

## Looping the Loop: Tape-Time in Burroughs and Beckett

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A lecture given in the series Taping the World, University of Iowa, 28 January 2010.

The tape recorder is untimely. Though magnetic tape might seem like the orderly and inevitable successor to the phonograph, ushering in the new world of ubiquitous recording and playback following the Second World War, the principles of magnetic recording had been established since the beginning of the twentieth century, and forms of tape-recording had been in use in the US and Britain during the 1930s. Far from lying unsuspected in the womb of technological time, tape seemed to have been discovered, but then left undeveloped for some four decades. When Beckett conceived the idea of a play built around a character looking back on a lifetime of tape-recorded diaries, he realised that he would have to give it the only historical temporal specification to be found for any of his plays: 'a late evening in the future' (Beckett 1986, 215). This now seems even odder than it did in its own time, for it is becoming every year less and less likely that such a future could now ever come about, that is to say, a future with a long and continuous history of tape-recording behind it, so abrupt has the eclipse of tape been, and so imminent does its absolute extinction appear to be. It may have looked as though tapes were inevitably going to overtake records in 1958, and for a couple of decades after that, with the development of the cassette in the early 1960s, sales of which almost reached parity with those of gramophone disks by the beginning of 1982 (Millard 2005, 320). But this was the year in which the CD appeared, which quickly caused the demise of cassettes. The history and prospects of the phonograph seem, by contrast, and surprisingly, unbroken and assured.

This rapid occultation of the tape-recorder may account in part for its remarkable neglect in the recent explosion of studies in the culture of sound reproduction. Despite the fact that modern electronic media would have been unthinkable without the possibilities of storage and editing that were opened up by magnetic tape technology, Steve Wurtzler's *Electric Sounds* (2007) contains only one reference to magnetic tape. In placing Beckett's *Krapp's Last Tape* at the end of an account of the anxiety and mistrust shown by modernist writers towards the phonograph and the gramophone, Sebastian Knowles seems simply to assimilate the tape-recorder to the phonograph, seeing the tape-recorder as just a technical variant in the history of phonography (Knowles 2003).

There are of course obvious analogies between the phonograph and the tape-recorder, not the least of them the fact that both are analogue rather than digital media. Like tinfoil, shellac or vinyl, tape is what Michel Serres refers to as hard rather than soft, relying as it does on a material inscription of an acoustic signal rather than a digital encoding of it. However, from the beginning, the materiality of tape has seemed enigmatic or anomalous, relying as it does not on any visible

tracing of the sound but on magnetic fluctuations which are analogous to or isomorphic with a variable electrical signal which is in itself as much an encoded transformation as a physical trace or effect of the vibrations of sound. The difference between analogue and digital recording resolves in the end to difference between a continuously varying wave-form, in its various physical analogies and a discontinuously-encoded form. The fluctuations of the electrical field seem in some ways closer to a digital than an analogue encoding, since they are so easy to render as quantitative variations in a single continuous quality than qualitative variations. And the most important development in tape recording, which accounts for much of the difficulty in putting magnetic recording to wide use in Britain and America before the War before they were able to benefit from, or plunder, the technical developments made by German industries, was the technique of coating cellulose-acetate tape with ferric oxides in the form of a powder. This means that, at the microscopic level, tape recording does not strictly involve a continuously variable wave-form, as analogue forms are supposed to do, but the tracing of magnetic patterns in discontinuous bits, that are tiny – about .5 of a micrometer wide – but still distinct, rather than of continuous curves. The shape and size of these particles proved to be crucial to the quality of the sound reproduction: the ferric powders developed in Germany produced particles that were mostly regular cubes; the versions developed in the US had a longer, stick-like shape, which allowed for better sound reproduction at lower speeds (Morton 2004, 114, 121).

The idea that one might be able to read off sound from the scorings in a phonograph record might always have been a fantasy, but gramophone records do allow for a certain kind of quasi-legibility, sounds of greater amplitude resulting for example in visibly deeper and wider indentations; djs are able to drop the stylus very accurately on to a particular point in a piece of music using this kind of legibility. Tape offers much less opportunity for this, since the dispositions of the magnetic particles on the tape are not visible, meaning that one length of tape looks and feels pretty much identical to another. One of the reasons that magnetic recording was not adopted as quickly by editors of film sound after the War was precisely that it did not offer a visible set of undulations on the film print as the optical soundtrack did (Morton 2004, 126). So while, on the one hand, tape recording is like the gramophone in requiring some material analogue in which the trace or memory of the fluctuations in a magnetic field can be deposited, on the other hand, what is memorised seems only quasi-material. This may be why the concept of digital audio tape seems so much more plausible and comprehensible than that of digital vinyl.

Gramophone records have a reputation for being more corporeal than tape. This may be an accidental after-effect of the development of the cassette tape, which made the process whereby the tape is read by the tape-heads much less visible than the reading of the grooves of the gramophone record by the stylus, and also of the exploitation of the manipulability of the record in 'scratching' and dj-ing tactics and techniques from the 1980s onwards. But this reputation may have been gained, not because gramophone disks are more susceptible to

manipulation than tapes, but because they are more vulnerable to damage. For in fact, tape requires and permits a much greater range and more varied range of affordances, of bodily tactics and conducts than the phonograph. Gramophone disks are fascinating, but tape is intriguing – remembering the relation of that word to knitting (tricotier), trickery and intricacy, which connects to the whole tangled thematics of thread in the human imagination.. Once the disk had been selected and removed from its wrapper, most record players will do most of the work thereafter. The problem, but also the performative opportunity and provocation, of the tape recorder lay in the fact that one was required to do so much in relation to it – most particularly in the ticklish ritual of threading the tape into the machine, and then the even more exquisitely satisfying task of securing it on the empty or receiving spool. There were those who were prepared to create an extravagantly long trailer of tape to secure it in the notch provided for the purpose, but I always felt that efficiency, economy and grace all demanded that one attempt to secure the tape by the clasp of its own friction alone, which is perfectly possible to achieve. Use of the notch always struck me as both indolent and inelegant, and I quietly scorned the bunglers who needed to create a flapping kisscurl in order to get the tape started, in much the same way as I scorned those who needed a machine to help them roll cigarettes, the manual version of which requires a very similar tucking-in technique.

Records are two-sided, but in a rather literal, and visually intelligible way; one has only to flip the record to play the other side. The imaginary space of the tape seems more complex. There is really no ‘other side’ of the tape, since the reverse track is usually recorded in a strip that runs parallel, but in the reverse direction, to the first ‘side’. Thus one does not so much play the other side, as the other direction of the tape, turning it back on itself. In a malconfigured tape-recorder, these two tracks could bleed across into each other. It is not surprising that, when cassette tapes automated the process of tape listening, they replicated the experience of the gramophone record, allowing one simply to flip and play again. To play the reverse side of a tape means sometimes to wind through to the end, take the tape from the right hand side spool, swap it with the now empty tape on the left hand spool, rethread, and play again. The tape instantiates and occupies a space that does not so easily surrender or reduce to visibility. It is a soft, semi-imaginary space. The obvious disadvantage of tape, which is the same disadvantage as the scroll, partially overcome by the book and the gramophone record, and now (almost) fully overcome by the searchable electronic text, is that it locks one into the continuum of recorded sounds, making it hard to get from one part to another, except by going through the sequence once again, like someone trying to remember a line from the middle of a song. But this disadvantage is in fact a hidden opportunity; for the plasticity and mutability of tape means that it allows one to rework, to work against or across its given conditions, to overcome or outwit its resistances. The advantage of tape is precisely that it is pedagogical; it is a technic that teaches technique.

It is perhaps this tactile involvement with the intrigues of the tape that accounts for the fact that almost all sound editing software retains the virtual image of the

unrolling tape in its graphical form. In part, this has to do with the influence of film editing, which accustomed sound editors to the idea that editing was a matter fundamentally of the coordinating of two dimensions, the vertical one of cutting and splicing, and the horizontal one of the sound-stream. Behind both, surely, lies the visual grammar of the musical staff. In the early days of digital editing, sound editors found it very hard to let go of the physical process of editing and in a BBC editing studio only a few months ago, I saw an emulator in use that allowed editors working on digital files to continue to experience the feel of working on the larger scale of quarter-inch tape.

The materiality of the gramophone record allows one to cut, to skip, to retard, accelerate and reverse, but only as variations in an already predetermined form, in a record that has always already been cut. As many have observed, the importance of tape lies in the fact that it allows many more opportunities to interrupt, intervene in and to transform the signal as it is being formed. Record 'scratching' allows one to interfere with the reproduction of a recorded signal; tape editing allows one to start again and produce a new signal entirely. As N. Katherine Hayles observes, 'whereas the phonograph produced objects that could be consumed only in their manufactured form, magnetic tape allowed the consumer to be a producer as well' (Hayles 1999, 210). Whereas gramophone disks remained technologies of sound reproduction, tape became an instrument of production, changing the technologies and practices of recording in fundamental ways, which emphasised, not the faithful capture of sound, but its manipulation (Morton 2004, 142). One of the most important features of the tape recorder for post-war writers was surely the analogies it suggested with the typewriter. Here too, the operator needed to wind the material to be inscribed around a drum (a complex apparatus when making carbon copies). The inked tape unrolled similarly underneath the keys from a spool on the left to one on the right, and then back again. Once again, this suggested a medium that provided ongoing opportunities for intervention and transformation. One can compare gramophonic modification to medical treatment that works at the level of the body, through grafting, amputation and other forms of local therapy, and tape-recording to treatment at the level of the chromosome. The gramophone is revisionist; the tape-recorder is regenerative.

The other determining feature of the tape recorder is that it is reversible, and in a number of different senses. I do not mean by this simply that it allows one to hear things backwards, significant though this capacity is, for the phonograph also allows this. It is reversible in the sense that it allows both recording and playback. Of course, this was also true of the phonograph as opposed to the gramophone and the recording capacities of the phonograph and various other recording devices were not completely forgotten or swept away by the gramophone. But the tape-recorder does more than double the function of the phonograph. It also allows one to connect recording to playback and playback to recording in various ways, as well as simply alternating between them. If one imagines playback as the verso of the act of recording which is its recto, then the tape-recorder allowed the formation of something like a Moebius strip, in which recording and playback

could feed into bear upon each other. This metaphor is deployed by N. Katherine Hayles too, who sees tape as inviting us to see passive inscription and active incorporation 'not as static concepts but as mutating surfaces that transform into one another' (Hayles 1999, 220). The canonical demonstration of this is Alvin Lucier's *I Am Sitting In a Room*, in which a voice was recorded in a room, then the output tape of that recording was broadcast back into the room and rerecorded, this input then providing the output for a further recording, and so on, through dozens of iterations, in which playback and recording are simultaneous and indistinguishable. This arrangement is theoretically possible with a series of phonographs, of course, but is much easier to do with a tape-recorder. It was not long before tape recorders were available which allowed one to do this kind of rerecording on to the same tape, using the playback and recording heads of a single machine. The result was that a kind of reflexive self-relation becomes tightly wound up in the experience and meaning of the tape-recorder. The tape remains soft and 'live' in a sense that the groove of the record does not, the proof of this being that tape is vulnerable not just to damage (damageability is central to the understanding and experience of many forms of recording media), but also to deletion. The disk is a fossil record; the tape is much more like Freud's *Wunderblock*, susceptible at any point to modification and erasure. The disk lays sound out for manipulation and modification. Tape allows sound to turn back on, and in on itself. This could sometimes happen without human intervention. One of the most mysterious effects of old tapes was the phenomenon of 'print-through', caused by the fact that, when wound on top of one another, the magnetic patterns imprinted in one part of the tape could print themselves by induction on a neighbouring part of the tape. Normally this faint ghosting of the sound is buried by the principal signal, but it can become audible in blank passages of tape, causing a curious anticipation of the first second or so of a track before it actually begins. Tape embodies not just the stopping of time, but the spreading and thickening of the present moment.

Most importantly, tape seems to allow for real-time manipulations and transformations, folding together the real and the reel. There are many different variants of this. In the early 1950s, Francois Poullin invented a device known as a 'morphophone'. The morphophone played a loop of tape in a circle, in which were set an erasing head, a recording tape and ten playback heads, the positions of which could be adjusted, to allow different kinds of delays. Another technique devised by Brian Eno and Robert Fripp was called *Frippertronics*. This involves hooking up two tape recorders alongside each other; an input is recorded on the left hand machine, and the tape is fed to the right hand machine, which plays back the sound that has just been recorded, though with a few seconds' delay. This signal can then be fed back to the first tape-recorder, and replaced by or mixed with whatever new sound may be being played. Similar looping systems were used by artists such as Roy Harper and, most notably, John Martyn, though by now the tape had been replaced by the Echoplex echo delay unit. An entire language of reverberation and echo effects is owed to tape, and the history of reverberation remains deliciously to be written. What happens under these circumstances is not the simple, two-stage recording and retrieval of the

phonogram, but the rapid alternation of past, present and future, in a kind of eddy. Tape then becomes an image of time susceptible of being looped as well as lopped, knotted as well as pooled. If the gramophone disk is an impassioned surface, tape is an ideal, phantasmal fabric.

But the tape-recorder is reversible in a more radical sense still, namely that it allows things to be erased, and re-recorded. Gramophones can play sounds backwards, but cannot unsound them. They can allow you to go upstream in the continuum of sound, but not backwards from the stream of sound itself, into the state of the *tabula rasa*. If you play a gramophone disk backwards, you will have to do so in real, elapsing time. If you erase a tape, it will be as though time itself were being rewound. Paradoxically, it is this capacity of tape to be reused that means that so much post-war broadcasting was lost. If one had been able to reuse film in the same way, many more early works of cinema might similarly have been lost. 'Dubbing', a term that derives from post-production synchronisation of dialogue, is almost certainly derived from 'doubling', but the customary spelling suggests an association with rubbing, and rubbing out.

Indeed we might say that the awareness and possibility of loss is built into tape in a way that it is not in gramophone recording. This is precisely because of the capacity that tape offers of layering and alternating recording and playback, building up multitrack recordings. Of course the problem of decay certainly exists in gramophone recordings, and the best reproduction will still always be from a cutting that is as few generations as possible removed from the master disk. But the fact that rerecording in the case of the gramophone tends to be a matter of reproduction rather than of primary production means that the question of loss and decay are less of a constant issue than they are in magnetic recordings in which the mixing together of live and recorded elements are commonplace. The fact that magnetic tape allows one to do more editing at every stage means that the question of loss and degradation is also much more pressing. It also makes it possible for such effects to be exploited, as in Alvin Lucier's *I Am Sitting In A Room*. In such media, loss is more. In a melancholy play like Beckett's *Krapp's Last Tape*, the function of tape indeed seems to be to 'link us to our losses', in Philip Larkin's phrase (Larkin 1964, 40). Beckett discovers for himself this layering structure in *Krapp's Last Tape*, the early drafts of which indicate that his plan was to have Krapp simply listening to a series of separate instalments from different moments of his life. The play developed its distinctively nested or sprung structure when Beckett collapsed two tapes into one, with his thirty-nine year old self acting as an intermediary for the mid-twenties Krapp, whom we never hear directly (Gontarski 1977, 64).

The most distinctive feature of the tape recorder arises from the combination of its extreme plasticity and its corporeality. For William Burroughs, who used tape-recordings extensively in his early writings, the tape-recorder was not an image or facsimile of sound reality, it was continuous with it. Burroughs borrows from his friend Brion Gyson the view that writing is fifty years behind painting because 'the painter can touch and handle his medium and the writer cannot. The writer

does not know what words are' (Burroughs 1969, 12). The various 'cut-up' techniques which Burroughs devised, both with the use of tape-recorders and with the manipulation of printed text, were intended in part to give the writer a kind of plastic, elastic contact with his medium: 'These techniques can show the writer what words are and put him in tactile communication with his medium' said Burroughs (Burroughs 1969, 12)

Burroughs believed that the link between tape-recorded sounds and ideas and real sound and ideas was so tight that cut-ups could have a kind of prophetic power, through revealing splices and faultlines in the fabric of reality that would ordinarily be concealed or forgotten. Burroughs gives as an example of this a cut-up he made from a text by John Paul Getty which produced the sentence 'It's a bad thing to sue your own father'. Three years later, Getty indeed found himself being sued by his son. 'Perhaps events are pre-written and pre-recorded and when you cut word lines the future leaks out', commented Burroughs (Burroughs 1969, 13). The magical thinking here involves a familiar reversibility of the relation between reality and representation. When the recording seems so tightly bound to and even cosubstantial with the reality which seems spontaneously to give rise to it, it can appear that the recording can reciprocally give rise to, or revise a reality. This reversibility seems to be a mirror of, and to be mirrored in, the reversibility of tape.

Burroughs's use of tape exploits the two sides of the editing process, which are the same as the two alchemical principles of *solve et coagula*, disjoining and joining, cutting and pasting. Burroughs developed a weird and frankly rather wearisome political psychophysics, according to which all human beings were programmed by external messages. Burroughs sees language itself as a kind of tape system, meaning that thinking itself is a kind of playback, or perhaps even a simultaneous recording and playback. Burroughs is not the only person to have borrowed from the tape-recorder to understand mental functioning. Recent work suggests that these kind of hallucinations may have their origin in some kind of distortion in the perception of time, for which the tape recorder has sometimes provided an apt analogy. A recent review of work on *déjà vu* suggests (while warning that this is just an analogy, which seems to have no anatomical basis), that 'If the brain's memory system is like a tape recorder, it is as if the recording head has got muddled with the playback head' (Phillips 2009, 28). Other work suggests that ordinary temporal apprehension may involve the synchronisation of several time-tracks; schizophrenics tend to display poor coordination of time events, leading to the suggestion that sensations of being controlled by external forces may actually derive from a failure of neurological synchronisation that leads to somebody experiencing the evidence or 'playback' of one's own actions before the sensation of having initiated or 'recorded' them, rather than vice versa (Fox 2009, 36).

For Burroughs, there is no simple way to eject or escape from this apparatus, but it is possible to reprogramme it. The cuts and displacements that Burroughs introduces are aimed at jamming the system, freeing programmed subjects from

their sense of having been preprogrammed. Rather than attempting to remove the tape, the tape is cut, ravelled and sabotaged. This is one side of what tape manipulation can bring about.

The other side is the creation of new kinds of continuities, especially through sexual couplings. Burroughs's work plays with the idea of splitting people down the middle and resuturing them, either with themselves, or with each other. With its interchange between left and right reels, the tape-recorder provides a suggestive image of this process:

Small microphones were attached to the two sides of his body the sounds recorded on two tape recorders – He heard the beating of his heart, the gurgle of shifting secretions and food, the rattle of breath and scratches of throat gristle – crystal bubbles in the sinus chambers magnified from the recorders. – The attendant ran the tape from one recorder onto the other to produce the sound of feedback between the two body halves – a rhythmic twang – soft hammer of heartbeats pounding along the divide line of his body (Burroughs 1968, 72)

An even more suggestive rhyme may be that between the two hemispheres of the brain and the two spools of the tape recorder. In fact, the relation between the right and left brains has often been understood in terms, not only of the circulation of recording and playback functions, but also of the difference between two different kinds of recording, namely the analogue and the digital:

The right hemisphere encodes data according to its total configurational similarity to other available gestalts, whereas the left hemisphere encodes stimulus configurations according to verbal codes and categories. Human hemispheric specialization is not unlike the difference between magnetic analogue tape recording and digital tape recording. The left hemisphere works like a digital audio recorder, using words as the medium for an encoding-decoding process, with words functioning as the “digital” units of meaning, much as the digital audio recorder breaks the complex acoustic waveform down into pieces that can then be encoded into numbers. The right hemisphere works more like an analogue recorder, which records a magnetic analogue of the whole acoustic waveform. (Watt 1990, 493)

Another metaphor that Burroughs frequently employs to express the invasive capacity of tapes is the tapeworm, which literally takes up residence in the human body, coiling itself through the intestines and sharing its nutrition. In the end, the tapeworm comes to double the shape of the human body itself, the auditory channel a precise rhyme for the alimentary canal.



There are striking differences between the different uses of tape made by Burroughs and Beckett. Though Burroughs met and admired Beckett, he seems not to have alluded to Beckett's use of tape in Krapp's Last Tape. But the two writers have in common a sensitivity to the powers of tape to induce bodily hallucinations. Krapp's tape-erotics are of a rather less magical kind than those of Burroughs, though the movement of the tape back and forth is a kind of mechanical masturbation for him (Beckett noted in his production notebook 'Tape-recorder companion of his solitude. Masturbatory agent' (Beckett 1992, 181). As Krapp winds back and forth, coming up short, overshooting, circling back, the tape is violently shuttled back and forth, in a sort of chronic, clonic frottage. This onanistic association is highlighted by a change that Beckett made in 1969 when directing the play in German in the Schiller-Theater in Berlin. Where the published text has Krapp say of his recent concourse with Fanny, the obliging 'bony old ghost of a whore' that it was 'better than a kick in the crutch' (Beckett 1986, 222), Beckett substituted 'etwas besser als zwischen Daumen und Zeigefinger' (Beckett 1970b, 98). A similar change was introduced in the French production Beckett directed in the following year, 'mais sans doute mieux qu'un coup de pied dans l'entre-jambes' becoming 'mais quand même un peu mieux qu'entre pouce et index' (Beckett 1992, 36), while Beckett substituted 'better than the thumb and forefinger' in the English production he directed in Berlin in 1977 (Beckett 1992, 36). Beckett enjoins a particular attention to the work of hands and fingers in manipulating the tape and tape-recorder, making it clear, for example, when winding forwards and backwards is to be done mechanically, and when it is to be done manually, with a single, dialling finger in the spool. The shimmying back and forth of revelation and concealment, of fort and da, is intensified by the bipolar structure of the tape-recorder, which may make manifest the association that Lynda Nead notices in the word 'strip', which 'refers both to the first ribbons of perforated film and to the ritual performance of staged nudity' (Nead 2007, 186). Beckett specifies in his directing of the play that Krapp is to keep hold of the play and wind buttons as he listens to the lake-episode, this making the tape-recorder correspond to the imagined body of the woman. The erotic relation between the tape and the body is also brought to the fore in the pun in the title of the French version of the play, *La dernière bande*; since *bander* is to get an erection, then the last tape is also the last stiffy. (I remember once remarking to Christopher Ricks that this was a rare example of Beckett enriching rather than inhibiting comic possibilities in translating from English to French; Ricks thought for a moment, and then said, 'Oh I don't know – Krapp's Last Tape – Custer's Last Stand?'). However, the tape-recorder in Krapp's Last Tape (and which one, by the way, is his last tape?) also has something of the metamorphic quality of Burroughs's soft machine, for Beckett indicated that it should also at times be identified with the earlier selves whose voices speak through it.

But Krapp's movements also seem to relay those of the tape-recorder. These involve repeated turns and returns, like the pacing and wheeling up and down of the woman in *Footfalls*, as she 'revolves it all' (Beckett 1986, ). Krapp listens to his younger self describe how he likes to get up and move about in the dark, in order to return to the sanctuary of his lighted desk (Beckett 1986, 217), the rotary

motion being emphasised in the French text: 'J'aime à me lever pour y aller faire un tour, puis revenir ici à ... (il hésite) ... moi' (Beckett 1977, 15) Beckett introduced a number of turning movements to look backwards over his left shoulder into the dark (where, he said, rather stagily, death was lurking for Krapp), and, in the Schiller-Theater production attempted to formalise the alternation between these anti-clockwise movements and the rest of Krapp's movements about the stage, which he wanted always elsewhere to be clockwise. On a page headed 'CIRCULATION', Beckett's production notebook contains rotary diagrams of Krapp's movements' and the note 'Principe: K. ne tourne pas à gauche' (Beckett 1992, 171). Some of the sentimentality of the episode in the punt is diffused if one attends to the rhymes between the movements of the lovers and the oscillations of the tape:

We drifted in among the flags and stuck. The way they went down, sighing, before the stem! [Pause.] I lay down across her with my face in her breasts and my hand on her. We lay there without moving. But under us all moved, and moved us, gently, up and down, and from side to side. (Beckett 1986, 221)

Just as Krapp lingers on the word 'spool', the word being a veritable ideogram of the tape-recorder itself, so the lovers here seem to be becalmed in a kind of pool (the palindrome of loop). Krapp loops a phrase from this into his own recorded discourse, 'Lie down across her', just before breaking off his recording and returning to listening. The French is a little more suggestive: 'Coule-toi sur elle' (Beckett 1977, 31). Couler is to flow, slide, slip or glide, while couloir is to strain or separate, as the younger Krapp imagines himself 'separating the grain from the husks' (Beckett 1986, 217), and the younger Krapp looks back 'vers l'année écoulée' (Beckett 1977, 19) – the word 'crap' originally meant chaff, husks or offscourings. This contrasts with the Sturm und Drang of the 'wind-gauge spinning like a propeller' (Beckett 1986, 220) in the younger Krapp's recounting of his spiritual vision. In successive productions of Krapp's Last Tape with which he was involved, Beckett saw more and more opportunities to deepen the relationship between Krapp and his apparatus. He is reported to have been particularly pleased by the effect of the turning spool reflecting light on to the face of the listening Krapp during the final moments of the play, an image which may ironically recall the whirling wind-gauge of Krapp's vision, which, by the end of the play, seems to matter so much less than the love he has set aside for his art.

In a sense the tape recorder is simply the inversion of the gramophone, in that here, rather than the tracking device moving through the track of the sound, the track moves across the tracking device (the tape-head). But much more seems to be in play in this process. The sliding of the tape is a kind of decantation, with each passing inch a diminishment of the supply tape and an equivalent accumulation on the receiving spool. At the end of the play, as Krapp listens to his younger self arrogantly celebrating his freedom from his past, the tape runs on, and then, inevitably, exhausts the supply spool, suggesting the pouring out of some emblematic vessel. The mixture of panic and pathos induced by the sight of

a spinning tape reel disconnected from its partner is evoked by Christian Marclay's *Tape Fall*, in which tape spills out from a single-reel tape-recorder mounted on top of a step-ladder, playing the sound of falling water, as the tape gathers in a beautiful tangled heap below it. Readers of Krapp's *Last Tape* have often sought to connect it to Beckett's discussions of time in *Proust*, the first book he published, in 1931, and it is as though Beckett had anticipated in that book an apparatus like the tape-recorder, when he speaks of the self subjected to time as 'the seat of a constant process of decantation, decantation from the vessel containing the fluid of future time, sluggish, pale and monochrome, to the vessel containing the fluid of past time, agitated and multicoloured by the phenomena of its hours' (Beckett 1970a, 15)

I proposed earlier that, if the gramophone disk suggests the plate, placard or surface of inscription, the tape connects sound recording much more to the many processes of weaving. The word 'spool', which Krapp so relishes (the French *bobine* is a bit harder to draw out with such lasciviousness) originally referred, like 'bobbin', to spinning and weaving, processes which have been bound symbolically to the unfolding of time. The other word on which Krapp dwells, the puzzling 'viduity', which he hears his self of thirty years earlier use, but has now forgotten the meaning of, is threaded through with some of these issues. 'Viduity', Krapp discovers on consulting his dictionary, is the 'State – or condition – of being – or remaining – a widow – or widower' (Beckett 1986, 219). Beckett is at pains to remind us of the association between widows and weaving, having Krapp refer to a non-existent quotation 'deep weeds of viduity', which improves the 'deep weeds of widowhood' he would have found as an illustrative quotation from Bulwer-Lytton's *Lucretia* (1846) in the OED, and also having him come upon a reference to the 'vidua-bird', also known as the 'widow-bird' or 'weaver-bird'. The arachnid associations of widowhood and weaving are unspoken but operative. Viduity, from *viduare*, meaning to deprive, means the opposite of undividedness or individuality. Itself bereft of its familiar prefix, 'viduity' seems to mime the condition of bereavement it signifies. So the play seems simultaneously to activate weaving and cutting, splicing and slicing.

The patterning of the action of the play also doubles the operations of the tape, with its alternations of continuity and discontinuity. Krapp not only violently chops into the body of the tape that he listens to, he also constantly interrupts his own thoughts, words and actions, to fetch bananas, to brood, or to shamle to his cubbyhole for restorative snifters. The sequencing of his actions also exhibits some of the temporal loopings and alternation of before and after that the tape-recorder effects. Krapp prepares for his annual retrospect by listening to an earlier retrospect, and what he hears in that retrospect is that his earlier self has adopted precisely the same tactic of *reculer pour mieux sauter*. As in his frantic and furious efforts to find the right place on the tape, Krapp rewinds in order to be able to make his play.

In fact, winding features at intervals in Beckett's writing. There is, for example, 'St-Lô', the lovely but cryptic little poem Beckett wrote about the hospital amid

the devastation of Northern France where he worked after the war. 'Vire' is the name of the river that runs through St-Lô:

Vire will wind in other shadows  
 unborn through the bright ways tremble  
 and the old mind ghost-forsaken  
 sink into its havoc

There is also the winding that features in the cover blurb (Beckett's) to *Lessness*, the only text in which Beckett ever approached anything like the aleatory methods of the Burroughs cut-up. 'Ruin, exposure, wilderness, mindlessness, past and future denied and affirmed, are the categories, formally distinguishable, through which the writing winds, first in one disorder, then in another' (quoted Knowlson 1996, 564).

Perhaps the most important kind of reversibility attaching to tape in the play is that of sense and the senseless. I have already noted the relation between the remarks about grain and chaff and Krapp's own name. Beckett seems here to play on the possibility, noted by many, that sound-recording processes can preserve very much more than what appears to have been said. Beckett plays between silence – passages in which nothing is said, or no sound is made – and recorded silence, the one being an absence of sound, the other the presence of silence, in a little gag at the beginning of Krapp's chronicle:

Thank God that's all done with anyway. [Pause.] The eyes she had!  
 [Broods, realizes he is recording silence, switches off, broods.  
 Finally.] Everything there, everything, all the – [Realizes this is not  
 being recorded, switches on.] Everything there, everything on this  
 old muckball, all the light and dark and famine and feasting of ...  
 [hesitates] ... the ages! [In a shout.] Yes! [Pause.] Let that go! Jesus!  
 Take his mind off his homework! (Beckett 1986, 222)

Krapp seems to mean here, how could his earlier self have let go everything for the sake of his art ('ses chères études' in the French, Beckett 1977, 28). The French text seems once again to have seen an opportunity to link retrieval and letting go to the process of the tape, for "Let that go!" is rendered as 'Laisser filer ça!' Filer means to slide or drift away, *le temps file* being a perfectly familiar way of saying 'time flies, or slips away', but its primary reference is to processes of spinning, drawing or paying out of some thread, rope or cable. Younger Krapp has let everything go, in favour of his vision of the friendly powers of darkness, which he records 'against the day when my work will be done and perhaps no place left in my memory, warm or cold, for the miracle that ... [hesitates] ... for the fire that set it alight' (Beckett 1986, 220). There is indeed no place in Krapp's memory for this; instead, what he wants are the tiny remaining traces of what younger Krapp has discarded. The tape records both the grain and the detritus, and by preserving both, allows for the bitter inversion of one into the other. Iron (magnetised particles of ferric oxide) enables irony. Beckett dramatises this first

by having Krapp record his own brooding silence, and then by having him enunciate unrecorded.

The play between sound and silence, intelligibility and unintelligibility, meaning and meaninglessness, all variants in signal-to-noise ratio, is also embodied in a particular feature of the tape recorder that Beckett capitalised upon in his Schiller-Theater production. Beckett noticed that, when fast-forwarded or fast-reversed, a high-pitched gabble could be heard (this was a common feature of early tape recorders, which tended to be removed from later models, though it was actually very useful as a navigational device). The published versions of Krapp's Last Tape make no mention of this feature, but Beckett specifies very clearly in the revised stage-directions he produced for the Schiller-Theatre production when he does and does not wish the winding to be 'mechanical with gabble' (Beckett 1992, 32). What is more, he even provides equivalents for this in Krapp's own actions. Krapp's isle, like Caliban's, is full of noises – grunts, growls, sighs, gasps, howls. In his notebook Beckett wrote 'Toutes manipulations magnétophone, recherches d'endroits registre et dictionnaire, peuvent accompagner de petits bruits de bouche (sopurs, colère, impatience)' – 'All manipulations, of tape-recorder, searches for the place in the ledger or dictionary, may be accompanied by little noises of the mouth (sighs, anger, impatience)' (Beckett 1992, 99; my translation). Indeed, for Krapp's searching through the dictionary for a definition of the word 'viduity', which the lapse of years has orphaned of intelligibility, Beckett actually provided a few words of subvocal scanning for the French and German productions with which he was involved: 'vice-président, vicieux, vidange' (vice-president, vicious, draining-away) for the French (Beckett 1992, 29) and, for the German, 'Wickel, Wiesel, Wischwasch' (roll, weasel, drivel) (Beckett 1992, 225). Tape not only includes words and gabble, silence and speech, it also makes it possible to wind them into each other. Beckett noted that his entire play formed a balance between speech and silence: 'With the silence of the listening phase these form a balance in terms of sound with the duo immobility-agitation' (Beckett 1992, 101). He even went to the trouble of timing the periods of immobile listening, and mobile non-listening on the part of Krapp, noting with satisfaction that the play broke down into '2 fairly equal parts – listening and non-listening' (Beckett 1992, 201). This economy involves a physical interchange between Krapp and the tape-recorder, as between the two spools of the tape-recorder itself; when it is moving, he is motionless; when it is still, he is in motion and audible.

Michel Serres has recently offered a reading of narrative and history in terms of the irreducible relation between code and information. Any instance of information requires the existence of some channel or medium, which Serres identifies with the principle of repeatability itself. Serres notes that this relation involves the mixing together of the principles of the continuous and the discontinuous. On the one hand, there is the repeatable, of the flow that remains itself through every change; on the other hand, there is the sudden, and entirely unprecedented event of a change that comes from nowhere. The words 'tension', and the family of words with which it is associated, has this ambivalence at its

heart: 'the Greek roots of this word *teinô*, which means to be stretched, to be drawn out continuously, as in the long flow of a paste or a fluid, contradicts the other possible root, *temnô*, which means to cut into tiny, quasi-atomic pieces' (Serres 2006, 135).

The development of the tape recorder required a material that can maintain a balance between these two principles: some materials were too stretchy, others, like metal, resisted stretching, but had a tendency to snap (the first tape recorder used by the BBC in 1932, which used metal tape with razor-sharp edges, had to be operated in a locked room, since the risk of snapping, along with the fact that the tape had to travel at 90 metres a minute to ensure adequate sound quality, made playback too dangerous for bystanders. The tape recorder only became a feasible proposition with the development of a material that balanced brittleness and elasticity. But Serres's structure applies at another level too, for it seems to encode the cooperation between code and information: 'continuous extension can act as the canal and the granular sections...give information' (Serres 2006, 135).

We have seen that, in both Burroughs and Beckett, tape and its apparatus involve fantasies of male and female coupling. This code-information coupling is also regularly sexualised. For Serres, the principle of redundancy is that of the creative Logos, while information arrives with the first, bifurcating disobedience of Eve. Burroughs too makes the identification between woman and error or aberration. Asked how he felt about women, Burroughs replied 'In the words of one of the great misogynists, plain Mr Jones, in Conrad's *Victory*: "Women are a perfect curse." I think they were a basic mistake, and the whole dualistic universe evolved from this error. Women are no longer essential to reproduction' (Burroughs and Odier 1969, 113). But I think that woman actually functions in a more systematic way for Burroughs as the redundancy of repetition. In a sense, woman is the matrix, the channel, the tape-apparatus, insofar as this is devised to make dissent and discontinuity impossible, by ensuring that everything is programmed, prerecorded. Or rather, perhaps, woman means the irreducibility of the dualism, whereby every discontinuity requires there to be a continuity, every signal requires a channel, every message emerges from a background. Woman means the necessity of this coupling; she is the looped tape. It is quite the contrary of Burroughs's view, for she is what is required for every reproduction. Against this, Burroughs will assert and in his work attempt to enact the life of a thousand cuts, of a kind of pure discontinuity, atomising, granulating, never falling back into repetition.

We might link this impulse to what W.R. Bion called the attack on linking (Bion 1984, 93-109), which might be said in informational terms to resolve into an attack on the idea of a background against which any two things might seem relatable or become commensurable – Bion describes in the essay the sleep of a schizophrenic, in which 'his mind, minutely fragmented, flowed out in a attacking stream of particles', and his dreams, which were 'a continuum of minute, invisible fragments' (Bion 1984, 98). Burroughs' struggle is against indifference, numbness, regularity – hence the importance of in his writing of spasmodic

movements, like vomiting or ejaculation, or explosion. The apparatus of control and anticipation that the tape represents is atomised and exploded, but so relentlessly that the paroxysms start to be patterned, to form a new kind of redundancy, against which more, and more violently spasmodic, struggles will always be needed. Burroughs thus strives, not only to assert discontinuity against continuity, but also to vaporise the link between continuity and discontinuity. *Solve et coagula*: the tape becomes the carrier-wave for its own dissolution, which feeds back into itself, to form a coagulation that is made of dissolutions. The discontinuous becomes continuous, such that the writing approaches the condition of a tape recorded on to itself over and over again: pure, unrelieved information coagulating into a stiff sludge of noise.

Beckett too reads the encounter between Krapp and his tapes in sexualised terms. But, where Burroughs struggles against the duality of continuity/discontinuity, Krapp, for all his misogyny, encounters what Beckett in his production notebook calls 'das Weibliche' (Beckett 1992, 97), an allusion to the 'Ewigweibliche' referred to in Goethe's *Faust*, as Beckett confirmed to Martha Fehsenfeld. This is part of an alternation through the play of continuity and interruption, moments when Krapp surrenders himself to listening and moments when he breaks off from that listening (sometimes combining the two, as when Krapp switches off in order to lose himself in reverie). In the end, Beckett's Krapp has no choice but to inhabit the predicament which Burroughs struggles to cancel or evade. Krapp sits in silence and darkness, drowned in dreams of the lake episode he has just played through again, not listening to the confident affirmation of his younger self of discontinuity: 'Perhaps my best years are gone. But I wouldn't want them back. Not with the fire in me now. No, I wouldn't want them back' (Beckett 1986, 223). Discontinuity interrupts continuity; continuity interrupts discontinuity; the young man who declares himself in his opening words to be 'sound as a – ' is interrupted by Krapp scattering his pile of tapes to the floor before his phrase – 'sound as a bell' – is completed (Beckett 1986, 217). The joke seems even better to me in the French, in which the younger Krapp is interrupted in saying that he is 'solide comme un pont' (Beckett 1977, 13-14), a phrase which looks forward to his vision 'at the end of the jetty' (Krapp 1986, 220). The tape provides Krapp with a bridge to his lost past which he can nevertheless never cross. The play ends with Krapp sitting in silence, and the audience listening to the empty tape running on – until, presumably, it runs off its reel, cutting through the thread of continuity, and the liberated spool starts its blind, fluttering freewheel. As he himself revolves it all, wound up in internal playback, Krapp's last tape, and Krapp's Last Tape, is played out.

Tape brings together the continuous and the discontinuous; more, it disallows the discontinuity between the continuous and the discontinuous. For that reason, it is the medium that most seems to embody the predicament of temporal embodiment – by linking us to our losses, making it possible for us to recall what we can no longer remember, keeping us in touch with what nevertheless remains out of reach, making us remain what we no longer are. It extends and attenuates us, distributing us through the time, or times, that we are, without ever being able

to have it. In this sense, tape might also seem to provide an allegory for its own broken, looped temporality, being, as it must be henceforth, at once all over and still somehow going on. And, as Beckett's Molloy wonders, what tense is there for that?

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