

The birth of technology from the spirit of alchemy

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This essay briefly examines Simondon's use of, and reference to, alchemy in his articulation[s] of technicity, underscoring the interesting interrelations between the latter and the problem[s] this might pose for straightforward and straightforwardly modern interpretation[s].

(Prefatory) Foreword:

When I first saw Scott and Tom's call for this Special Issue of *Platform* devoted to "Situating Simondon", I forwarded it to some potentially interested scholars, posted the link up on *Twitter*, and sent them a digital thumbs-up, adding at the end of that minuscule missive a brief note on my part, noting that their call for papers' guiding questions ("How might we situate the theories of Simondon within our contemporary media environment? Are they still relevant? Or are they too reliant upon outmoded principles and theoretical models? What lessons, both theoretical and practical, might researchers in the fields of communication and media studies take from Simondon's philosophy? How might we extend or update his work for the digital, networked society?") are the same questions that have been asked of alchemy since the advent of modern chemistry, and that a rather unknown dimension of Simondon's work – unknown to the *anglophone world* at the very least – is precisely the latter's interest in, and references to, this ancient theory of transduction and transmutation. They replied with a very nice thank-you and asked if I might be able to contribute something on the topic of Simondon's interest in alchemy and its relation to contemporary media technology. Then (as a true sign of true editor excellence) they kindly reminded me of this much much later: a reminder which prompted me to write-up and send-off what follows – an admittedly rather cursory essay on "The Birth of Technology from the Spirit of Alchemy" (apologies in advance for its accursedly cursory nature).

In "The Birth of Technology" (1970),¹ Simondon argues that "scientific spirit" (the *lógos*, as such, of *technè*) developed in the West as a result of the meeting and mingling of Eastern, Near-Eastern, or Egyptian technics on the one hand and the [principally Greek] contemplative and theoretical sciences on the other (Alexandria – with its Ptolemaic *Pharos*² – was an exemplary hub of this confluence between the technical and the theoretical).³ Since it deals for the most part with what the ancient Egyptians called *al-khem* (the Arabic *al-khimiya*, the Latin *alkimia*, the French *alchimie* and the English *alchemy*, originally designating a fertile as opposed to a desert milieu: the generative "black earth" of *al-khem* as opposed to the deleterious "red earth" of *al-deshret*), "The Birth of Technology" could just as easily have been called "The Birth of Technology from the Spirit of Alchemy" (the title of the present essay).⁴

¹ Gilbert Simondon, "La Naissance de la Technologie" in Gilbert Simondon, *Sur la Technique (1953-1983)*, Paris: Presses Universitaires de France, 2014: 120-178 – henceforth *Technique*.

² Alexandria's towering light-house: one of the seven technical marvels or "wonders of the world" in the time-period of classical antiquity (cf. http://en.wikipedia.org/wiki/Pharos_of_Alexandria).

³ "L'esprit technologique s'est développé en Occident à partir de la rencontre des techniques orientales, proche-orientales, ou égyptiennes, et de la science contemplative et théorique principalement grecque. Alexandrie a été un lieu exceptionnel de confluence entre théorie et technique"; *Technique* 131.

⁴ A similar statement will be made below (that is, further on in this essay) comparing and conjoining D tienne and Vernant's *Ruses de l'Intelligence* with M nard and Miquel's *Ruses de la Technique* ("the title of D tienne and Vernant's study could just as easily have been that of the study by M nard and Miquel"). Such titular repetitions and replications – indeed "repetitions and replications" in general, specifically in this essay* – bring us by a commodius vicus of recirculation to an ancient alchemical principle (that of the *ouroboros*) acknowledged in *footnote 51* below.

*["specifically" and "in general"] ... An ouroboric excerpt from further in this short submission (as below, then, so above): "The reader of the present essay might at present note and notice the ouroboric operation at work in this paper: it recycles itself (returning, for instance, to the *detour*, the *aporía*, the *hydra*, et cetera) in the manner of that mythical monster to which Simondon himself refers in "The Birth of Technology".

Prior to the separation of science and technics or of technical and theoretical knowledge, alchemy was exemplary of their “unitary enthusiasm” explains Simondon – an “*enthousiasme unitaire*” that was torn asunder with the rise of those separate sciences which were the offspring of alchemical inquiry – namely *metallurgy*, *iatrochemistry*, and (later) *biology*.⁵ “*L’alchimie postule l’unité des sciences et des techniques [...] [et] l’unité des sciences les unes par rapport aux autres,*” states Simondon: alchemy postulates the unity of science and technics, and the unity of the sciences with respect to each other⁶ (*viz.* their inter-related undertakings and inter-communicative correlation[s]). This is one of the great appeals of alchemy for Simondon and for his theory of techno-individuation – one that Isabelle Stengers takes up in a conference paper she presented at the University of Saint-Étienne on “How to Inherit from Simondon”.⁸

“The generalization of the notions of *germ* [and *germination*], of *metastability* and *energetic tension*,” or of *transduction* and *transformation*, “allows the mobilization [in Simondon’s work] of an ancient aesthetic associated with alchemy,” explains Stengers.⁹ “Alchemy plays an important role in Simondon’s thought” – a thought that “mimes the alchemical treatises on transmutation” and shares with them “the conviction that the material *opus* which Simondon describes in terms of ‘objective’ individuation has a counterpart in and for the [individual and individuating] alchemist: namely, the spiritual *opus* which Simondon describes in terms of ‘subjective’ individuation” (this according to Daniel Colson in a paper presented at the very same conference as that of Stengers).¹⁰ The intensive interrelation *et opus opificis* – of the *operator* and the *operation*, “*spiritualis et materialis*” – in any and every alchemicotechnical undertaking was also the key critical consideration of Giuseppe Del Re’s essay on “Technology and the Spirit of Alchemy” (published in *Hylè: International Journal for the Philosophy of Chemistry*¹¹ and in modified form as the tenth chapter re: “Alchemy and Technology” of his monograph on *The Cosmic Dance*).¹²

Del Re concludes his essay on “Alchemy and Technology” with a statement the spirit of which is also (beyond the bounds of its alchemical analysis) altogether Simondonian and indeed (in addition) Stieglerian:¹³ “those who develop technology without even a trace of the spirit of alchemy, i.e. without a parallel upgrading of their spiritual standards – particularly their sense of responsibility – may be contributing to the devastating ills of society [...] which no vaccine can prevent”.¹⁴ “The main spiritual philosophy of alchemy,” he explains, “placed the search for the secrets of nature in the context of a path toward elevation beyond [individual or collective] ambitions and lust for power”;¹⁵ “as a condition for

⁵ *Technique* 135.

⁶ *Technique* 135.

⁷ “Comme l’instauration de la mécanique suppose le transfert d’efficacité d’un outil à un autre outil, l’alchimie suppose le transfert d’efficacité d’un règne à un autre”; *Technique* 135. Just as the inception of *mechanicity* (*viz.* “the mechanical”) involves the transfer of efficacy from one *tool* to another, the inception of *alchemy* (*viz.* “the alchemical”) involves the transfer of efficacy from one *kingdom* – one *field, domain* or *regime* – to another.

⁸ Isabelle Stengers, “Comment Hériter de Simondon” in *Gilbert Simondon: Une Pensée Opérative* (ed. Jacques Roux), Saint-Étienne: Publications de l’Université de Saint-Étienne, 2002: 300-324; henceforth Stengers.

⁹ “La généralisation des notions de germe [et de germination], de métastabilité et de tension énergétique” – “la généralisation transductive, [en somme]” – “permet de mobiliser une esthétique ancienne, associée notamment avec l’alchimie”; Stengers 309.

¹⁰ Daniel Colson, “Crise Collective et Désaisissement Subjectif” in *Gilbert Simondon: Une Pensée Opérative* (ed. Jacques Roux), Saint-Étienne: Publications de l’Université de Saint-Étienne, 2002: 156-161 – henceforth Colson.

¹¹ Giuseppe Del Re, “Technology and the Spirit of Alchemy” in *Hylè: International Journal for the Philosophy of Chemistry* Vol. III, 1997: 50-64; “Alchemy and Technology: From Wisdom to Know-How” in *The Cosmic Dance: Science Discovers the Harmony of the Universe*, Philadelphia: Templeton Foundation Press, 2000: 246-274. Henceforth “Technology and the Spirit of Alchemy”; “Alchemy and Technology”.

¹² “In general, all practical operations have this dependence on the experimenter’s [...] attitude,” he explains (“Alchemy and Technology” 271). “If we consider technology developed in view of applications, then the role of the virtue of the operator is even more important” (*ibid.*).

¹³ See *footnote 70* below, re: Stiegler.

¹⁴ “Alchemy and Technology” 271-272.

¹⁵ “Alchemy and Technology” 260: “that view of man, that respect for nature, that sense of responsibility, which would prevent [technicians and technocrats] from giving priority to their whims, power and glory” (272).

making matter proceed toward its ultimate perfection, *the operator* [in any and every alchemical undertaking] should tread the same path [as *the matter* s/he is modifying and manipulating].¹⁶

Daniel Colson's observation with respect to the alchemical dimension of Simondon's thought – that “the material *opus*” and “the spiritual *opus*” are consistently correlated and trans-individuated in it – leads him to observe furthermore that “once one has recognized it” one can discern “constant reference to alchemy” (“discrete” but *ongoing* and “fundamental”) throughout Simondon's work.¹⁷ “Without this reference to alchemy,” he maintains, “one would miss the aim of [Simondon's] project, which is to interlink and to foster intercommunication between the spontaneous geneses of nature on the one hand and of the artificial geneses of technics on the other”.¹⁸

The spontaneous and the technical, the natural and the artificial, are in alchemy “analogous” one with the other (and here one might recall the very last pages on *L'Individuation à la Lumière des Notions de Forme et d'Information*, where Simondon underscores the fundamental importance of analogy for the purposes of his allagmatic theory¹⁹). “This analogy present in Simondon's thought is the bridge that unites the study of individuation and that of the concretization of the technical object,” explains Colson.²⁰ “One often forgets,” Stengers reminds us, “that it is alchemy – haunted by the relations between the becomings of the living and those of [inanimate] matter – that has bequeathed to us a rich vocabulary associating mutations ‘material’ and ‘spiritual’ [...], [e.g.] a spirit ‘matures’; ambition ‘corrupts’; irony is ‘corrosive’; ideas ‘germinate’, ‘precipitate’, [...] ‘crystallize’”.²¹

Alchemy thus conceptually conjoins and technically entwines what would otherwise be distinguished as the “natural” and the “artificial” – and, more radically still (i.e. more *transgressively* or *transgressively transductive*), the “living” and the “dead”; in this sense, as I have written elsewhere,²² it operates along lines that can be characterized in [technically transgressive] terms of “the Simondonian *análogos*, the Deleuzian *antilógos*, [...] [and] the Nietzschean *phúsiológos*” all-at-once.²³

¹⁶ “Alchemy and Technology” 267: “the history of alchemy suggests that the practical operations of science and technology require a total personal involvement of the operator – indeed are parallel to the progress of the operator in the renunciation of his or her ego in favor of nobler ideals” 270).

¹⁷ “Lorsqu'on l'a reconnue, la référence constante” – “discrète mais fondamentale” – “à l'alchimie contribue à la richesse de son œuvre”; Colson 156.

¹⁸ “Sans référence à l'alchimie, on manque la finalité du projet qui est de relier et de faire communiquer les genèses spontanées de la nature et les genèses artificielles de la technique”; Colson 157.

¹⁹ Gilbert Simondon, “Théorie de l'Acte Analogique” in Gilbert Simondon, *L'Individuation à la Lumière des Notions de Forme et d'Information*, Grenoble: Jérôme Millon, 2005: 562-566.

²⁰ “Cette analogie présente dans la pensée de Simondon est le pont qui relie l'étude de l'individuation et celle de la concrétisation de l'objet technique”; Colson 157.

²¹ Stengers 309. Both Stengers and Colson conduct us to that section of *L'Individuation à la Lumière des Notions de Forme et d'Information* where Simondon refers to the “corruption” *qua* “decomposition” of alchemical *melanosis* (the *nigredo*, *nigrefactio*, or *nescioquid* of *liquefactio*) from whence new forms can arise by the light of *leukosis* (the *albedo* or *albefactio* of the alchemical *quid novum*) as platforms* for further transformation and innovation – this by way of *iosis* or *eurythrosis*, which in Simondon's text is the *cauda pavonis*: the tell-tale “end”, ever new and renewed, of alchemy's *magnum opus* (*L'Individuation* 551). In this process, writes Simondon at the end of his treatise (*ibid.*), “Jung discovers [...] a translation for the operation of individuation” – as so does he, Gilbert S., *n'est-ce pas* (a point emphasized by both Colson and Stengers, as well as by in *La Philosophie de Simondon*, Paris: Librairie Philosophique J. Vrin, 2003: 110-115, where he characterizes Simondon's work as an actual alchemical undertaking in itself, a work that “dissolves” and that “calcinate” its object of study ... “Il dissout, il calcine. Il pratique une ‘œuvre au noir’ sur la philosophie et sur un objet de la philosophie: l'individu” ... it dissolves, it calcinate, it puts into practice an alchemical *melanosis* – the blackening or decomposition – that leads to the *cauda pavonis* – the many-coloured tell-tale “end” *qua* brilliant “peacock's tail” – of [his] philosophical analysis; Chabot 111).

*(footnoted wink here to *Platform: Journal of Media and Communication*)

²² See for instance “YOU, the U-Bomb, or YOU-bomb goes Kabloom: An Essay on Anonymity, Risibility and Quantum Subjectivity” (1994, published in *The Canadian Journal of Comparative Literature* XXIII.ii, 1996: 426-455; available online at academia.edu/4184544), “Between Beckett & Bec: The Metic Hexis and Flusserian Flux of Vampyrotheuthis Abductionis” (2012, forthcoming in *Marshall McLuhan's & Vilém Flusser's Communication & Aesthetic Theories Revisited*, eds. Thomas Kohut and Melentie Pandilovski, Minneapolis: University of Minnesota Press, available online at academia.edu/4185250), &c.

²³ Aaron Cheak (ed.), *Alchemical Traditions from Antiquity to the Avant-Garde*, Melbourne: Numen Books, 2013: 625 (also see 623-624).

In other words, alchemical operations are not strictly speaking “logical” or “lógos-centric” (for all of their articulated “analogies”) but instead much more “mètic” – *mètis* and its mètic manipulation[s]²⁴ “putting back into play”/en cause²⁵ what would typically be *separate, partitioned, distinct* and *divided* (re-uniting/re-mixing “[supposedly] radical separation[s]” such as those “between the human and the animal, between rational and irrational beings – those living without *lógos*, the *alógia zóia* – [et cetera]”²⁶), proceeding by *aporia* in the words of Samuel Beckett’s *Unnamable*,²⁷ proceeding by *detours* in the words of Marcel Détiénne and Jean-Pierre Vernant,²⁸ proceeding not in a “straight-ahead” manner but rather in a manner that might appear “headless” (“acephalous”²⁹) or indeed “hydra-headed” (“polycephalous”³⁰), so as to *fold-in, mediate* and *manipulate* “uncertain” and “unstable” conditions, allowing for cunning coordination with-and-in these conditions, as Détiénne and Vernant explain on the last page of *Les Ruses de L’Intelligence: La Mètis des Grecs*.³¹

This “ruse de l’intelligence” is indeed definitive (for all its ambiguity³²) of technics in the Simondonian sense: technicity prior to its “logocization” – lifting the latter word from *Les Ruses de la Technique: Le Symbolisme des Techniques à-travers l’Histoire* (a study by Guy Ménard and Christian Miquel).³³

²⁴ “The Greek term *technè* is often translated as “skill”, “art” or “craft”, and in the ancient texts it is associated with such activities as carpentry, navigation and weaving. In one sense, *technè* is described as “knack” or as “pure technique”, explains Robert Johnson in his book on *User-Centered Technology*, Albany: SUNY Press, 1998: 51-52. “Like the navigator of the ship mentioned by Plato’s ‘Athenian stranger’, a technician or technical operator “has, through *technè*, the knowledge [or rather, the *know-how*] to overcome the potentially inevitable consequences brought-forth by domineering and determining forces. [...] In this scenario we get a glimpse of what is probably the most unexplored, yet possibly the most powerful, aspect of [the technical know-how which I call] ‘user knowledge’ – [that is,] the concept of *mètis*. *Mètis*, or what is also called ‘cunning intelligence’, is the ability to act quickly, effectively and prudently within ever-changing contexts. Related to and sometimes described as a component of *technè*, *mètis* derives from ancient Greek mythology, as the word itself was the name of Zeus’s first wife,” who the Chthonic embodiment of the cunning Greek *mètis* just as Zeus was the Olympic embodiment of commanding Greek *lógos* (*ibid.* 52-53). An overarching *lógos* might work well on the lofty heights of Mount Olympos, but as Stephen Gaukroger maintains in *The Genealogy of Knowledge: Analytical Essays in the History of Philosophy and Science*, in the more mundane world – i.e. here on *earth*, on the *ground* or (in Greek) upon the *chthonos* – things move and mutate too much (“Earth is a place of becoming and change,” writes Gaukroger, and “in overcoming an adversary – whether this be in hunting, fishing, racing or in working resistant materials such as metals – there are only two routes open: either the stronger will win, or, by the power of *mètis*, one reverses the natural course of events through cunning, disguise, quick-wittedness or whatever”; *The Genealogy of Knowledge: Analytical Essays in the History of Philosophy and Science*, Ashgate Publishing, 1997: 295). This explains why in Greek myth Zeus devoured *Mètis*: that is, to gain (or embody) her *mètis* and thus have Olympian – or as Nietzsche would say, “*Apollonian*” – control and command on the one hand, Chthonic – or as Nietzsche would say, “*Dionysian*” – cunning and craftiness on the other.

²⁵ Marcel Détiénne and Jean-Pierre Vernant, *Les Ruses de L’Intelligence: La Mètis des Grecs*, Paris: Éditions Flammarion, 1974: 305); henceforth Détiénne & Vernant.

²⁶ Détiénne & Vernant 305.

²⁷ This is the situation, the condition, at the beginning of *The Unnamable*: “What am I to do, what shall I do, what should I do,” asks the narrator; “in my situation, how [am I to] proceed? By *aporia*”? he asks (“I say *aporia* without knowing what it means,” he admits on the flip-side of the novel’s first page); Samuel Beckett, *The Unnamable*, New York: Grove Press, 1958: 3-4. For further correlations between Beckettian *aporia* and Simondonian alchemy, see my contribution to Aaron Cheak’s anthology, *Alchemical Traditions from Antiquity to the Avant-Garde*, Melbourne: Numen Books, 2013: 548-638 – ‘Alchemical Endgame: Checkmate in Beckett and Eliot’, written and published prior to my having read “La Naissance de la Technologie” (indeed prior to the publication of Simondon’s anthology *Sur la Technique*).

²⁸ Détiénne & Vernant 306.

²⁹ cf. Georges Bataille, Pierre Klossowski, Roger Caillois *et al.*, *Acéphale: Revue Trimestrielle*, Paris: Éditions Guy Lévis-Mano (GLM), 1936.

³⁰ In Karen Pinkus’s *Alchemical Mercury: A Theory of Ambivalence* (Stanford University Press, 2010: 55) this would be the titular “ambi-valence” which multiplies and/or redoubles given “valences” (“In the mid-1800s,” she explains, “valence theory began to be used to signify the normal number of bonds that a given atom can form with other atoms – a register that links valence with philosophical materialism, matter and Epicurianism. In recent scientific work, valence refers specifically to the number of electrons in the outermost shell of atoms. It is not provisional or essential to the atom; valence *is* atomicity. It defines a given chemical element, perhaps not in its essence, but in its capacity to combine with other elements – its potentiality”; *ibid.*).

³¹ Détiénne & Vernant 306.

³² For all its ambiguity or (again) “ambi-valence”; see the previous footnote (above) re: *Alchemical Mercury: A Theory of Ambivalence*.

³³ Guy Ménard and Christian Miquel, *Les Ruses de la Technique: Le Symbolisme des Techniques à-travers l’Histoire*, Montréal: Éditions Boréal, 1988: 101; henceforth Ménard & Miquel.

Hélène Védrine – *Les Ruses de la Raison* – has aptly underscored the “ruse” that is characteristic of Greek technical reason, which we must be careful to understand [and to keep in mind] across the prism of our own conquering technical reason [*a.k.a.* its “logocization”³⁴]. She shows, in fact, that from Hermès (the god of ruses) and Mètis (wife of Zeus and herself the incarnation of ruses) to that Ulysses “of-a-thousand-ruses” so vaunted in Homer’s *Odyssey*, Greek thought has always been “a thought of the ruse” with things. It is this fundamental schema which, according to numerous authors, dominates the case of Greek technics.

Jean-Pierre Vernant – *Mythe et Pensée chez les Grecs* – thus shows that the Promethean ability which founds their technics, up to and including the very gesture of stealing the gods’s sacred fire, is more on the order of a ruse than of a conquest (which is without doubt its most common interpretation; for more on this, see Marcel Détienné and Jean-Pierre Vernant, *Les Ruses de L’Intelligence: La Mètis des Grecs*, in which they take cunning intelligence as a paradigm of Greek thought). Dominique Janicaud – *La Puissance du Rationnel* – similarly defines Greek technics as a technics of the ruse. [...]

Georges-Hubert de Radkowski – *Les Jeux du Désir: de la Technique à l’Économie* – insists for his part on the fact that between primitive technics, which amounts to “composing with nature”, and the modern technical attitude, which imposes upon it a novel order, the whole space of “a game with nature” is deployed, implying that we deform it minimally without unduly mutilating it; “technics”, he writes, “is the fruit of this game [with nature]”. It is ruse itself, daughter of the imagination’. Referring finally to the interpretations of Gilles Deleuze and Félix Guattari – *Mille Plateaux* – [...] technics are used to capture and divert natural energies without dominating or otherwise altering the latter. Whatever the privileged perspective, the paradigm of the “ruse with nature” appears fundamental [to Greek technics].³⁵

Védrine, Vernant, Détienné, Deleuze, Guattari, Janicaud and Radkowski – the authors mentioned by Ménard and Miquel in this paragraph of their study – explore in their respective works the complex complexities of technics as a matrix “*en marche en avance de [...] sa logocisation*”,³⁶ unfolding and/or underway well before its technologi[c]ization, prior to its articulation in straightforwardly “logical”, “logocentric” terms (hence “without tacitly presupposing its hierarchical subordination to science” – stealing a sentence from Andrew Goffey³⁷ – and again “refus[ing] to privilege *epistèmè* over *tèchnè*”³⁸).

In the very first footnote of *Les Ruses de L’Intelligence*, Détienné and Vernant explain that prior to publishing their study “one of us had already demonstrated the importance of *mètis* for the analysis of technical thought (cf. Jean-Pierre Vernant, “Remarques sur les Formes et les Limites de la Pensée Technique chez les Grecs”, *Revue d’Histoire des Sciences*, 1957: 205-225, reprinted in *Mythe et Pensée chez les Grecs*, Paris: Éditions Maspero, 1974: 44-64),”³⁹ and indeed throughout their co-authored work they note the inextricability of *mètis* and *technè* in Greek thought (“We find the same collection of words – *dólos*, *mechanè*, *technè* [and the like] – to describe the intrinsic characteristics of this type of cunning

³⁴ *viz.* “sa première ‘logocisation’, au sens d’une première tentative de la faire parler” (its first “logocization”, in the sense of a first attempt at making sense of it, working and wording it out): Ménard & Miquel 101.

³⁵ Ménard & Miquel 101-102 (my translation).

³⁶ “*Il y a toujours une pointe de puissance qui est en avance sur le savoir*” – Émile-Auguste Chartier, quoted in Ménard & Miquel 31: *there is always a potent point that is ahead of knowledge*. “*Dès ce moment*” (le moment de sa “logocisation”) “*commence à se former, par laïcisation [...] et par son objectivation sur des objets techniques concrets, le second glissement, qui conduit à penser que l’histoire technique est signe de progrès, signe de la marche du peuple élu vers son idéal*” – Ménard & Miquel 157 (101): from this moment onward there starts to form, by [what could be conceived as its] secularization and by its objectivation [qua objective projection] onto concretized technical objects, a second slippage which suggests that the history of technics is a sign of progress, evidence of the march of privileged people toward their ideal[s].

³⁷ Andrew Goffey, Introduction to Isabelle Stengers and Philippe Pignaree, *Capitalist Sorcery: Breaking the Spell* (trans Andrew Goffey), Basingstoke: Palgrave Macmillan, 2011: *xix*; henceforth Goffey.

³⁸ Goffey *xix*.

³⁹ Détienné & Vernant 7.

intelligence”;⁴⁰ mêtic manoeuvres, mêtic operations, are what the Greeks called a “*dôliè technè*”:⁴¹ the tricky technicities and technical tricks of *l’intelligence rusée et technique*⁴²).

The title of D tienne and Vernant’s study (*Les Ruses de l’Intelligence*) could just as easily have been that of the study by M nard and Miquel (*Les Ruses de la Technique*):⁴³ technics are tricks “with nature”,⁴⁴ pulling protocols from the natural context – the context of nature, of natural forces/operations – and turning this text (the context of nature) into what could cunningly be considered a veritable *hypertext*, with its crafty conjunctions/correlations and attendant/tangential “detours”.⁴⁵ Hypertexts are, after all, allagmatically and alchemically – indeed *al[leg]chemically* and *allegorithmically*⁴⁶ – analogical asseverations: they are ways of proceeding by *apor a*,⁴⁷ by *detour*,⁴⁸ in a manner that might appear “headless” (“acephalous”)⁴⁹ or again “hydra-headed” (“polycephalous”)⁵⁰, so as to fold-in, mediate and manipulate an otherwise unwieldy, unworkable, unwordable and/or unnameable field or “milieu” of associations.

The reader of the present essay might note and notice the ouroboric operation⁵¹ at work in this paper: it recycles itself (returning, for instance, to the *detour*, the *apor a*, the *hydra*, et cetera) in the manner of that mythical monster to which Simondon himself refers in “The Birth of Technology”. “*On comprend ainsi que l’op ration technique [...] ne tend pas vers un  tat terminal qui l’arr te*,” he explains; “*la technique, op ration de l’homme avec la nature – arte et natura – , s’engendre elle-m me et rena t d’elle-m me, comme le dragon Ouroboros de l’ancienne alchimie qui se mord la queue*”:⁵²

In this way we understand that the technical operation [...] does not tend toward a terminal condition at which point it stops; technics, the operation of man with nature – *arte et natura* – , regenerates and renews itself like the *Ouroboros* of ancient alchemy, the dragon that bites its own tail; instead of being a medium that *comes to completion* and *comes to be forgotten* in the end, the technical operation *resumes itself, multiplies itself*, like the distillation that takes up the product of a prior distillation to take it further.⁵³

Technical – like alchemical – operations are ouroboric, and in this sense both *hyper-* (* ber-*) and *hypo-* (*unter-*) textual, i.e. bounding beyond apparent aporias only so as to bite that which would block it (which of course inextricably involves “it” itself) in the back. A given context, condition or situation is carried or extended “further” than would normally be the case in these cases, and seen somewhat obscenely – *behind the scenes*, so to speak (with a wink here to Deleuze’s critical tactic⁵⁴ of “taking an author from behind and

⁴⁰ D tienne & Vernant 52.

⁴¹ D tienne & Vernant 63, 70, 109-111, 150-151 (also 287).

⁴² D tienne & Vernant 217.

⁴³ See *footnote 4* above and *footnote 51* below, re: such repetitions/replications.

⁴⁴ M nard & Miquel 101.

⁴⁵ M nard & Miquel 102.

⁴⁶ Here playing on the algorithmic allegories *a.k.a.* allagmatic “algorithms” of Ken Wark and Alex Galloway (see Alexander Galloway, *Gaming: Essays on Algorithmic Culture*, Minneapolis: University of Minnesota Press, 2006: 91-91, McKenzie Wark, *Gamer Theory*, Cambridge: Harvard University Press, 2007: 30-50, and *footnote 71* below).

⁴⁷ Samuel Beckett, *The Unnamable*, New York: Grove Press, 1958: 3-4.

⁴⁸ D tienne & Vernant 306 once again.

⁴⁹ Georges Bataille, Pierre Klossowski, Roger Caillois *et al.*, *Ac phale: Revue Trimestrielle*, Paris:  ditions Guy L vis-Mano (GLM), 1936 once again.

⁵⁰ Karen Pinkus, *Alchemical Mercury: A Theory of Ambivalence*, Stanford University Press, 2010: 55.

⁵¹ The *ouroboros* is the self-consuming *serpent*, *dragon* or *worm* symbolic of any alchemical operation (and at the heart of an essay on alchemy in the most recent issue of *Collapse: The Journal of Philosophical Research and Development* – Volume VII, 2011: the “Culinary Materialism” issue; cf. Dan Mellamphy and Nandita Biswas Mellamphy, “Ec[h]ology of the D s tre”, pp.412-435).

⁵² *Technique* 156.

⁵³ *Technique* 156-157.

⁵⁴ (His notion with regard to Kant’s *Critiques*)

giving him a child that would be his own offspring, yet monstrous” – “monstrous [...] because it resulted from all sorts of slipping, shifting, dislocations and hidden emissions”).⁵⁵

The carriage, the carrying, of this carrying-or-extending-“further” (i.e. of this “further”ing definitive of what is *hyper-*) hinges on the hyperlink, which is linked not only to what is *hyper-* but also to the *hypo-*, i.e. to the underscored text qua current context; in this way the current is conjoined to a condition and situation both beyond it and technically linked to it (appropriating a term from a different section of Simondon’s collection *Sur la Technique* and using it for different purposes, one might call this “the halo effect” of alchemical/technical operations)⁵⁶. This is the “tour”⁵⁷ – the “ruse”, “trick”, or “turn”; the cunning, canny *encompassing* and/or *outmanoeuvring* – i.e. the deviant yet definitive “detour” of mêtic machinations (hence the “trick” of “technics” as such ... *Les Ruses de la Technicité*): “The technical object is not used to master nature,” explain Ménard and Miquel, “but to turn it [in other directions, i.e. as a kind of ‘detour’/détournement]” (“à la manière des machines hydrauliques qui détournent les eaux d’une rivière de leurs cours normal [...] pour un but autre que celui fixé par la nature lui-même”).⁵⁸

Ruse rather than “mastery”; cunning co-ordinations or re-orderings (rings round and round) rather than “control”: these are the tractics/tacticities of technicity. From this perspective “what is important is not strictly speaking the evaluation of more or less [logical and] successive ‘stages’,” for instance those of the alchemical *melanosis* (*nigredolnigrefactio*), *leukosis* (*albedolalbefactio*) and *cauda pavonis* outlined at the end of *L’Individuation à la Lumière des Notions de Forme et d’Information*;⁵⁹ rather, and more specifically, the importance lies “in the link between technics and the movement [perhaps highlighted most brightly in the Olympic Games of antiquity]⁶⁰ that resides at the heart of Hellenic culture,” explains Jean-Claude Beaune in *Le Balancier du Monde: La Matière, La Machine et La Mort*.⁶¹ This movement, of course, is both *hypo-* and *hyper-*, pivoting on a particular point so as at once to [*de*]part from it and be its oblique *partenaire*; hence the intimate interrelation of mêtic machinations (the Greek *mêtis*) with incarnated inductions (the Greek *hexis*) and split-second decisions (the cut of the Greek *kairos*).

But *mêtis* and (indeed *as*) the interrelation of *kairos* and *hexis*, i.e. of decisive – never mind deceptive – *moments* and *movements*, is difficult to track: this by dint of always being oblique to straight lines of inquiry and analysis. That might be one of the reasons why the ever-interesting Michel Tibon-Cornillot found himself somewhat frustrated in a session of the aforementioned University of Saint-Étienne conference on Gilbert Simondon (January 2011): ... Responding to Étienne de Banville’s paper, “Une Philosophie de la Technicité en Acte”,⁶² Tibon-Cornillot admitted that he “had a lot of difficulties reading *On the Mode of Existence of Technical Objects*⁶³ and establishing links between [nonliving] technics and [living] bodies the likes of which one finds, for example, in Leroi-Gourhan”⁶⁴ (or, for a more recent

⁵⁵ Gilles Deleuze, *Pourparlers*, Paris: Éditions de Minuit, 1990: 15; *Negotiations* (trans. Martin Joughin), New York: Columbia University Press, 1995: 6.

⁵⁶ I lift this term from “L’Effet de Halo en Matière Technique”: the title of a conference-paper delivered to the *Institut de Science économique Appliqué* in 1960, published in *Cahiers Philosophique* 43 (June 1990) and in *Technique* 279-294.

⁵⁷ cf. translate.google.com/#fr/en/tour for a set of connotations via machine-translation.

⁵⁸ In the manner of hydraulic machines that divert the waters of a river of their normal course [...] for a purpose other than that set by the nature itself (Ménard and Miquel 101).

⁵⁹ *L’Individuation* 551.

⁶⁰ Here we touch on a topic of special interest to Debra Hawhee – cf. her *Bodily Arts: Rhetoric and Athletics in Ancient Greece*, Austin: University of Texas Press, 2005.

⁶¹ Jean-Claude Beaune in *Le Balancier du Monde: La Matière, La Machine et La Mort – Essai sur Le Temps des Techniques*, Seyssel: Éditions Champ-Vallon, 2002; henceforth Beaune.

⁶² Étienne de Banville’s, “La Perruque: Une Philosophie de la Technicité en Acte” in *Gilbert Simondon: Une Pensée Opérative* (ed. Jacques Roux), Saint-Étienne: Publications de l’Université de Saint-Étienne, 2002: 92-108; henceforth Banville.

⁶³ cf. academia.edu/4184556 for our English translation (2010; alas: stopped short).

⁶⁴ Michel Tibon-Cornillot in Banville 104.

example, in works such as Debra Hawhee's *Bodily Arts: Rhetoric and Athletics in Ancient Greece*⁶⁵. "With respect to the relations between technical objects and the body," he noted, "there are endless zones of obscurity in [the work of] Simondon. And with respect to the question of *compromise, détournement* [and the like]" – questions posed by Banville in his paper – "one would [indeed] have to examine them in the light of the concept of *mêtis*, this attitude so well analyzed by D tienne and Vernant":⁶⁶ a comment that must have pleased Colson and Stengers, whose papers at that particular conference did so, if only briefly (i.e. in passing).

The *m tis* here, and the m tic *m tissage* (*q.v.*), is *hermetic* rather than *hermeneutic* (hence Tibon-Cornillot's difficulties in decoding it): as Simondon himself says in "The Birth of Technology", it is rather unfair to ask modern workers – including modern scholars, *nota bene* – to grasp in a feat of *kairote* (my term for *kairos*-centric karate) the intricate and altogether inextricable net of relations⁶⁷ which those who have been initiated into the intensive and interdisciplinary *m tissage* (*m tis* and m tic *m tissage* here fused in one word) of hermetic manipulations maintain – and oft maintain *poorly*, sometimes to a *fatal* (*self-defeating*) degree.⁶⁸ "*L'herm tisme est li    un tr s haut niveau de comp tence, de savoir et de savoir-faire,*" writes Simondon:⁶⁹ the hermetist's high level of cross-disciplinary competence, both abstract and applied, demands the kind of knowledge and know-how that Bernard Stiegler, for instance, laments as one that is fast disappearing in our hyper-industrialized/hyper-synchronized consumer society, even in its tangle of hypertexts and with its myriad "web-savvy readers and writers".⁷⁰

(Concluding) Afterword:

Perhaps only machines and machinic operations demonstrate in this day the kind of m tic *kairote* I've just mentioned⁷¹ – which recalls (that is, calls-to-mind) a blog-post by Christian Faur  on "La *m tis* de Google",⁷² wherein the internet is likened to a chthonic chaos and/or the traps of Tartarus ("*le web a les caract ristiques du Tartare de la mythologie grecque,*" he suggests): "even the most seasoned sailors of its

⁶⁵ Debra Hawhee, *Bodily Arts: Rhetoric and Athletics in Ancient Greece*, Austin: University of Texas Press, 2005. Also see Beaune 40, 62, 75 ("La question du *kairos* [et] de la *m tis* demeure pos e: question qui rel ve de la ruse et de la mesure, [...] de l'action aussi. [...] *Chronos, Aion et Kairos*:  ternelle retour, immobilit  du premier moteur"; *ibid.* 75. The issue of *kairos* and *m tis* remains open: it is a matter that involves calculation and cunning – and action as well. *Chronos, Aion et Kairos*: eternal return – immobility of the initial *impulse, impetus* or *motor*).

⁶⁶ Michel Tibon-Cornillot in Banville 104.

⁶⁷ "Grasp" here in the sense suggested in Greek antiquity by Heraclitus in the tenth of his fragments ("Grasping wholes and not wholes" – ()holes – at once "convergent [and] divergent, consonant [and] dissonant"; cf. Charles Kahn in *The Art and Thought of Heraclitus: An Edition of the Fragments with Translation and Commentary*, Cambridge: Cambridge University Press, 1979: 85); Marcovich translates this as "connexion" – which resounds of a network *nexus*, *n'est-ce pas?* (cf. Miroslav Marcovich, *Heraclitus: Greek Text with a Short Commentary*, Merida: Los Andes University Press, 1967: 105); Heraclitus's word is *syllapsis*, which shares the same herme[neu]tic heritage/cross-connexion[s] as *synapses*.

⁶⁸ The death of alchemists was quite common, remember (death by alchemical *iosis*/poisoning).

⁶⁹ Hermeticism is linked to a very high level of competence, knowledge and know-how (*Technique* 146).

⁷⁰ See for instance, Bernard Stiegler, *The Decadence of Industrial Democracies: Disbelief and Discredit, Volume One* (trans. Daniel Ross and Suzanne Arnold), Cambridge: Polity Press, 2011 (henceforth Stiegler), and an essay on the latter by Yours Truly, originally written for the 2015 special "Bernard Stiegler" issue of *Boundary 2: International Journal of Literature and Culture* at the invitation of its Guest Editor, forthcoming in the next issue of *Parrhesia: Journal of Critical Philosophy* (Dan Mellamphy and Nandita Biswas Mellamphy, "*Mort   Discredit*: Otium, Negotium, and the Critique of Transcendental Miserablism"; rough-draft online at academia.edu/4184488). N.B.: the phrase "web-savvy readers and writers" (which was the last one that I wrote as I drafted this paper) turns out, after a web-search, to have been written beforehand – as all phrases turn out to be, *naisse-pas?* – by Sarah Cypher (which is the author's *actual*, not only her *virtual*, name) on her web-log at sarahcypher.com/2011/10/03/social-media-for-authors-week-4-of-4 (hence the quotation marks).

⁷¹ This is the argument I present, along with my partner Nandita, in an essay we submitted just yesterday (end-of-July 2014) for a forthcoming special-issue of *FibreCulture* on "Apps and Affects" (since our *Apps and Affects* conference-paper had already been published in *The Imaginary App* anthology at the M.I.T. Press), and one that Nandita outlined in her contribution to *The Funambulist Papers, Volume Two*; cf. Dan Mellamphy and Nandita Biswas Mellamphy, "*An Algorithmic Agartha*: Post-App Approaches to Synarchic Regulation" as well as Nandita Biswas Mellamphy, "*Ghost in the Shell-Game*: On the M tic Mode of Existence, Inception   Innocence" (available online in rough-draft form at academia.edu/7671616 and academia.edu/5277020).

⁷² Christian Faur , "La *m tis* de Google" (blog post), christian-faure.net/2008/09/06/la-metis-de-google.

netscape often lose themselves within all the web-pages and the multiple tabs that are open, or by following links that lead nowhere”.⁷³

Today “Google has become a major *techmar* (i.e. ‘benchmark’) of the web – a compass, a star, a beacon⁷⁴ to ‘guide’ us on the web-waves – and it even goes so far as to offer us the option of having it be the rudder of our embarkations with the release of its Chrome web-browser”.⁷⁵ Fauré’s foray into ancient Greek myth in this blog-post goes back – via D tienne and Vernant – to the myth of Zeus and M tis wherein the lord (and *l gos*: the ruling, commanding and controlling “word”) of Olympos and of the Olympian gods devours the ancient embodiment of pre-Olympian cunning and of chthonic craftiness – the titaness M tis – in order to supplement what Nietzsche would have called his “Apollonian” aspect (his Olympian *l gos*) with M tis’s more “Dionysian” dimension (her Pelasgian *m tis*).

“Zeus was not content with uniting himself to M tis by mere *marriage*,” explain D tienne and Vernant at the outset of their study; “by *devouring her whole* he managed to make himself *entirely m tic*” in addition to being *logocentric* (i.e. in addition to being the *l gos* of Olympos);⁷⁶ “henceforth [therefore] no ruse can take place in the universe without being spirited by way of Zeus himself, [i.e. passing through Zeus]”.⁷⁷ “By imposing its index as the navigation-lighthouse [qua Ptolemaic *Pharos*]⁷⁸ of the web, Google has, in the likeness of Zeus swallowing M tis, swallowed-up the ruse and intelligence of the internet,” Faur  proposes; in this way “*Google alone* has [and/or would have] a handle on the web’s myriad links and multiple practices, which permit it in turn to link and to bind” – *de lier et d’encercler* – “all those who would mount expeditions to conquer the web. Just like Zeus, then” (that is, Zeus in the wake of the devoured M tis), “Google can anticipate the future and see in advance the strategies that could undermine its reign. Its web-crawlers have therefore done much more than just ‘browse the web’,” he astutely observes; “they have absorbed it in order to appropriate the intelligence of the web” (i.e. they have “consumed” it in order to “corporealize” and “incorporate” this intelligence), “which is in keeping with the proper sense of *ligere* as a ‘linking together’: by swallowing-up the web-links of the internet, Google has [‘woven’ or] ‘linked together’ the web through one of those ‘ruses of intelligence’ which the ancient Greeks called *m tis*; *m tis*, which alone could elicit such mid-boggling results”.⁷⁹ Perhaps only such a web-crawling apparatus can manage this kind of m tic *m tissage* – this kind of cunning *world-wide-web-weaving* – today (in which case “alchemical operations” would incontestably be “machinic technics”).

⁷³ Christian Faur , “La *m tis* de Google” (blog post), *christian-faure.net/2008/09/06/la-metis-de-google* (“*le web a les caract ristiques du Tartare de la mythologie grecque*”: the web has the characteristics of the Tartarus of Greek mythology).

⁷⁴ cf. en.wikipedia.org/wiki/Tekmar_%28mythology%29#Etymology re: *techmnar/tekmar*.

⁷⁵ Christian Faur , “La *m tis* de Google” (blog post), *christian-faure.net/2008/09/06/la-metis-de-google*.

⁷⁶ D tienne & Vernant 20.

⁷⁷ D tienne & Vernant 20.

⁷⁸ See footnote 2, above.

⁷⁹ “*En avalant les liens du web, Google a li  le web par une de ces ruses de l’intelligence que les grecs nommaient m tis, qui seule pouvait provoquer des retournements stup fiants*”; Christian Faur , ‘La *m tis* de Google’ (blog post), *christian-faure.net/2008/09/06/la-metis-de-google*.

