcuse had argued in *One-Dimensional Man*, “the choice of a technical rather than a political or moral solution to a social problem is politically and morally significant” (Feenberg, 2006, p. 186). In Feenberg's view, and rather even from a hermeneutic perspective of the philosophy of technology, we need to address technology in terms of the conditions of our humanity instead of treating it as instrumental means. Feenberg's critical theory of technology articulates a normative approach that calls for the reform of technology in a democratic manner.

Technology in our society has had been, and is being constantly configured in such a manner, so as to reproduce the rule of the few over the many. This feature is achieved by subjecting human beings to technical control and restricting their participation in design and decision-making about technologies, and thus perpetuating elite power structure of technocracy in its inherent rational forms. And as Feenberg (2006) sums up, “Most fundamentally, democratization of technology is about finding new ways of privileging these excluded values and realizing them in the new technical arrangements” (p. 185). Normativity is concerned with how things ought to or should be. Feenberg's thesis holds that reform and development of technology must be done democratically; that is the normative demand he places on technology.

However, in Feenberg's micropolitics of technology, democratisation of technology is not a feature that can be achieved without struggles. It envisages not just electoral controls on technical institutions but also, and more importantly, democratic rationalisations of technical codes realised through the public interventions. Even though Feenberg charts the road of democracy, his thesis deeply remains informed by the Marxist notion of 'dictatorship of the proletariat'. Just like Marx, for him everyone's idea of good life

coincides. Like 'proletariat' of Marx, Feenberg brings under one umbrella every citizen of advanced societies – to him they are homogeneous entity – and all rooting for the notion that technology be democratised. However, he admits that such radical ideas emanating post May events have met with little success: “A disappointing vestige of the idea [of self-management] was realized by German and some Scandinavian unions, which won rights of 'co-management', including participation of union representatives on boards of directors. But so far these reforms have had little impact on any advanced society” (Feenberg, 1999, p. 146).

What is more puzzling in Feenberg's conception of the micropolitics of technology is that he does not pay attention to a situation where 'participant interests' could be genuinely diverse in nature. While he takes a cue from the constructivist studies of technology and accounts for the various local struggles demanding accommodation of their concerns in technological design, it remains unclear as to why the concretisation of a particular 'technical code' in technological design amongst the contesting diversity of meanings is democratic by default. Feenberg does not provide us any criterion to decide whether the outcome of a technical controversy or democratic rationalisation was indeed democratic. He argues that the public intervention in technological decision-making is intrinsically democratic in itself, and that is his normative basis.

Nonetheless, the participatory form of technological design is not the ultimate aim that Feenberg's micropolitics entails; it is of instrumental value, as he notes – “Technical representation is not primarily about the selection of a trusted personnel, but involves the embodiment of social and political demands in technical codes” (p. 142). And precisely for this reason it needs to be checked whether the micropolitics of technology has indeed lead to democratised 'technical codes' or not. Feenberg observes, “It [micropolitics] involves many diverse but converging activities with long-term subversive impacts” (p. 104). He is aware of these diverse interests, but assumes that they ultimately converge and coincide. However, in practice the assumption of 'homogeneity' does not stand; in reality actors have 'heterogeneous' interests.

While it is plausible to think that most of the time technological design can accommodate these 'heterogeneous' interests, but that is not the case always. Mol's concept of multiplicity which Marres has used to represents the antagonism in issue politics,

presents a complex situation for the politics of technology. For example, in the case of AIDS research and drug approval process in the USA, Veak (2000) notes, “...emphasis on expertise created a hierarchy among activists and consequently a fragmentation. There were the 'insiders' – the activist who worked directly with the scientists – and the 'outsiders' (i.e. all the rest). Moreover, because of the immense amount of disagreement over the direction of AIDS research not all voices could be heard” (p. 231).

There is thus question which is thrown up by the diversity of participant interests. In such situation, when does it becomes possible to say that a particular technology has indeed been democratised? And more importantly, how do we take into account the multiplicity of entities that are not only *jointly*, but *antagonistically* implicated in an issue (in particular technological)? Assuming that this antagonism is irreconcilable i.e. when Habermas' criterion of 'participatory administration' turns insufficient – what kind of a basis will allow us to claim that choice of one amongst these two or more technological paths indeed was an act of democratisation of technology? Or to put it simply – what could be the normative ground for choosing one form of technology over the other antagonistic forms, in the process of democratisation of technology. That is the precise problematic of this dissertation.

5.8 Law as the Mediator: Feenberg in his work *Questioning Technology* devotes a complete chapter to the debate over technology that took place between Marcuse and Habermas in the 1960s. Feenberg uses the *critique of technology* articulated by these second generation Frankfurt School thinkers to synthesise his own critical theory of technology. While Feenberg agrees that Habermas' scepticism about speculative foundations of Marcuse position is difficult to dismiss, he criticises Habermas for omitting out human relations to the built environment in his theory of communicative action. In particular he points out to the two particular world-relations that Habermas, following Weber, thinks are non-rationalizable (table 2) (Feenberg, 1999, p. 158). The first being, norm-conformative relation to the objective world i.e. fraternal relation to nature; and second is, the expressive relation to the social world viz. bohemianism or the space of counter culture. Feenberg relates back these world-relations to Marcuse's position, and uses these excluded spaces to build up his own position.

Worlds Basic Attitudes	1 Objective	2 Social	3 Subjective	1 Objective
3 Expressive	Art			
1 Objectivating	Cognitive-instrumental rationality Science Technology	Social Technologies	X	
2 Norm-conformative	X	Moral-practical rationality Law	Morality	
3 Expressive		X	Aesthetic-practical rationality Eroticism	Art

table 2: World Relations and Basic Attitudes

Habermas argues that, while technology is neutral it is dominated by the instrumental rationality which acts as an hindrance to communicative action. Feenberg maintains that even with Habermas' qualifications, the idea that technology is neutral is untenable and is reminiscent of the naïve instrumentalism. Nevertheless, Feenberg acknowledges that, “Indeed, the role of communication in design can serve as a touchstone of democratic politics in the technological age. This is why I have been at pains to work out the relation between my position and Habermas's communication theory, despite the fact that he ignores technology” (p. 128).

Following Ihde, Feenberg holds that technology is never independent of its context and thus can never be neutral. And since struggles over choice of technological design are within social space, they cannot be denoted as 'instrumentally rational' but are 'rational' in themselves – a contradiction in Weberian terms. With modifications, Feenberg employs this 'rationality' to Habermas' vision of the democratic speech community and suggests this conception as – democratic rationality. As Feenberg (1998) states, “If authoritarian social hierarchy is not technically necessary, then there must be other ways of rationalizing society that democratize rather than centralize control”. However, the problematic of this dissertation is – what kind of a rationality is needed when multiplicity of entities are not only *jointly* but *antagonistically* implicated in an issue corresponding to the democratic rationalisation?

Feenberg extends in his work Habermas' media theory, that defines money and power as

medium, to technology. Accordingly, technology is a medium (in the sense of technical control) which along with money and power organises interaction in social life so as to produce objectifying behaviours. And while all media are mediations serving as means for each other, according to Habermas, juridification plays the central mediating role in our contemporary societies to further the general system advance. Law, for Habermas, is both a 'complex medium' that regulates system functions (of society) and an 'institution' as well that regulates lifeworld functions (of humans). Feenberg (1999) thinks, “In these respects technology offers an exact parallel to law. It, too, mediates both system and lifeworld” (p. 172).

Habermas in his work makes a distinction between 'pure' and 'legal' norms. Pure moral norms are “possible interactions between speaking and acting subjects in general”, while legal norms “refer to the network of interactions in a specific society” (Habermas, 1994, 124) . And because norms are the concrete expression of the peoples conceptions about good life while situated in a particular context, they are transformed into law in a legally salient manner. That is to say, pure moral norms aren't adequate to define a society and always need to be concretised through choices. As Habermas concludes, “Every legal system is also the expression of a particular form of life and not merely a reflection of the universal content of basic rights” (p. 124).

Similarly in the sphere of technology, Feenberg argues, 'pure technical principles do not define actual technologies', and they must be concretised in terms of a technically particularised conception of the good. Thus, instead of keeping technical systems in bound, he argues, “they must also be *layered* with demands corresponding to a publicly debated conception of the good life” (Feenberg, 1999, p. 180). And he believes that democratic rationalisations carry out this process in several domains. But how to produce a resolution when multiplicity of entities are *jointly* and *antagonistically* engaged in democratic rationalisation of technology? This thesis argues – we must fall back on the legal sphere of Habermas.

5.9 Rationalisation in Contestation: Feenberg while capitalises on norm-confirmative relation to the objective world in his critical theory of technology, he scarcely respects the norm-confirmative attitudes toward *social* and *subjective* worlds. These two spaces form the moral-practical rationality in Habermas' theory, reflecting

world-relations of 'law' and 'morality'. While technical control that signifies technology can be distinguished as an ideal-type media, it is empirically intertwined with money and power. That is why it too has a shared relation to the mediating role that juridification plays in our contemporary society. Values that inform law can not be radically different from those that need to be embedded into technical systems. In fact, that is the fundamental basis which allows us to view democratic rationalisations as legitimate. Thus, there is no reason to believe that values that bear on democratic rationalisations of technology form a separate sphere in themselves, and have no correspondence with the moral-practical rationality.

According to Feenberg (1999), “Both law and technology are thus open to criticism not only where they are inappropriately applied, but also for the defects of the form of life they embody” (p. 180). Feenberg has rightly argued that, the range of technologies that impose normative demands on our lifeworld need to be opened up for criticism for the fact that they inherently embody the hegemonic technical code. Democratic rationalisations of technology that lead to reform of technology to suit particular conception of good life which is arrived after public debate, are highly valuable. However, this holds good only in the cases where public as a whole is one 'homogeneous' entity or the differences within are resolved through a reconciliatory process of public debate. But when a particular technology is subjected to the open criticism either for its inappropriate application or for the form of life it embodies, and multiplicity of entities enter into the public debate with antagonistic views that are irreconcilable, choice of one form of technology over the other will not be *de facto* democratic. This choice must be substantiated with a normative ground. Law, that is arrived at after the most transparent democratic processes to which central democratic institutions adhere to, must be brought to bear upon this situation. Law alone can provide rationalisation in a democratic contestation. That is to say – in an antagonistic contestation – only the form of technology that corresponds with the conception of good as signified by law will lead to the democratisation of technology.

5.10 Between Facts and Norms: Moral-practical rationality has a central role in Habermas' *The Theory of Communicative Action.* He has further deepened this understanding in his work *Between Facts and Norms*. His philosophy of law aims to build bridges between the normative and the empirical approaches to democracy. In

modernity, where background consensus based on traditional sources or homogeneous morality is inaccessible, law has emerged as the only source of social integration. In our modern societies, law now institutionalises morality and thus is impregnated with it, but at the same time is not a mere social fact and thus is autonomous from morality. Law, both as an instrument of authority and as the only cement for integration of plural societies, is also closely associated with normative legitimacy. Hence an adequate legal theory is placed between facts and norms.

Habermas (1994) in his work *Between Facts and Norms* attempts to balance the long existing tensions in political theory between freedom and equality. He offers his theory of the co-originality of private and public autonomy, wherein modern law is seen as the grammar that facilitates individuals to organise themselves into a political community. Within such context, rights that are necessary to institutionalise democratic self-legislation are seen as human rights. Thus, without human rights there is no possibility to create institutional framework for public autonomy, but at the same time the concrete content of the rights to private autonomy is also decided by the people themselves. This position is what Habermas calls as the co-originality of private and public autonomy. The source of legitimacy, Habermas argues, then does not primarily reside in either private or public autonomy, but is to be found in the intersubjective process of discourse or in the communicative structures. Endorsing the 'weak cognitivism', Habermas believes that the truth of moral statements is derived from the intersubjective consensus of *ideal discourses*. Accordingly for Habermas, real deliberations that closely respect pragmatist assumptions of communicative action, have an epistemological privilege, and thus democratic procedures constitute the legitimate form of decision-making.

The democratic rationalisations that Feenberg proposes need not be seen as illegitimate, as they involve the specific publics that has participant interests in the issue they are implicated into. However, when multiplicity of entities enter into the public debate while being antagonistically opposed to each others conception of good in regard to technology in question, we are left with a complex normative situation. In Habermas' discourse ethics, the only available source of legitimacy is deliberation in the public sphere. But what if the public sphere fails to resolve the antagonism? When *jointly* implicated publics bring into the public sphere irreconcilable antagonistic views over the choice of form of a technology, three possibilities emerge to resolve the issue – anarchically fight on the

street ('might is right'), disregard the concerns of the minority ('tyranny of majority'), or settle the issue within the framework of law by accepting its normative legitimacy, which accommodates by virtue human rights that fundamentally inform public autonomy. This thesis holds that, only the third position is acceptable within the discourse of Feenberg's micropolitics of technology.

Among the contesting facts, law alone should judge what norms must be embedded into 'technical codes', so as to ensure that they are democratic. Law is the only source of social integration in our modern technological societies, and that is why it alone can provide us a normative ground to decide upon legitimate rationalisation. Law thus should be seen as the mediator providing us *legitimate rationalisation* in a democratic society. In conclusion, whenever an irreconcilable antagonistic contestation over the form of technology unfolds within publics – to say that democratisation of technology has occurred – becomes possible only when it corresponds with the framework of law.

5.11 The Case of Narmada Dams: In the case of the Narmada dams controversy, the grassroot organisation 'NBA' (Narmada Bachao Andolan or Save Narmada Movement) working for the people of Narmada valley, aided with advocacy efforts of international non-governmental organisations (NGOs), managed to pressure the World Bank to withdraw its planned financial support from the Sardar Sarovar Project in the year 1993. These organisations claimed that the Sardar Sarovar Project violated several environmental and social guidelines. But this displacement of politics to an international fora where transnational advocacy enacted politics also brought it a failure. The original demands made by the actors active in the region was for the satisfactory arrangements of resettlement and compensation. However, as Marres (2005) notes, this issue at stake in the controversy was marginalised, as it was 'translated' at transnational fora in terms of the problem of corporate globalisation.

The entire issue and 'NBA' movement came into existence because, on Lippmann-Deweyian terms, the existing democratic arrangements failed to settle it at first place. Indian national democratic arrangements, that includes the parliament of India as well as regional governments of the states of Madhya Pradesh, Maharashtra, and Gujarat, through which the Narmada river passes were central institutions for settlement of this issue. These representative democratic institutions alone had the legitimate instruments

at their disposal to address and enforce the rehabilitation and resettlement issues that brought publics into being through 'NBA'. Given the fact that ultimately it were Indian dams and subjects affected by the projects were Indian citizens, as a matter of course no other transnational agency was in a position to settle the issue that was raised by the Narmada valley people.

However, as noted since the representative democratic arrangements failed to address and settle the issue, and displacement of politics to transnational fora rather marginalised the original issues, the people of Narmada valley only had one recourse i.e. law. The democratic institutions of India themselves should have addressed the issue by bringing in satisfactory legislation to address the issue, but they failed to do so. But there was another powerful agency at the national level, which could oblige the Indian government to observe the rightful procedures and address the rehabilitation and resettlement issue at stake. This agency, safeguarded by the Indian Constitution from the interference of executive and legislature branch is judiciary. In particular the Supreme Court of India has been vested with the responsibility and authority to safeguard the constitution and law. In order to ensure that the concerns of the people of Narmada valley are addressed, NBA had to enact another displacement and they took final recourse to law. In the year 1994 NBA instituted legal proceedings against the Sardar Sarovar Project at the Supreme Court of India. The court ordered that construction work on this dam be halted till all the facts are examined. In 2000, the Supreme Court ruled that construction at the site of the Sardar Sarovar dam could proceed, on the condition that arrangements for resettlement and compensation of the affected population are made by the respective state governments.

The Supreme Court refused to sanction NBA demand that the project authority should not be allowed to further increase the dam height, as it did not wanted to interfere with the matters of policy vested with the executive branch. However, the judgement introduced the 'pari passu' principle for rehabilitation and resettlement (R&R) i.e. 'proportionally; at an equal pace; without preference'. Till today, the court maintains the oversight over the project through the R&R report that government must submit to it mandatorily. Every new construction intended to increase the Sardar Sarovar dam height is only permitted by the court after it is satisfied with R&R conditions. Since then, construction of other dam projects which were planned on the Narmada river, have been halted by the court at

various times for want of proper R&R or environmental clearances.

Although popular protests staged by NBA through Gandhian way of 'Satygraha' were opposed by some political parties accusing it of obstructing the development, this antagonism within the multiple social groups where the Narmada dams were to be constructed, could not achieve reconciliation through wider public debate or through mediation of the representative democratic arrangements. Ultimately it was only through the recourse to law that the controversy has reached an amicable solution, and thus social integration remains maintained. Law thus provided the legitimate rationalisation that was needed in this irreconcilable antagonistic contestation over democratisation of technology.

5.12 Conclusion: How to resolve disagreements in the sphere of technology - had been the question that this dissertation posed in the first chapter. This question was raised in relation to Feenberg's theory of democratisation of technology. As was discussed in the second and third chapters, Feenberg breaks away with the commonly assumed understanding of technology as being 'neutral' or apolitical. His principle of 'democratic rationalisation' shows that public intervention into the matters of decision-making about technology need not be termed as undemocratic. As was elaborated in the third chapter, Feenberg's theory rightfully argues for subordination of technology to society. It is his conception of technical micropolitics that has been subject of scrutiny in this dissertation.

In the fourth chapter, shared links between Feenberg's micropolitics, Beck's sub-politics, and Marres' concept of issue politics derived from reconstruction of Lippmann-Dewey debate were forged. It thus became possible to appreciate the various dimension of public agency that Feenberg relies on in his technical micropolitcs. Specifically the agenda setting theorists view that issue politics undermines the established relations of popular sovereignty had to be acknowledged. Equally, the displacement of politics away from the representative democratic institutions also became clear. Public involvement in politics signifies a problem is a crucial understanding that Lippmann-Dewey debate makes available to us. The most important point of departure for this thesis was provided by the Marres' insightful definition of public as being *jointly* and *antagonistically* implicated in an issue.

In this chapter these various aspects were joined together. First it was argued that even with 'participant interests' Feenberg's technical micropolitics is susceptible to populism. Secondly, it was contended that public involvement in politics raises problem of legitimacy, although supported with Lippmann-Deweyian thesis and Habermas' participant administration concept, that objection could be dissolved. Thirdly, however, it was argued that with the proliferation of 'civil bureaucracy' there is a problem of multiplicity and the related antagonism. Fourthly, then it was shown that Feenberg's technical publics can not be assumed to be 'homogeneous' i.e. apart from its fractured geographical location or its status of being minority, the publics might actually have diverse and thus 'heterogeneous' participant interests. There is thus a possibility that in enactment of technical micropolitics, publics is both *jointly* and *antagonistically* enrolled in an issue. Fifthly, arguing from the critical theory perspective it was proposed that, when norm-conformative relations with the objective world or expressive relation to the social world gets marred into the irreconcilable antagonistic stance, then the micropolitics of technology must subject itself to the norm-conformative attitude to social world i.e. law. And this argument was further elaborated using the case study of the Narmda dams controversy.

The principle of *legitimate rationalisation* proposed in this dissertation holds that, among the contesting facts, law alone should judge what norms must be embedded into 'technical codes', so as to ensure that they are democratic. Law thus should be seen as the mediator providing us *legitimate rationalisation* in a democratic society. To the question posed in the first chapter in relation to the disagreements in the technical sphere, it is concluded here that they must be resolved through the process of juridification. To say it in the terms of Marres, when there are antagonistically implicated actors implicated in an issue, and the representative democratic institutions fail to bring reconciliation, then the technical micropolitics must be displaced by technical publics for juridification.

The principle of *legitimate rationalisation* proposed in this thesis exclusively emphasise and relies on the central role of law. However, law itself can and is a contestable instrument in several circumstances. Hence, variety of objections could be raised over its adjudged superiority to public involvement in politics. However, the spirit in which this thesis puts law in centrality, is to reinforce the democratic framework. When multiplicity

of entities are involved in antagonistic contestation over democratisation of technology, each one of them professes what Beck has called 'self-legitimisation' attitude. If the micropolitics of technology is to ensure democratic rationalisation, then it must also submit itself to the democratic framework in such antagonistic contestation. Only then with the mediation of law, which provides the normative ground in our modern societies, we can be sure that the outcome of a technical controversy had indeed resulted in democratisation of technology. Nonetheless, several questions could still be posed against this position. Next chapter will discuss some concluding remarks in this relation.

Chapter 6 - Legitimate Rationalisation

6.1 Disagreements and Democracy: '[man must] be forced to be free' proclaimed Rousseau. Feenberg rejects any allegiance to social contract theory, however, he is neither an anarchist. He significantly remains committed to democracy. Democratic arrangements are highly valued for the fact that they work towards reconciliation of legitimately conflicting interests, something that was missed out by the 20th century communism. It is a fact that people usually disagree about what laws need to be made, but democratic arrangements are respected precisely because they provide a fairness to this process. As Swift (2006) notes, “Disagreement is significant not because it implies that any decision would be as good as any other, but because there is a moral problem – *a problem of legitimacy* [emphasis added] – in making people comply with policies they disagree with” (p. 202). Despite the disagreements citizens go along with the decisions made by the state, because in democratic framework people have equal standing as citizens and even in the face of disagreement with other's view, everyone needs to be respected as equal members of the political community.

As was discussed in the previous chapters, technologies that configure so much of the modern society life value very little of any legitimate disagreements that citizens may have, and largely operate in technocratic fashion. The conception of the micropolitics of technology sketched by Feenberg breaks away from the assumption that technology is neutral or that citizens intervention in the affairs of experts should be seen as irrational. Today it is implausible to assume that politics is contained in fora of national representative democracy. The phenomenon of 'subpolitics' makes that amply clear. In this context, Feenberg has rightly argued that the involvement of publics who have 'participant interests' in the decision-making pertaining to the form of a technology will in effect lead to democratisation of technology. Importantly, if technical micropolitics can ensure the accommodation of concerns and values of those who were excluded in the existing designs of a technology, then it would lead to a technology that respects equal standing of all those who are affected by it.

The specificity of the problem that this dissertation addresses is a situation when multiple social groups have antagonistic conceptions about the form of a technology, wherein

design cannot possibly accommodate everyone's concerns or values i.e. choice of technical code A over B. As Swift (2006) observes, “The very fact that people disagree about what's right , and yet all are to be ruled by the laws that are made, means that we need a mechanism for dealing with that disagreement. That mechanism itself be morally justified. Most philosophers hold that, in one form or another, democracy is such a mechanism” (p. 203).In the sphere of technology where democratic rationalisations are sought through public involvement in decision-making, we would also need a mechanism to resolve the disagreements that the multiple social groups might bring to the table.

These disagreements in the technical sphere are equivalent to the disagreements that Swift refers to in the public sphere, since they both involve common subject – the public. That is to say, disagreements in the technical sphere also reflect a moral problem, a *problem of legitimacy*. It was argued here that, when reconciliation of differing views through public debate or by modifications to design of a technology in question is not possible, then technical micropolitics must be subjected to juridification. When norm-conformative relation to the objective world or expressive relation to the social world gets marred into the irreconcilable antagonistic stance, then only that mechanism which is morally justified in itself can lead to the resolution of the situation. The moral-practical rational space provides law as the solution in such instance. As Habermas argues, modernity has destroyed social homogeinity and thus modern law is the only source of social integration that is available to us. Thus law alone can provide the *legitimate rationalisation* that is needed in such contestation over an issue of democratisation of a particular technology. This understanding in relation technical micropolitics will be applied to a case study described by Feenberg, to further elucidate the point in the next section.

6.2 The Case of AIDS Patients: Feenberg provides his most elaborate normative argumentation in regard to participant interests in his account of the challenge that AIDS activists posed in their demand for access to experimental drugs. The principle of legitimate rationalisation can also be applied to this case. The U.S. Centers for Disease Control (CDC), in its first report in June 1981 about the new medical syndrome (i.e. AIDS) noted that those affected were 'all active homosexuals'. As Epstein (1996) observes “AIDS became a 'gay disease' primarily because clinicians, epidemiologists, and reporters perceived it through that filter, but secondarily because gay communities were obliged to make it their own” (p. 55). It was for these natural reasons that treatment activism began

in gay communities. The ACT UP (AIDS Coalition to Unleash Power) which became the principle organisation in the struggle of AIDS patients for access to experimental drugs in the USA, had a predominantly white, well-educated, gay male cultural base at its inception. Formulation of ACT-UP in the 1987 took place because its previous version Gay Men's Health Crisis (GHMC) wasn't politically active in the sense of 'activism'. However, Epstein notes; “But even within the predominantly gay male social movement organizations like ACT UP, various constituencies had asserted their priorities” (288).

Activists in the Women's Caucus of ACT-UP, found the health needs of women with HIV and AIDS were not being taken care of. As Gena Corea described in her book, the 'crazy-making politics of knowledge' seemed to bar women from medical consideration. The CDC's definition of AIDS systematically 'exclude[d] the symptoms appearing exclusively in women', such as pelvic inflammatory disease. It meant that “women were not receiving the health and disability benefits that accrued from an AIDS diagnosis” (p. 288). In the absence of data, CDC maintained, no causal link between symptoms and HIV infection could be established. The ACT UP response is well reflected in their slogan - 'Women don't get AIDS, they just die from it'. The required data could not be generated because mostly women had been excluded from clinical trials, and in few of them in which they did, no pelvic exams were performed. Summarily as a result, women were denied access to the experimental treatments.

Although eventually, the women activists successfully forced CDC to change its definition of AIDS thus allowing them access to experimental treatment, let us engage in a thought experiment. Imagine that in this struggle of women activist (sub)groups against CDC, the gay male community took an opposing stance and did not agree with the proposed change of definition. Let's say the gay male community argued that experts were right in claiming that AIDS is a 'gay disease'; or it will lead to unnecessary medicalization of another 'sexuality'; or simply did not wanted the distraction of medical treatment from the focus group (perhaps for fear of division of resources). Further assume that neither any political party, CDC's committees, Church, or media accepted the claim made by the women activists. That is to say, usual democratic arrangements as well as the public debate failed to appreciate the concerns of women AIDS patients, and few who were sympathetic could not generate enough 'public' pressure to push for change in the 'technical code'.

In this situation, how women AIDS activists could have carried forward their struggle against hegemony of technocrats and (gay)males? How definition of AIDS, which gay males sought to exclusively appropriate for themselves, could have been amended to shift scientific considerations on symptoms that were exclusive to women and thus develop women centric AIDS treatment? In this hypothetical situation not only we have now *jointly*, but *antagonistically* implicated actors, with 'participant interests' (i.e. AIDS patients) representing different social groups. What kind of a displacement could have served their cause? In absence of support of the representative democratic institutions or the publics who could sympathise with this stigmatised group, there is hardly any site or form of politics that they could have relied upon. Of course, they also had no opportunity to the route of 'might is right' because the gay male community and experts had appropriated it. Neither they could have taken the route of 'tyranny of majority' since they were small minority. In this scenario there is only one agency where they could have displaced their micropolitics i.e. the Supreme Court of USA. Any settlement of this contestation could not be imagined without the recourse to law, if democratisation of technology is to be ensured. Only through juridification they could have put themselves in a position to claim the same benefits as their male counterparts had appropriated. Only through law, *legitimate rationalisation* of technology, in this case AIDS treatment, could have been achieved while maintaining social integration in the society.

6.3 Why Law: Significantly Habermas' position of co-originality of public and private autonomy shifts the locus of legitimacy to the intersubjective discoursive processes of opinion- and will- formation, instead of accepting the primacy of either public or private autonomy. This position in turn accords an epistemological dimension to the democratic processes. However, the position of deliberative discourse that Habermas envisages has found objections on several grounds. Weinberger holds that since in Habermas' theory of legal validity critical valuations are based on political convictions, legitimacy cannot be an objective feature of valid law (Menendez, 2000). Weinberger argues that the outcome of the discourse can not be assumed to constitute a mark of objective validity. Equally he stresses that the ideal discourse can not be enacted in real situations given the difficulties arising from the fixed opinions or ideologies. Habermas however believes that the democratic processes, substantiated by the communicative structures of intersubjective process of discourse, are the only source of legitimacy that are available

to us.

Finnis arguing from the position of natural law tradition contends that the consensus cannot be taken as *constitutive* of truth (ibid.). But Habermas rejects the 'strong cognitivism' claim that the truth of moral statement corresponds to the external empirical reality. Instead he endorses 'weak cognitivism' wherein the truth of moral statement corresponds with the intersubjective consensus of ideal discourse. Alexy on the other hand in his special case thesis holds that law is a special case of general practical reasoning, informed by prudential and ethical arguments (ibid.). Accordingly, legal and general arguments are applied jointly at all levels. Habermas agrees with Alexy that law cannot be equated with general practical discourse, but claims that judicial adjudication should not be seen as being intermingled and regulated by general practical discourse. Habermas thinks that judicial adjudication involves careful consideration of all arguments and circumstances pertaining to the case, and needs to be distinctly separated from general practical discourse.

In conclusion it can be hold that, Habermas' philosophy of law builds bridges between the normative and the empirical approaches to democracy. Law in being the only source of social integration in our technological societies saliently addresses the moral problem of legitimacy. Within the democratic framework, law informed by both private and public autonomy should be sufficient basis to peaceful co-existence of humans.

6.4 Conclusion: The principle of legitimate rationalisation proposed in this thesis exclusively emphasise and relies on the central role of law. Feenberg is unlikely to object to this position, because first his object is that decisions must be based on 'tradition, law, or the will of the people' (Feenberg, 1999, p. 4) and not technocractic assumptions, and secondly he holds that public activity and participation must 'respect the rights of others' (Feenberg, 1998). However, law itself can and is a contestable instrument in several circumstances, as Feenberg (1999) notes in his comparison of law and technology: “Like law, sometimes technology is overextended, sometimes it is politically biased, sometimes it is both” (p. 180). What if the law is overextended or politically biased or both – then can it be a mediator?

Habermas' position of co-originality puts human rights that are necessary to

institutionalise democratic self-legislation at its core (but equally the concrete content of them is decided by the people themselves). Democratic institutions while prioritise opinion- and will- formation to formulate laws, a sufficiently substantiated constitution that guides these processes, keeps away certain principles outside of their purview. For example, the right to vote or the right to freedom of expression. As Swift (2006) explains, “...democratic authority does not extend to self-abolition – so the people cannot legitimately decide, even by democratic means, to deprive themselves of those rights that are constitutive of democracy in the first place” (p. 192).

These principles that constitute democracy and the special status that Habermas endows to 'judicial adjudication' should provide enough basis to the court of law for correction of bias or overextension of scope ingrained in a law formed under political convictions. For example recently the High Court of Delhi and subsequently the Supreme Court of India rejected a law enacted by the Government of Delhi that sought to restrict the number of manually pulled cycle rickshaws plying on the city roads. In its judgement court recognised the right to the road for all forms of transportation. Court ruled that the law was unconstitutional and biased towards people who own automobile, marginalising the poor people who earn livelihood by pulling these environment friendly rickshaws. However, what if juridification also fails to uphold the democratic principles? Only in this extreme situation, when law fails in its duty of being the source of social integration, 'the people' must form themselves into one homogeneous entity and enact a Lockian moment or ensue that the May Events repeat themselves – politics must then return to its base.

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