Amongst the original sins that anthropology students are warned against from the start of their education are those of functionalism and technological determinism. Things never to be espoused accept under pain of extreme denigration. The implication being that these were primitive forms of anthropological explanation now superseded by more advanced positions. In historical context these prohibitions may have seemed reasonable enough. Perhaps there once was a threat of a full fledged ideological commitment to modelling the world as an organic or systemic functional model, which we needed to eschew. But, at least outside the study of ecology, those days are long gone, leaving these prohibitions as generic, rather undefined and possibly by now somewhat debilitating to any anthropology that seeks to provide plausible accounts and explanations for social change.

The three books under review here are concerned with transformations in the digital world, and it is clear that at some level this new digital world has dramatically transformed all our lives because of advances in technology that function rather well. The reason for picking these three books, in particular, is that they highlight an ambiguity at the heart of explanations that implicate technology and function. Because it is always people who create the machines that, as these books clearly reveal, have the ability to script people. We will examine them in a sequence that reflects another variable factor in such equations. In this first case it is the creation of a machine, in the second it is the development of software, that is a game. While in the third case it is the creation of narratives. Furthermore the three vary with respect to whether the intention is to control or to facilitate the people at the user end of the spectrum.

The disciplinary classification of the authors is also ambiguous. If we were not told of their affiliation my bet is that most people would have assumed it was Burrell with her long term ethnography based in West African that was the anthropologist and perhaps Malaby who works on a software corporation who was otherwise. As it happens I was one of the examiners for Burrell’s PhD thesis at the LSE which was in sociology, while Malaby is trained and teaches as an anthropologist. What all three authors share is a commitment to ethnography.

The book by Schüll is a riveting read that maps out, through meticulous scholarship, an extreme but significant phenomenon that dominates the lives of more people than we care to admit to. It is drawn from some twenty years of research and writing, is clear in exposition and modest in inference. The
book is concerned with the kind of coin operated single ‘slot’ machine (mostly now video poker) that even Geertz and Goffman (the latter also did fieldwork in Las Vegas, the site for this study) dismissed as the most degraded form of gambling. They were interested in the sociality of gambling, and these machines induce no sociality whatsoever, the players are completely isolated. Much of the material is astonishing and shocking. We learn how these machines can now be designed such that a player can work through a thousand poker hands an hour with direct access to their bank account in order to transfer money. The individual seems to become a mere cypher such that a legacy can be lost in a day. All of this is used to support a central thesis which is that the players and companies engage in what the author calls ‘asymmetrical collusion’ (i.e. one side clearly dominates) to create a kind of trance like zone in which the players are not really concerned to win or indeed to lose. The whole point of this process is simply that they can remain in this constant state of play, oblivious to all else.

Some of the strongest and most fascinating material concerns the details of how precisely the companies engineer this degree of control. This ranges from their exactitude in creating the light and sounds that constitute the ambience of the rooms, to the mechanics of algorithms that can secure just enough ‘near misses’ to entice players to remain in play. The companies create what she calls a ‘snug ergonomics’ (she coins quite a few memorable phrases) of ‘visual consistency, acoustic harmony and tactile confirmation’ (63) to retain players and financial flow. The evidence is clear that the refinement of algorithms and machine were never intended to reflect what were initially encountered as players desires as in the delusional legitimation of some economics. This is a systematic engineering that seeks to transform the players into that instrument/victim which best secures the company’s profits. And it is possible to watch exactly how, for example, the provision of carefully calculated ‘free spins’ of the right number at the right time achieves such aims. The book thereby very neatly expresses my initial concern. On the one hand this is precisely a technological determinism except that it is people who are designing the machines. And in turn it is capitalist corporations that hire and refine the people who then create this technology. Indeed the first clear addiction that permeates this whole trajectory is the addiction of capitalist firms to profits. Which we could reasonably argue is ultimately the determinant force.

Later sections of this book provide an equally compelling ethnography of the gambling addicts, deal with issues of regulation and with the failures to engage with this phenomenon as a social problem. One of the strengths of the work is that it in treating with the entire cycle it helps demonstrate the weakness of studies that research only production or consumption rather than the key interplay between multiple factors and actors within such processes. When it comes to accounting for the addiction of the gamblers, I would take issue with some of her more theoretical conclusions. The comparison with Freud was to me unhelpful and dilutes the otherwise keen anthropological sensibility. It is also quite unnecessary since one of the strongest sections of this book provides an insightful, plausible and much more acceptable account that comes from the wider contextualisation of ethnography. Her evidence
suggests that rather than a retreat to psychology it would be better to see this as analogous to a manual in Buddhism. How can one gradually engineer a state of total separation from the world, by entering into a gambling zone that is exclusive without any separation between person and machine, and that feels like a state of complete transcendence? The word that dominates this book is `zone' which in a curious way reflects an almost `new age' retreat from any awareness of other persons or concerns. This is what her informants constantly claim is their ideal state to be pursued through play.

But why then should these particular individuals seek to enter into such a transcendent realm? Her best evidence for the users suggests then that they do indeed achieve a kind of pure anti-materialism, beyond desire, but the specifics of this reflect a systematic negation of the rest of their lives. For example, a worker such as a waitress or insurance salesman may be spending the rest of their day in constant interacting with other people in a manner engineered by the terms of their occupation, mostly with an acute awareness of both time and money as the factors which control those interaction; factors which have to be constantly to the fore. What these machines allow them to achieve is the ability to systematically escape from all social relationships (193-198), to escape from thinking of money as value (198-203) and to escape from clock time (203-207). It's a zone of existential oblivion within which this same asymmetrical collusion is used to engineer their own extinction. Just for once there are real grounds for an anthropologist to cite Bataille. Since the gambling addicts as victims create simultaneously an affirmation and destruction of their humanity in this extreme rejection/celebration of the precise functionalism of our modernity in its service to money, time and customers.

Perhaps the most dramatic evidence for the success of this project comes from an analysis that was based on observing players in order to streamline medical care for players that suffer from heart failure. The video evidence demonstrates that when someone does indeed have a heart attack, the players on either side of them generally just keep on playing (30-33). One of the reasons I value this work is that the message is pretty much the exact opposite of my own writing on the power and relative autonomy of consumption. But this then begs the question of how to generalise from this very specific instance, both with respect to the general relationship between producers and consumers but also in how best we should use such work to reflect on these wider issues of technological determinism reflected in the idea of people who create machines that script people? In order to examine both of these further Schüll's work is better seen in the context of the other two books under review.

One of the other felicitous phrases used is Schüll is `perfect contingency.' But in this case the phrase is taken from the work of Malaby who has fostered an anthroplogy of contingency as part of his development of a theory of gaming. But what place should contingency have in play? In Schüll's book it is subservient to the logic which seamlessly connects the addiction of the gambler to capitalist addiction to profit. But things are rarely so seamless even in the world of business. Malaby is his ethnography of Linden Labs takes us to
the other end of the spectrum, though he doesn’t have to travel too far; just from Las Vegas to nearby California. Once again we see a collusion between corporations and users but with a very different aim. I will examine Malaby’s book rather more briefly since it came out in 2009 and is a shorter work. But it provides a useful counter weight to Schüll. What the two have in common is that they are both studies of designers creating an environment for digital interactions. For Malaby this consists of an ethnography of Linden Labs, the company which created the best known virtual world of Second Life. The complement in this case would be the book by Tom Boellstorff (2008) *Coming of Age in Second Life* which has already become something of a classic as an ethnography of an online world. But the prevailing ethos of Linden Labs is very different from the gambling dens of Las Vegas, taking its cultural roots from movements that grew up in California around the ideal of digital media as vehicle for personal emancipation and freedom based on a philosophy of ‘technoliberalism’.

It is this which extends Malaby’s previous emphasis upon gaming as an anthropology of contingency, constructing an infrastructure where the whole point is that the unexpected is supposed to happen. In that spirit Linden Labs was certainly not trying to entirely control the conditions for play, as we found in video poker. Rather they did everything they could think of to encourage players to be the creatives at their end of this process, though usually more as individuals rather than as social beings. The intention was closer to a kind of ‘Lego’ model where designers provides the bricks but the users create the structures from their imagination. So play becomes idealised as the opposite to bureaucracy which is precisely designed to reduce contingency. Nevertheless, as Malaby makes clear, in this vision of the users there is considerable attention to the detail by which infrastructure and tools are created which still makes this an instance of designers scripting users even if the stories they hope will be written will be imaginative and varied.

In the event it was often the designers at Linden Labs who become rather disappointed with the consumers of their design. This is basically because most players do not actually do cool, creative and novel things with the tools they have been given. A typical visitor to Second Life was more often engaged with activities such as shopping for clothes that reflected pretty much the same script as thousands of others online and many millions offline. Boellstorff also reveals players getting involved in much the same kind of disputes about property and troublesome neighbours as in offline real estate. Through all of this we can also start to see how the circle can turn through another twist. Looking more widely at commercial involvement online, much of the interest today is in the way the corporations behind the production of games effectively syphon off the creativity of consumers for their own interests (Malaby 2012 292-3).

So between them these two books provide a kind of parameter of design in the digital field, between the desire for total control and the desire for liberationist expression. This is useful in considering the impact of digital technologies more generally. Because on refection these may include the infrastructures that allow us to withdraw cash from ATM’s where we, as much
as the designers, would wish to be completely assured that contingency plays no role at all. Through to the brave new worlds of social media such as YouTube where consumers get up to all sorts of unexpected appropriations and the creativity is almost entirely at that end. Between these lies the growing world of in-betweens such as smartphone Apps where it is increasingly difficult to distinguish between actions that lie somewhere between conventional producers and consumers in the realm of prosumption.

On reflection the ideal kind of space that Linden Labs would ideally have created is perhaps the internet itself, an infrastructure that goes so far, provides the tools as it were, and then leaves everything else open to its users to create. But although some early visionaries thought otherwise the internet does not necessarily implicate the technoliberationist ideals that they had envisaged. Because there is no reason why, left to themselves, the users cannot seek to in turn create scripts which through the internet come to control other people. One of the most obvious examples of just such a phenomena are the scams we associate with Nigerian usage of the internet. Where someone concocts a plausible story and thereby entraps their victims and keeps hold of them until money has passed from the hapless victim to the storyteller.

Burrell’s book consists of a fairly eclectic set of engagements, based mainly on young Ghanian’s use of internet cafés. We thereby enter into the lives and aspirations of such scammers, but the book is happy to stray into others areas, for example a chapter on the wider political economy through which development agencies construct an imagination of this internet use within a discourse of the global information society, which probably owes more to the Californian vision that anything going on nearby in these internet cafés that are the sites of her ethnography and which are frequented by a generally peripheralised low income urban youth.

The scamming witnessed by Burrell does not seem as developed or sustained as that of Nigeria. it was often more personalised and may involve males appearing as females to attract foreign interest. But there was also a trade in foreign stereotypes, as Ghanaians exploited foreign assumptions that rendered plausible these portrayals of war torn refugees or corrupt politicians with fortunes to dispose of. It is the scamming which provides the most clear parallels with Schüll’s account. Here, after all, are people who seem to be as cynical and ruthless in their attempts to extract money, as effectively as they can, by targeting the most vulnerable members of another society who lack the ability or sophistication to see through their machinations. The results could be just as devastating, because their victims are quite as defenceless as the addicts of Las Vegas.

But you could hardly have a more different context for these attempts at exploitation between the corporations behind Las Vegas and the youth who frequent these internet cafés in urban Ghana. Most of Burrell’s concern is not with scamming but with the way these youth would rather engage in a relationship with the wider world based on very different principles. Her core argument is that the primary attraction of the internet is the hope that it will
provide a means both to increase an individual’s social network and most specifically to acquire foreign contacts. It is on the internet where these youths attempt to create a more cosmopolitan presence online. But at least according to Burrell’s empathetic ethnography the youth’s ideal is one of a tolerant and mutual relationship. It is simply that such an ideal is quickly undermined, because what is actually mutual is much more often intelligibility; as each end responds to the crude projections of the other as to the assumed nature of Africans or foreigners. Whatever persona they try and adopt on the internet, the experience of this exchange is more likely to reinforce these youths sense of themselves as marginal and disenfranchised in contrast to this idealised metropolitan they think they are encountering online.

The reach of the book is quite broad. One of the chapters is concerned with the role of rumour and anxiety in the local understanding of this new technology. Burrell makes the point that amongst the most persistent rumours are of individuals who make larger sums of money through scamming very rich Western figures. There is an element here of taking from the rich and giving to the poor that helps to legitimate scamming, but also to balance the actual experiences of general poverty and failure. This mimics the promises of wealth - in contrast to the rarity of that experience - in the increasingly influential Pentecostal churches. A further chapter explores in more detail the parallels and interweaving of the internet and Christianity.

Another theme throughout this work is insistsency upon the materiality of the internet. This is highlighted in the final chapter which examines the trade in second-hand computers as an aspect of e-waste. The flow of computers back to Ghana tends to follow the actual migration of Ghanaians to other countries. There is a neat image by which they very computers that are found in these same internet cafés are then material symbols of those Ghanaians who did manage to use the internet as a conduit to a life abroad. In this analysis Burrell makes considerable use of various approaches from material culture studies and STS to frame her investigation.

All three books are deeply interested in the precise materiality of digital technologies. They all show this abiding concern with the way people create machines, software, infrastructures or simply just narratives that in turn script other people in loose or close embrace. But what emerges is the need to also ethnographically engage with and understand the ethos and ideology of those who create these scriptings, which vary wildly from the total control of gambling corporations to the technoliberation that seeks to facilitate creativity in the user.

In combination these three books make a contribution to anthropology that I would argue they cannot create on their own. The starting point for this engagement with issues of technology as cause may be the desire found both in the writings of Gell (1998: 20-21) and Latour (1999: 176-180) to help us escape from the crude dichotomies that are found in political discussion as to whether it is guns that kill people with the implication that is guns which should be banned, as against those who insist on a different semantics where it is people who kill people, which reduces the gun to a mere background
facilitator beneath the radar of blame and cause. Gell and Latour have already repudiated the simplistic nature of this dichotomy. But for those of us who believe that the guns really do matter, it follows that we need to take seriously the technology and function of material forms and these have changed dramatically, as even the `guns' may now be digitally controlled missiles. What these three books add then is an appreciation of the sophistication and global reach of new digital technologies that sometimes with great precision and sometimes in hapless misconception script the complex interactions between distant peoples and forces across the globe. Indeed in this particular instance it is the capitalist that is the most local, while the marginal youth appear here as the most global players. The books shows ethnographers increasingly alert to the technologies of this century, and why they need to be.


