

Rejection of Technology

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Abstract

It is well accepted that technology plays a critical role in socio-technical transitions, and sustainable development pathways. A society's amenability to the intervening (sustainable) technology is fundamental to permit these transitions. The current age is at a juncture wherein technological advancements and capacities provide the common individual with affordable and unlimited choice. Technological advancement and complexity can either remain simple and unseen to the user or may daunt him to keep away, in which case the intended pathways remain unexploited. The current paper explores the reasons behind rejection of technology and proposes a solution model to address these factors in accommodating socio-technical transitions. The paper begins with structuring the societal levels at which technological rejection occurs and proceeds to discuss technology rejection at the individual user (niche) level. The factors influencing decisions regarding technology rejection are identified and discussed with particular relevance to the progressive world (Asia).

1. Introduction

Technology fundamentally serves to expand and enhance human capabilities and conveniences. It can have a successful impact on people only when it vibes with societal routines and prevalent mindsets. Consequently, certain technologies are well accepted (to varying degrees) while many are rejected; both indicative of prevalent socio-technical transitions. While the acceptance of technology by society is well understood in the competitive market, its rejection, though pronounced, is not easily apparent in revealing socio-technical transitions. The objective of this paper is to investigate socio-technical transitions underlying the phenomenon of technology rejection. This paper explores the causes of technology rejection and also suggests future directions of inquiry. The technologies being dealt with are those that are common, easily procurable and usually accessed on a daily basis by individuals.

'Rejection of technology' may be expressed as a phenomenon wherein a society, ranging from individual users, community groups, through states (nations), availing the service of a particular technology, deliberately chooses to refrain from its adoption. Consequently, some technologies get used frequently while others are used more sparingly. Along this *usage-frequency continuum*, it is likely that technologies which are rarely used

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face fewer problems in adoption, while technologies that are used frequently carry a greater degree of concern in light of possible rejection.

The rejection of technology is a prevalent and natural process – every technology introduced will either get accepted or rejected completely or to varying degrees of both. With most day-to-day technologies being highly configurable and scalable, and given the diversity in global societies, technologies are designed (and marketed) to local (societal) appeal and trends. Numerous countries, especially in the developing/progressing world, are in the midst of major socio-technical transitions (Rock and Angel, 2005), bringing about transformations in the way a society operates, functions, and performs both technologically and socially. These theories on socio-technical transitions (Geels and Schot, 2007) are well developed and appreciated in research literature (Markard and Truffer, 2008), with a discussion on various factors determining the up-scaling and downscaling of transition initiatives (in society) (Bai et al., 2009). The role of the *individual user* in society is the most fundamental unit determining socio-technical transitions, and it is at this level that transitions need to be discerned. This might be of particular significance when attempting to upscale a successful sustainability experiment to a larger user base (eg., STD/ISD telephone services in India). Sustainability deals with the role of technology in enabling livelihood security and well-being, keeping in mind environmental and cultural values, while also being affordable. Bekhout et al. (2009) identify consumer (individual user) behaviours to play an important role in opening sustainable development pathways. The rejection of a technology with potential to induce sustainable socio-technical transition is not beneficial. An attempt has been made in this paper to explore the factors underlying an individual user's (consumer) rejection of technology and subsequent impacts on the transition process and intended (technology) pathways. Goode (2005) identifies the barriers to innovation diffusion which manifest at the individual, organizational and landscape levels, providing a good resource to view these barriers from the standpoint of the individual, organisation and landscape. Many individual, organizational and technological factors determine the acceptance (or rejection) of a technological innovation (Tornatzky and Klein, 1982) or pathway. The focus of the current paper is to understand technology rejection from the users' arena where technology is accessed/adopted/experienced.

As indicated earlier, the users' arena can be scaled up from the individual to the community to the state (nation) and can be representative of the individual, organisation and landscape respectively. While the current paper looks at the rejection of technology at the users' scale, it is important to note that technology rejection, though eventually discernable at the individual (user) scale, can be effected or imposed by the state. Sustainability is most effectively understood through the 'three pillars of sustainability', viz., society, economy and environment. Likewise, the landscape of technology rejection, fundamentally indicating 'inability to sustain itself' in the users' arena, can be discerned through the three pillars, viz., society, economy and environment. Following this lead, the possible technology rejection scenarios may be mapped (see Table 1) by meshing technology users (individual, community and state) with the three pillars of sustainability (society, economy and environment).

Examples of technology rejection at the individual/community/state level influenced by the societal, economic and environmental considerations have been presented in Table 1. However, the scope of the current paper is limited to the individual user scale (shaded grey cells in Table 1).

Table 1: Matrix indicating technology rejection at various societal levels vs. sustainable development pathways

		Sustainable-development pathways (concerns)		
		Society	Economy	Environment
Societal scale	Individual	<ul style="list-style-type: none"> Burma blogging GPS tracking in mobiles Internet Synthetic garments 	<ul style="list-style-type: none"> CFLs (in rural Asia) Fuel cell cars 	<ul style="list-style-type: none"> Mercury based batteries Synthetic dyes Plastic paper
	Community	<ul style="list-style-type: none"> Prenatal gender detection Nuclear energy (Germany) Full-body scanners 	<ul style="list-style-type: none"> Healthcare diagnostics (MRI) Photovoltaic's (domestic) 	<ul style="list-style-type: none"> Plastic paper Refrigerants Lead-free fuel
	State/ Nation	<ul style="list-style-type: none"> Endosulphan Mobile phones (N. Korea) Nuclear energy (Germany) 	<ul style="list-style-type: none"> Concord (supersonic commercial flights) 	<ul style="list-style-type: none"> DDT/Endosulphan Sea bed trawling

Technology: acceptance vs. rejection

Technology rejection is a distinct phenomenon and not simply a negation of its acceptance. There is an extensive body of knowledge dedicated to the acceptance of technology, especially in the recent field of Information Technology (IT) (Davis et al., 1989). Numerous iterative models (Technology Acceptance Models 1, 2 and 3) have evolved over time to explore how users have accepted IT (Venkatesh and Davis, 2000; Venkatesh and Morris, 2003). These theories focus on factors that support acceptance of technology and innovation (Aversano, 2005). There are also theories on how innovations can be adapted to suit the larger market of consumers such as Diffusion of Innovations (Rogers, 1983). These theories of *Technology Acceptance*, *Diffusion of Innovation* and its extension, *Crossing the Chasm*, are all acceptance-centric models. However, there is a paucity of both theory (Aversano, 2005) and literature (Goode, 2005) on rejection of technology, particularly from the viewpoint of the individual. A study of technology acceptance does not imply an inherent understanding of technology rejection. As Gatignon and Robertson (1989) state “Rejection is not the mirror image of adoption.” Although there are numerous factors common between acceptance and rejection of technology, the mere absence of the set of factors facilitating acceptance does not ensure rejection. This paper attempts to identify and characterise rejection-centric factors for technologies at the individual (user) level.

The following section articulates the need for investigating the individual user as a rejector of technology. Section 3 expounds on the factors which lead to rejection of technology, with a preliminary framework proposed in Section 4.

2. Individual users rejecting technology

Transitions in socio-technical regimes are situated at the level of organizational fields (Geels and Schot, 2007; DiMaggio and Powell, 1983) comprising communal individuals. The systemic (societal, regional or state/national level) reasons obstructing transitions have been explored in Bai et al. (2009). However, reasons for which individual users may reject a technology will also influence socio-technical transitions as at the level of organizational fields, communities of (individual) users or adopters act as agents of change or transition. Users may reference each other in their buying decisions. The reasons why these adopters may reject a technology must also be part of the transition theory. A structured understanding of why individual users reject technologies will enhance sensitivity to their concerns in achieving successful niche transitions and up-scaling. Society shapes the values and norms that define consumer preferences (Kotler et al., 2009) and affinity for or against a technology or product. The socio-cultural diversity of Asia influences this user affinity towards a technology. The paper does *not* dwell into the aspects by which the niche-innovations get adopted for unintended anti-social ways.

3. Determinants of technology rejection

The phenomenon of technology rejection is determined by numerous factors attributable to the nature of interaction between society and technology, which primarily depends on the technological advancement/complexity *faced* by the user. The current section attempts to identify these factors and discusses their influence on the individual's decision to reject a technology, with particular reference to the developing/progressive world.

The factors contributing to technology rejection include

- Technological complexity
- Technology fatigue / excessive technology
- Level of flexibility
- Altering user-base
- Switching cost and loss aversion

3.1 Technological complexity

Technological complexity can have a profound influence on users leading to the rejection of a technology. It could be the outcome of a technology actually being too complex or being perceived as too complex for use. Consider the response of under-informed users when introduced to a new technology. These users tend to experience anxiety, apprehension or even fear, when required to incorporate a new technology into their routines. This aspect may be called *technological anxiety*. Also, the degree to which users believe that they can perform a task effectively using a new technology may be quite low. This may be understood as a low level of *technological efficacy*. The factors of anxiety and efficacy are also of critical importance in specific fields such as IT (Venkatesh and Bala). These factors result partly from technological leapfrogging (i.e., development by skipping inferior, less efficient, more

expensive or more polluting technologies and industries and moving directly to more advanced ones). The concept of technological leapfrogging has numerous advantages in sustainable development (Goldemberg, 1998; Steinmueller, 2001). When communities rightly skip initial and inferior technologies and move directly to advanced technologies, they also lose out on the training and social conditioning required for a smooth transition, with an impending risk of shock attributed to the insurgence and accommodation of an overbearing technological complexity. Technological leapfrogging must be studied by taking into account complementary technologies (Steinmueller, 2001).

Apprehensiveness with a technology may arise not only from under-information but also from over-information. Both these extremes of *technology-familiarity spectrum* are seen to exhibit technology rejection. An example comes from the world of blogging. Some users may not want to adopt this niche because they do not understand its mechanism, while other users may reject it because they understand the vulnerabilities of the medium, the pervasiveness of the internet, information theft and the traceability within cyber-space. Another example is from social-networking websites. Many do not use these sites because they are unfamiliar with this forum, while at the other end of the spectrum, users conversant with the intricacies of social networks refrain from its adoption. Both instances of these are traceable in the developing/progressive nations such as India and China. Internet banking also faced this problem initially (until encryption technology was dramatically improved to address the concerns originally raised at Amazon and eBay).

The shape of the learning curve may also be responsible for the rejection of a technology. If the technology requires a steep initial learning, then the technology may get rejected. However, a learning curve that requires users to learn along the way to attain confidence over the technology would be beneficial as it generates a dedicated user-base (organisation) usually comprising a strong network of loyal actors (eg., the Linux developer community). Linux may be a good example because of the importance of learning involved in becoming a user, bug-fixer, and finally a developer (Ye and Kishida, 2003). Learning itself is a motivation that intrinsically drives people to get involved in a technology and better it. This is true of technology developers wherein users tend to start off from the *outside* following a 'learning by doing' approach before choosing to proceed further and go *inwards* to become developers.

3.2 Technology fatigue / excessive technology

"This is too much tech for me. I just want something simple"

Excessive technology is related to, but different from technological complexity. In scenarios of excessive technology, users tend to refrain from its overwhelming complexity and withdraw towards *minimalism* of technology. There are also reasons to believe that technology probably overestimated the need for itself (users may not need to read or reply to emails outside their desks (Anthony, 2008)). A recent (2010) study by the marketing and research firm Nielsen found that only one in five informed urban Indian users prefers to adopt the 3G mobile technology despite 70% of them being conversant with it (Nielsen Company,

2010). 3G adoption in China has also been sluggish. To understand such trends, the phenomenon of technology rejection by well-informed, educated and capable users seems pertinent.

a) Feature fatigue

Users tend to exhibit *feature fatigue* when technologies or products get brimming/bloated with features. Due to technological advancements, products become capable of performing more functions with only a nominal increase in product cost. But consequently, to achieve secondary functionality, the learning involved and the risk of erroneous use are incommensurate. Attempts have been made to identify the tipping point of when a product overwhelms its customers. [Rust et al. \(2006\)](#) further explain that typical users “do not use anything close to the full functionality of a highly complex product. For them, more functions translate to lower value in use.” This is particularly valid in product categories such as mobile-phones, cars, home-appliances and even hand tools. Some companies have even removed features from their products in an attempt to make them simpler. The Google search engine was an instant attraction because of its uncluttered minimal interface. Product companies such as Acer, LG and Samsung even pride themselves on making advanced products that are simple. There are also examples of the John’s phone ([johnsphones.com](#)) which is a phone-calls-only cell phone and the Peek, an email-only handheld device ([Time magazine, 2008](#)), which was recognized as one of the 50 Top Inventions of 2008 on TIME magazine. The ipod is a more popular example of a single-purpose device that consciously refuses to pile features onto itself ([Rust et al., 2006](#)).

b) Replacement fatigue / consumer fatigue

Rapid technological advancements results in shorter product life cycles and higher obsolescence rates. Simplicity is highly appealing in a world where consumers have too many choices and technology evolution is constantly pacing. The impact of this on society is most pronounced in the developing/progressive nations that have to cope with an increasing variety of rapidly developing technologies from around the world (competing to grab the burgeoning middle-income market). Under this dense technology cloud, the customers prefer uncomplicated products, straightforward guidance, and things that work quickly and effectively, without much effort ([Ashkenas, 2009](#)) in their learning/adoption. People are apprehensive about learning new things every time they are to buy and adopt a new or better technology. If the learning and cost involved in first-time adoption of a product has been high, it plays heavily in matters of replacement. People are more likely to reject a technology if they are already deeply invested into learning and adopting incumbent technologies. As [Bayus \(1991\)](#) identifies, users who are cost sensitive and have lower incomes tend to be late replacers/upgraders of technologies (as in products). This might have a particular resonance in terms of progressive-world transitions, where incomes are lower and time devoted to unproductive activities scarce.

c) Wait-and-watch tendency

When users are unable to determine technological supremacy among choices, they tend to wait for the emergence of a clear ‘standard’ technology / product as seen in the standards battle between the Blu-ray and HD-DVD (Christ and Slowak, 2009). This tendency of *wait-and-watch* is higher when the rate of technology change is most pronounced, eg, as in the launch of multi-function smart mobiles/PDA/tablet PC’s. This is best illustrated in the following figure (Fig. 1). Also, a niche gets compared to a benchmark, eg., the apple iPhone setting the comparison standard for all new launches of smart phones. Never in history has there been an instance of nearly sixty new mobile phone model launches in a year, competing to grab the huge market (population) in Asia. The wait-and-watch tendency, leading to technology (momentary) rejection (put away) is clearly evident and very pronounced.

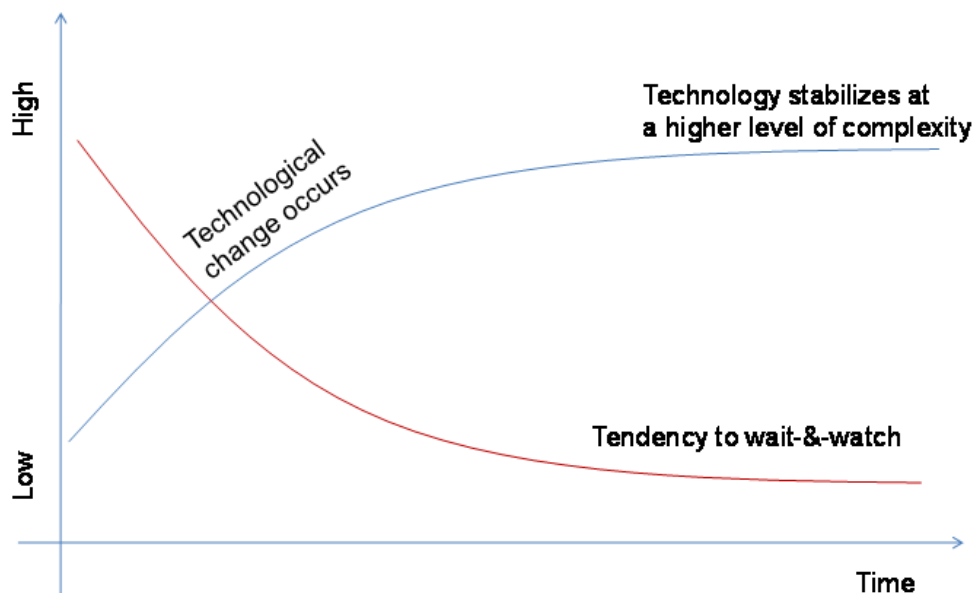


Fig. 1. Wait-and-watch tendency vs. rate of technological change

d) Excessive Choice Effect

With the advent of rapid and cheaper miniaturization in digital technology, there is an increase not only in the number of features but also in product choice. The presence of excessive choice is also seen to repel potential users from adopting a new product / technology. This *excessive choice effect* occurs due to the cognitive burden of discerning the right choice on the short term memory (where a person has to understand and remember all the options to evaluate them) and the risk of a post-purchase regret (in which buyers fear the likely prospects of choosing a sub-optimal option) (Iyengar and Lepper, 2000).

3.3 Level of flexibility

Flexibility fundamentally implies the dexterity of a technology in being amenable to use. It helps users in accepting and adopting technologies in ways naturally suited or appealing to their personal convenience/habituation/conversance. The open-source software movement is based on this approach (Raymond, 1999). Flexibility has been understood to be of great importance to organizations, which must adapt in short-notice to changing needs. This is relevant at the individual level as well, where the lack of flexibility may result in users rejecting the technology. Learned users or conditioned users want flexibility at the most fundamental operational level of the technology. Here the technology is not expected to render itself as primitive, but the flexibility of use must be in its fundamental operation and adoption. An example of this is in adoption of the top-loading (as against the front-loading) washing machine, which permits one to work with buckets of water as against the prerequisite of a reliable constant head of water for the fully-automatic front-loading washing machine. Users in the developing/progressing world exhibit a much higher capability to evolve creative and ingenious solutions in response to demands of practical circumstances, such as adopting the top-loading washing machine with an intermittent and unreliable water supply. Technologies not rendering themselves as flexible to operate at the fundamental level tend to get rejected.

3.4 Altering user-base

As a technological niche (at the individual user level) matures into an organisational socio-technical regime, it is characterised by a reconfiguration in the technology user-base/adopters (eg. as in recent cases of the Apple iPhone being preferred to Blackberry's and the Android operating system preferred to Windows). Further, it is also possible that technologies get confined to communities of networked niche-users in a landscape of another technology. An example of this may be the Linux or Mac community in Asia, which exists as a well-connected network of niches within the large Windows landscape. Geels and Schot (2007) identify that general users (actors) who participate in the landscape regime may have perceptions (and preferences) different from those adhering to niche technologies. Niche users differ from regime-users in terms of traits determined by their affinity and/or aversion towards a technology. When a niche-innovation attempts to become a regime, it may get rejected if the mass of prospective adopters fails to cross-over. Rogers (1983) explores the differences characterising the adopter-categories in terms of their background and the perceived image/incentive in the preference of a technology. The initial smaller adopters tend to be more-educated, affluent, image and fashion conscious, and carry an elite socio-economic stature in comparison to later large adopters. They tend to be part of better informed social networks and aware of societal trends in adopting technologies. Under such circumstances, a technology may get rejected from becoming a regime, with the later adopters being less-educated, poorer (and thus more frugal) and carrying a lesser image of flamboyance. User-categories fundamentally differ on social and economic grounds, risk perception, prior technological exposure, knowledge-base, language and capabilities. The value late adopters associate with new functionalities would be different. Technology

rejection may thus be a consequence of the incentive/benefit accruing from the adoption of a technology not appealing to the differences characterising the adopter-categories. As an example, in the case of early desktop PCs, early adopters did not recognize problems of feature fatigue because they tended to be more knowledgeable and familiar with that technology (category of products) (Rust et al., 2006). Failing to recognize such distinctions among adopter-categories could result in technology rejection.

3.5 Switching cost and loss aversion

This deals with technology rejection resulting from the change demanded of its adopters and the perceived risks of uncertain consequences. Technology adopters often prefer not to change habits they are accustomed to, as it would demand time, effort, uncertainty and anxiety (depending on age group). It is important to highlight the fact that technological adoption does not occur in isolation – it could involve a cascading rejection of many other technologies. Technology/products work in conjunction with complementary product families, as present-age products tend to be reliable and designed for long durations of usage. (Indian farmers switched to improved crop varieties, fertilizers and pesticides and mechanisation as a self-reinforcing package (Rogers, 1983)) Adopters would prefer to recover investment in existing technologies (in terms of value or service) before switching to a new technology. They are concerned about the financial investment in the previous products and the mental and financial investment in a new product (Okada, 2001). The rapid introduction of new and improved versions can make a customer regret a previous purchase, delay all new purchases, and agonize over similar purchases in the future, none of which is in the long-term interest of the market (High-Tech Strategies, Inc., 2008), or sustainable socio-technical transition. The requirement of prematurely retiring existing in-use products can prevent customers from purchasing an upgrade, and this may prevail over attractive pricing and quality offered by a new product (Okada, 2001), particularly in frugal societies of Asia. This rapid pace of product improvement/replacement may lead to prohibitive switching costs. *Switching costs* refer to the costs and efforts imposed on the end user in shifting from one technology to another (Shapiro and Varian, 2003). Just as the relative advantage of an innovation is related positively to its rate of adoption (Rogers, 1983), so does the switching cost relate negatively to its rate of adoption.

A closely related concept in decision theory is *loss aversion*. Customers evaluate a new product in relation to existing products. If there is a perceived loss in an already proven benefit/incentive, they display loss aversion by not adopting another unproven technology. Users not only compare a new technology against what they already use, but also against a prevailing market-dominant standard. The extent of behavioural change required is an important cause of technology rejection. Research (Aversano, 2006) has shown a tendency amongst mobile phones users in the United States to reject that technology as it intrudes into their time engaged in solitary activities. Users rejected this technology because it forced a change in lifestyle, or had *effects on the self*. People are also concerned about what changes a technology would bring about in the present society. This concern for *effects on society* is particularly relevant in rural environments in Asia where an adherence to social norms and

traditions (Kotler et al., 2009) forbids technology adoption. This insecurity or inertia plays an important role in technology rejection.

4. Rejection of technology vs. increasing usage complexity

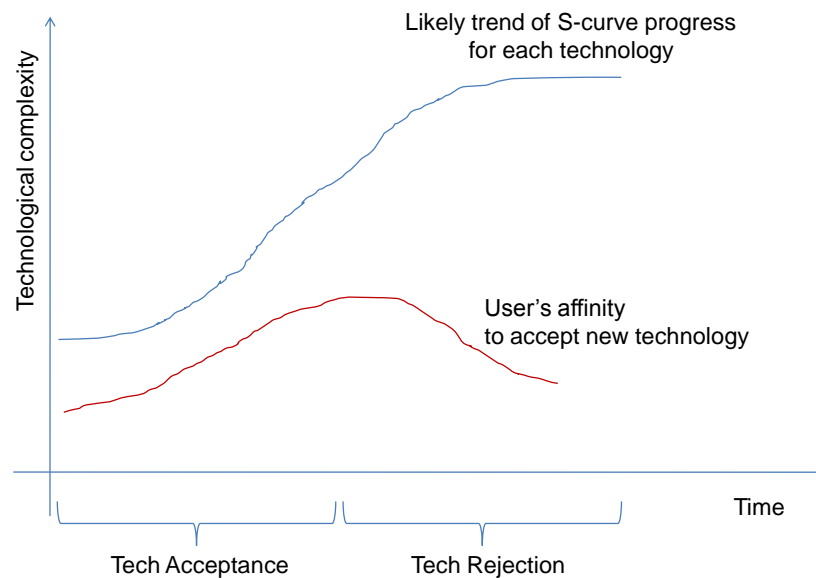


Fig. 2. Rejection of technology vs. increasing usage complexity

Nearly all technological trends follow the technology lifecycle S-curve as illustrated in Fig. 2. Consider a technology that is directly offered to individuals for incorporation into daily routines, viz., mobile phones and media players. Initially, users are excited to accept the technology wherein they learn to extract the advantages/services provided by the new technology. Users are willing to learn to use (user's affinity) a new technology but this willingness tends to level off depending on the time and effort required to keep pace with evolving/updating technologies. When technologies demand continued learning, beyond a threshold, a lingering need to withdraw manifests. Eventually, the technology is found to be too complex to keep pace with, resulting in its gradual rejection. This is particularly true in the case of recent smart phones, wherein most urban users prefer to refrain from adopting the latest gadgets. This is also pronounced in the developing/progressive world due to factors discussed in the earlier sections. This results in the bell-shape trend in user affinity towards a technology, starting with an increasing acceptance to a certain level after which technology rejection starts to manifest (see Fig. 2). However, when a technology eventually reaches its maturity and levels off, the user affinity also stabilizes, resulting in its common acceptance, eg. public transport, television, etc. This bell curve trend can be corroborated by other findings too including feature fatigue itself (Thompson et al., 2005).

Proposed solution model

A technology characterised as a product (assembly) usually integrates numerous technologies responsible for the various components (sub-assemblies) of the product. However, all the technologies on which a product is based are not of equal importance to that product (and its functioning). To the general user, the product is the (inter) face of the technology (as a whole) and not the physical embodiment of its components. A proposed model to discern the role of technology (manifest in a product) and its acceptance or rejection at the user level is illustrated in the Fig. 3.

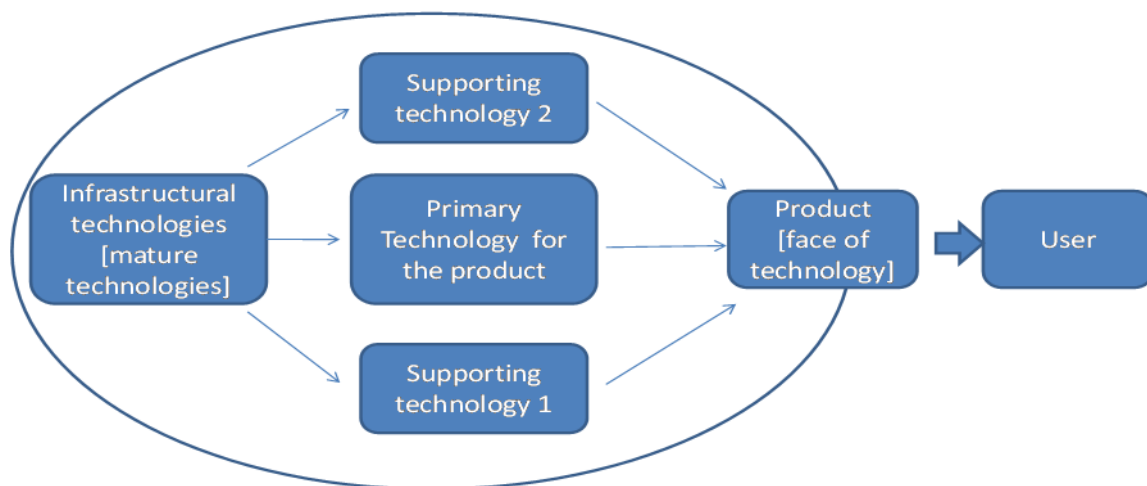


Fig. 3. Proposed technology-sensitive solution model: technology-user interface

Infrastructural technologies are those that have already reached their maturity levels and now serve as a standard platform upon which newer technologies take-off, (Carr, 2003) eg., FM radio, MP3, human-interface devices such as keyboard and mouse. *Primary technology* refers to the core technology under study that is either adopted or rejected by the users, eg., mobile communication technology in smart phones. *Supporting technologies* are those which are also evolving in conjunction and usually facilitate the manufacture of the core product, eg., micro-motors, thermoplastics and capacitive screens. The technology behind a product is judged based on its interaction (face) with the user, and it is the nature of this interaction that critically determines the rejection or acceptance of technology (discussed earlier in Section 3). In industry's pursuit for cost-effectiveness, ease of manufacturability, serviceability, etc., the various technologies behind a product are always evolving, eg., computer processors, RAM, etc. Keeping the product-user interface relatively consistent can help prevent technology rejection. By masking the technology complexity (hiding its expansive features and capabilities), but by appealing to the conversancy of the prevalent user, technology rejection can be mitigated at the level of the individual user. This is likely to ensure successful adoption of positive socio-technical transition with prevalent ideas and usage scenarios (Rogers, 1983). Many other research findings also concur with the fact that the product face holds a key to successful transitions. Barriers for technology adoption have

usually comprised skill and dexterity related issues (Goode, 2005) and this model underlines this trait.

The solution to technology rejection, attributed to feature fatigue, may be addressed through appropriate product design (Rahman and Rahman, 2009) as the proposed model values a product's role in technological transitions. Also, attempts to conduct socio-technical transitions at the infrastructural level have been encouraging. Technological leapfrogging works well with infrastructural technologies, such as ICT or mobile telephony or the internet (Steinmueller, 2001). Another example is the acceptance of electricity as a power source, despite being generated through various (infrastructural) means, as long as its interface with the user remains consistent. Likewise computer operating systems mask the changing (electronic) hardware complexity by retaining a familiar interface.

If a *learning by doing* approach is to be adopted for grassroots' innovation endeavours, then a progression along the path of *users – fixers – developers* is likely to be accepted. As discussed in the earlier section, this approach would support a technology which is adopted first, maintained and developed next. The technology (inter) face would be required to be simple while masking the complexity inside. It is best to have products that necessitate little or no learning as in the acceptance of ATMs (Carroll, 1998).

The altered version of the technology-rejection graph (see Fig. 4) can be revised as indicated. To render itself as amenable to easy adoption, the complexity of the product (technology) interface is indicated as a separate (lower) trend from the technology advancement it masks. Realising that all technologies eventually reach maturity and become an infrastructural substrate for newer technologies (Carr, 2003), it would be appropriate to maintain a consistent product (face) with the user, eg., Television. Over an extended time duration, users would incorporate new (and meaningful) technologies into their daily routines, without even heeding the technology S-curves responsible in the background. As is also evident, technologies are rendering themselves to being natural and instinctive for usage, with a much lesser likelihood of their rejection. The proposed model however does not suggest ways to address *all* the causes of 'rejection of technology', but attempts to discern the same at the individual user level viz., technological anxiety, technology fatigue, switching costs and loss aversion.

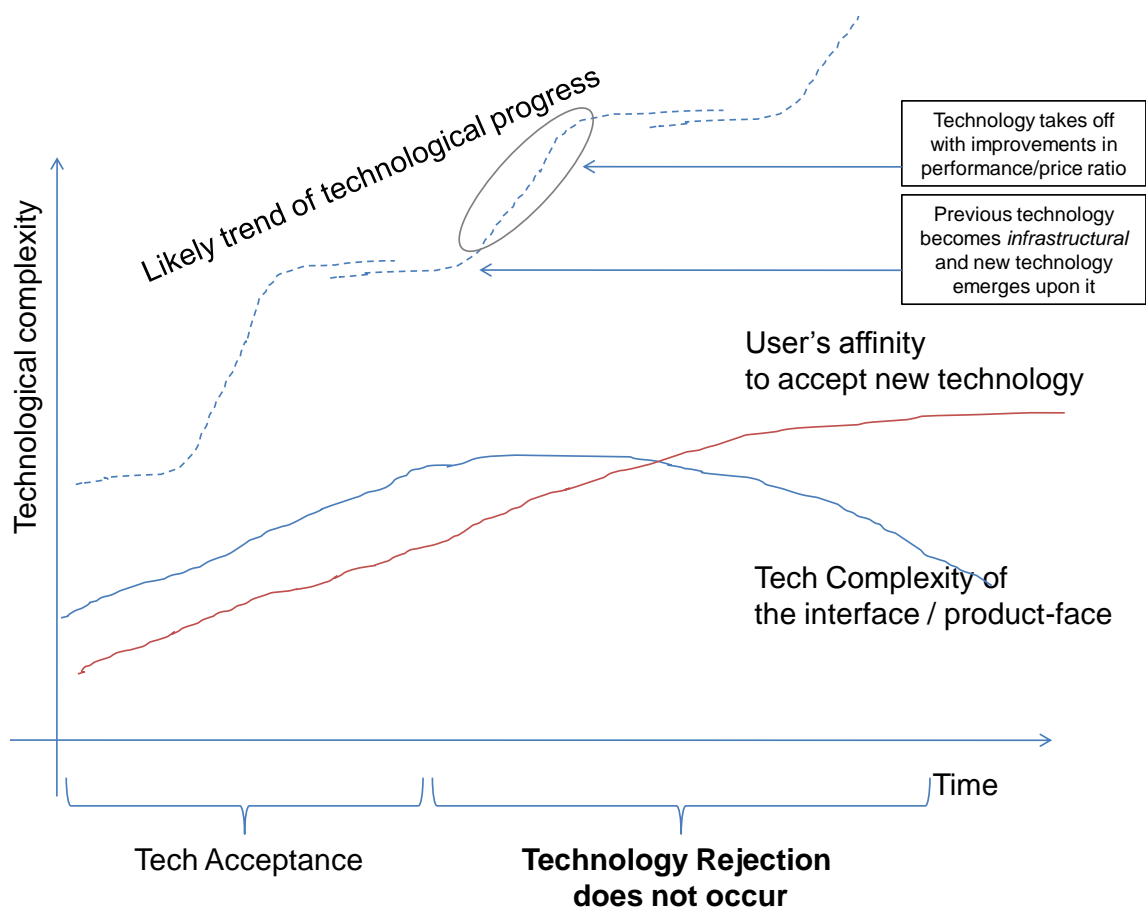


Fig. 4. Trends indicating technological advancement and complexity vs. technology acceptance (by users)

5. Conclusion

This paper explores the recently pronounced phenomenon of *rejection of technology*, with particular emphasis on rejection in the individual users' arena. Technology acceptance is not a negation of its rejection, and this distinction has been clearly explained in this paper. Technology rejection can severely hinder (technology centric) sustainable development pathways, and needs careful investigation. In addition to identifying salient factors responsible for technology rejection, the paper also reviews current literature in this area. The identified factors have been explored in the backdrop of technological advancements and socio-technical transitions in the developing/progressive world. The paper begins with an overview of various scales at which technology rejection occurs and proceeds to discuss in detail rejection at the individual user level. A technology-sensitive solution model has also been proposed to identify pathways to discern and mitigate rejection. The current paper, though not exhaustive, provides a basis for further research in understanding technology rejection in the context of sustainable socio-technical transitions.

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