STIMULUS AND RESPONSE: BEHAVIORISM, TROPISMS, AND TWENTIETH-CENTURY FRENCH THOUGHT AND LITERATURE

Literary criticism's model of choice for the understanding of fictional minds has been, at least until recent cognitive and evolutionary incursions, primarily psychoanalytic. While French literature itself has had many dealings with Freudian and post-Freudian psychoanalysis over the course of the last century, for instance in the work of André Breton, Serge Doubrovsky or Marie Cardinal, other conceptions of the mind emerging from science, philosophy and religion have also made their mark on literary culture, and the individual characteristics of these alternatives are not always well served by interpretations using a psychoanalytic framework. One of the most influential and controversial of these other theories of human nature in the twentieth century was behaviorism, which dominated scientific psychology in the post-war decades. As a scientific theory, it was championed in France notably by the sociologist and intellectual, Pierre Naville, who may have been instrumental in bringing it to the attention of Jean-Paul Sartre and Maurice Merleau-Ponty, in whose philosophy it is discussed in detail. As a cultural force, it was the critic Claude-Edmonde Magny who first drew awareness to its possible influence, along with cinema, on the "externalist" American novels of the 1940s, which were to have a major influence on French writers like Sartre and Albert Camus. André Gide makes reference to the scientific origins of the movement in his fiction, albeit dismissively, and Nathalie Sarraute not only discusses behaviorism and its cultural manifestations extensively in her essays, but employs its foundational concept, the tropism, prominently throughout her fiction. Sarraute's relationship to behaviorism is one of the most interesting in the period, as we shall see, since it combines condemnation of what she sees as the "behaviorist novel" in American and French literature with adoption in her own writing of other psychological doctrines that might also be considered behaviorist. This article explores the impact of the behaviorist theory of mind on French literature and culture, and in doing so uncovers a significant mismatch between the "behaviorist

novel" as it has been narrowly conceived and the broader theories of behaviorism as a movement within psychology. Understanding this disparity permits us to reconsider the validity of the label "behaviorist" with regard to mid-twentieth-century authors, and notably among European writers, Camus, Sartre and Sarraute.

Behaviorism's rise to prominence spans three generations, and within those generations its doctrines were principally developed and disseminated by three notable scientists. Jacques Loeb (1859–1924) was the precursor, in whose work many of the movement's main ideas are already formulated; his student, John B. Watson (1878–1958) is often referred to as the "father" of behaviorism for founding and naming the movement and setting out its central tenets; and B. F. Skinner (1904–90), inspired by Watson's work, became the radicalizer, popularizer and leader of the discipline at the height of its mid-century fame. It is with Loeb that animal tropisms originate. The term "tropism" existed previously in botany, back-formed from more specific terms for responses to stimulus, such as "heliotropism", the tendency of plants to grow towards a light source, or "geotropism", the response to gravity in orienting the plant's structure. Loeb experimented with light sensitivity in caterpillars and other invertebrates, arguing that the tropistic process was identical to that observed in plants, from which he drew the conclusion that "heliotropic animals are therefore in reality photometric machines"(41). Through these findings, his research into artificial parthenogenesis, and experiments on conditioned responses that mirrored in invertebrates the work simultaneously being carried out on dogs by Ivan Pavlov, Loeb hoped to banish mystical conceptions of *élan vital* from the understanding of animal life, and he was not cautious about speculating on the possible implications for humanity:

> Our wishes and hopes, disappointments and sufferings have their source in instincts which are comparable to the light instinct of the heliotropic animals. The need of and the struggle for food, the sexual instinct with its poetry and its chain of consequences, the maternal instincts with the felicity and the suffering caused by them, the instinct of workmanship, and some other instincts are the roots from which our inner life develops. For some of these instincts the chemical basis is at least sufficiently indicated to arouse the hope that their

> analysis, from the mechanistic point of view, is only a question of time. […] We eat, drink, and reproduce not because mankind has reached an agreement that this is desirable, but because, machine-like, we are compelled to do so. We are active, because we are compelled to be so by processes in our central nervous system. (32–33)

The central claim that behaviorism makes—that the human body is essentially a machine responding deterministically to stimuli in a way that is hugely more complex but not qualitatively different from the functioning of simple life forms—is here already encapsulated by Loeb, and it remained for his successors only to refine its details and find evidence to support it.

Loeb's proto-behaviorist ideas percolated rapidly into French culture. Gide made passing reference to him in the second dialogue of *Corydon* (first printed privately in 1911, and published in 1920), and returned to his theories in *Les Caves du Vatican* (1914). Drafts of this novel include Loeb's name as a correspondent of the character, Anthime Armand-Dubois, with regard to the latter's scientific research (Pollard, 115). The published version lacks the name, but the imprint of Loeb's ideas remains clear:

> En attendant de s'attaquer à l'homme, Anthime Armand-Dubois prétendait simplement réduire en "tropismes" toute l'activité des animaux qu'il observait. Tropismes! Le mot n'était plus tôt inventé que déjà l'on ne comprenait plus rien d'autre; toute une catégorie de psychologues ne consentit plus qu'aux *tropismes*. Tropismes! Quelle lumière soudaine émanait de ces syllabes! Évidemment l'organisme cédait aux mêmes incitations que l'héliotrope lorsque la plante involontaire tourne sa face au soleil (ce qui est aisément réductible à quelques simples lois de physique et de thermo-chimie). Le cosmos enfin se douait d'une bénignité rassurante. Dans les plus surprenants mouvements de l'être on pouvait uniment reconnaître une parfaite obéissance à l'agent. (683)[1]

Gide was certainly no advocate for such a view of life, and the satirical tone of the above passage is swiftly underlined in the novel by Anthime's conversion from an enthusiastic belief in soulless mechanism to fervor of a more conventionally religious kind. Anthime's experiments in animal

[1] Here and throughout, all italics in quotations are in the original text. For a more detailed discussion of Gide's tropisms, see Patton, 35–42.

conditioning are, however, reminiscent of Loeb and Pavlov, and his desire to "s'attaquer à l'homme" shows that he shares Loeb's ambitions for such methods to extend to human psychology.

The first major text of human behaviorism was in fact already published by the time Gide's novel appeared. Watson's "Psychology as the Behaviorist Views It" (1913) takes "profound influence" (Greenspan and Baars, 222) from Loeb as it lays out the theory of human nature that he, Skinner and others would advocate over the coming decades. Watson and Skinner aimed to displace what they dub "mentalist" approaches to psychology by outlawing the unverifiable data of introspection and abandoning the concept of consciousness as neither definable nor usable. In *Behaviorism* (1925), Watson lays out the shift in perspective for which his discipline calls: "All schools of psychology except that of behaviorism claim that *'consciousness' is the subject matter of psychology.* Behaviorism, on the contrary, holds that the subject matter of human psychology is *the behavior or activities of the human being*" (3). He goes on to urge: "Why don't we make what we can *observe* the real field of psychology? Let us limit ourselves to things that can be observed, and formulate laws concerning only those things" (6). Behaviorism thus attempts a two-fold scientific revolution in the study of human nature: firstly, in that psychology will be understood to follow predictable mechanistic laws, and secondly, in that the demonstration of these laws will rely exclusively on objectively ascertained external evidence. The inner life of the mind, where we believe our actions have their source in our thoughts and feelings, and in our exercise of free will, is not only a "black box" into which scientific investigation cannot penetrate, it is also, for the behaviorists, an illusion and an irrelevance for the understanding of human life. As Skinner puts it in a later work, *About Behaviorism*: "Nothing is lost by neglecting a supposed nonphysical link [between external stimulus and observed response]. Thus, if we know that a child has not eaten for a long time, and we know that he therefore feels hungry and that because he feels hungry he then eats, then we know that if he has not eaten for a long time, he will eat" (14).

The behaviorists embarked on a program of reformulating the "mentalist" conceptions of psychology into systems of behavioral responses to stimulus and longer-term products of reinforcement through conditioning. They achieved some success where physiological or involuntary responses were concerned, as in Skinner's above example, or Watson's now notorious "little Albert" experiments to condition a fear response in a child through the association of a loud noise with the sight of a rat. They ran into greater opposition in their attempts to externalize more complex or more private mental functions, however, as when Watson tried to redefine thought as "largely *subvocal talking*" (*Behaviorism,* 191), or Skinner reconceived metaphor as a similarity of response evoked by the similarity of two different stimuli (104).[2]

Behavorism arrived in France in the mid-twentieth century as both a scientific and cultural force, and these two aspects were to become further entwined in its European reception. Naville's *La Psychologie: science du comportement* (1942) was the most faithful and far-reaching attempt to present behaviorist ideas to a French audience from a scientific perspective. His links to the French literary and philosophical milieux of the time facilitated the osmosis of behaviorist ideas into the broader cultural sphere. A former associate of the Surrealists, who had co-founded a journal with Louis Aragon, he had moved on by the publication of *La Psychologie* to a close engagement with the thought of Sartre and Merleau-Ponty. Sartre's discussion of behaviorism in *L'Être et le néant* (1943), published the year after *La Psychologie,* likely draws on Naville's exposition. Three years later, the publication of Sartre's lecture, *L'Existentialisme est un humanisme* (1946) would be accompanied by a detailed response from Naville, in which the latter picks up Sartre's use of the phrase 'la condition humaine' in order to lecture him on human conditioning:

> Les individus ne naissent pas et n'apparaissent pas dans un monde qui leur fait une condition abstraite, mais apparaissent dans un monde dont ils ont toujours eux-mêmes fait partie, par

[2] A damning review article on Skinner's *Verbal Behavior* (1957), comparing Skinner's theory of the "controlling relations" of an utterance unfavourably with his own developing theory of generative grammar, was the publication through which Noam Chomsky first made his name.

> lequel ils sont conditionnés. Et qu'ils contribuent eux-mêmes à conditionner, de la façon dont la mère conditionne son enfant et dont cet enfant la conditionne aussi dès qu'il est en gestation. C'est seulement de ce point de vue que nous avons le droit de parler de condition humaine comme d'une réalité première. (92)

Against Sartre's absolute human freedom, Naville presents a scientifically inflected view of human nature in which "il y a des lois de fonctionnement pour l'homme comme pour tout autre objet de la science" (93), laws which can be used to understand the cause and effect of our behavior.

Sartre and Merleau-Ponty were predictably wary of Naville's determinism and of behaviorist doctrines that ignore or deny subjective experience, which were entirely incompatible with the phenomenological tradition from which their thought emerged. Despite this, the behaviorist movement made common cause with Merleau-Ponty in its rejection of dualism and its vision of life lived through the body, as well as a shared interest in behavior as a window into human nature, seen in Merleau-Ponty's first major philosophical work, *La Structure du comportement* (1942). Merleau-Ponty's understanding of behavior, however, does not aim to abolish the mental, as Watson's and Skinner's does, but rather to abolish the dichotomy between mental and material reality. Viewed as a simultaneously mental and corporeal phenomenon, behavior is for Merleau-Ponty a concept with which to combat the notion of the self as an inner homunculus detached from the physical body, but not a concept with which to combat the notion of a self at all or weaken its status as an independent subject endowed with free will, as Skinner does when he declares that "a self or personality is at best a repertoire of behavior imparted by an organized set of contingencies" (164).[3] Sartre too engages with behaviorism in a primarily critical mode, particularly in his early work. *L'Être et le néant* dismisses its view of humanity as solipsistic:

> Si les animaux sont des machines, pourquoi l'homme que je vois passer dans la rue n'en serait-il pas une? Pourquoi l'hypothèse radicale des béhavioristes ne serait-elle pas la bonne? Ce que je saisis sur ce visage n'est rien que l'effet de certaines contractions musculaires et

[3] The relationship between Skinner's and Merleau-Ponty's thought is explored in more detail in Corriveau.

> celles-ci à leur tour ne sont que l'effet d'un influx nerveux dont je connais le parcours. Pourquoi ne pas réduire l'ensemble de ces réactions à des réflexes simples ou conditionnés? Mais la plus grande partie des psychologues demeurent convaincus de l'existence d'autrui comme réalité totalitaire de même structure que la leur propre. (262)

The contention of the behaviorists, of course, is that inner life and conscious agency are an illusion not only in the other people that we meet, but in us ourselves too, which is a proposition that Sartre refuses to countenance seriously. (For him, the evidence of intuition is not ruled out of bounds.) Unlike Merleau-Ponty, he retains a dualist view of the mind, albeit the property dualism of a materialist rather than the substance dualism of Descartes. For Sartre, while there may be no immaterial soul behind consciousness, the mode of existence of the mind is nevertheless qualitatively different from that of the body, and any attempt to reduce mentality to physiology is anathema. But it is Sartre's attitude to conditioning that is perhaps most interesting. In the discussion following *L'Existentialisme est un humanisme*, he dismisses Naville's position as "dogmatisme" (104). Sartre's idea of liberty in his early philosophy of the 1940s is uncompromising, and ill-suited to engage with Naville's position. He was never to accept such a determinist model, but it is notable that, as the post-war decades progressed and behaviorism was ever more in the ascendant within psychology, Sartre's confidence in human liberty eroded. In 1969, Sartre defined freedom as "ce petit mouvement qui fait d'un être social totalement conditionné une personne qui ne restitue pas la totalité de ce qu'elle a reçu de son conditionnement" ("Sartre par Sartre", 101–102), adopting behaviorist terminology and demonstrating a striking rapprochement with the behaviorist line.[4] We see the same trajectory in the more pessimistic view of his later philosophy, such as the *Critique de la raison dialectique* (1960), in which the concept of the *practico-inert* emphasizes the constraints on freedom brought about by the consequences of our own and others' actions, which we cannot control. Sartre's view of human nature never coincided with that of the behaviorists, and on the question of

[4] Comparative examinations of behaviorist thought and Sartrean existentialism include Kvale and Grenness, Morf.

consciousness an unbridgeable gulf lay between them. But where free will is concerned, while a belief in its existence would always remain the centre of Sartre's philosophical system, we can see his attitude shift over the course of his career from a position diametrically opposed to the behaviorists, to one that is not so very distant from them. In *Les Séquestrés d'Altona* (1959), Frantz's verdict on the individual's relationship to history is the despairing comment: "La guerre, on ne la fait pas: c'est elle qui nous fait" (173). Skinner takes a similar view on the subject: "The person who asserts his freedom by saying, '*I* determine what I shall do next,' is speaking of freedom in or from the current situation; the I who thus seems to have an option is the product of a history from which it is not free and which in fact determines what it will now do" (185). The later Sartre thus permits his concept of freedom to be hemmed in by constraints internal and external to the self, nuancing the absolute opposition to behaviorist thought that characterized his early philosophy, while still leaving uncompromised the spark of free will that is, for him, the innermost element of human existence.

Behavior modification through conditioning makes an appearance in a number of Western works of literature during the mid-twentieth century. Skinner himself offered a utopian vision of a society in which harmful behavior has been conditioned out in his *Walden Two* (1948), while darker visions were presented in Aldous Huxley's *Brave New World* (1932) and George Orwell's *1984* (1949), which were no less convinced than Skinner of the potential of conditioning to shape human behavior. To this list we might also add Anthony Burgess's *A Clockwork Orange* (1962), which stages a form of "aversion therapy" similar to Watson's "Little Albert" experiment, but takes a more skeptical view of the long-term efficacy of conditioning in shaping psychology. Interestingly, the term "behaviorist novel" did not attach itself to texts like these, but, in line with of Magny's analysis of the contemporary American novel, became associated exclusively with the fashion for impersonal narration offering an external perspective on the characters. Magny's *L'Âge du roman américain* (1948) focuses on the work of John Dos Passos, Ernest Hemingway, John Steinbeck and William Faulkner, and characterizes the writing in all four of them as follows:

> Le mode de narration […] devient absolument objectif, d'une objectivité poussée jusqu'au behaviourisme, de par les conventions mêmes qui ont été adoptées par la présentation des événements, conventions imposées au cinéaste par la nature même de son art, mais que le romancier moderne a librement choisies: on décrira les faits uniquement de l'extérieur, sans commentaire ni interprétation psychologique. (49)

While acknowledging that the writers' intentions may have been consciously shaped more by the cinema than by behaviorist psychology directly, Magny maintains that by abjuring the novel's traditional access to characters' inner life, the resulting texts are nevertheless behaviorist in effect:

> Presque tous les romanciers américains des vingt dernières années, d'Hemingway à Caldwell, semblent avoir inconsciemment adopté cette vue behaviouriste de l'homme: ils nous donnent non pas les sentiments ou les pensées de leurs personnages, mais la description objective de leurs actes, la sténographie de leurs discours, bref, le procès-verbal de leurs "conduites" devant une situation donnée. (50)

In these post-war years, as France was in the process of reinventing its own cultural identity after the trauma of the Occupation years, the American novel was a benchmark against which new French literature could measure itself. In the 1940s it was often seen as an inspiration in its confident innovation, praised by readers and imitated by writers in France; more frequently in the following decade it would come to be criticized by French authors and critics as reductive in its view of human nature and pernicious in its influence on French culture. Didier Alexandre comments:

> Après avoir adulé, avant et au lendemain de la Seconde Guerre mondiale, les romanciers américains, critiques et écrivains, soucieux de refonder le roman français, font de l'histoire récente du roman américain l'histoire de ce que ne peut être le roman français. (81)

Sartre, whose *Le Sursis* (1947) is clearly influenced by Dos Passos, is among the first wave. He offered his view of current American writing in a 1946 speech to Yale University, later translated into English and published in *The Atlantic Monthly*:

> Hemingway never enters inside his characters […]. He describes them always from the outside. He is only the witness of their conduct. It is from their conduct that we must, as in life, reconstruct their thought. He does not admit that the writer has the power to lift the tops of their skulls as the Club-footed Devil raised the roofs of houses to see what went on inside. We have to wait with him – page after page – to understand the actors in the drama. We are, as he pretends to be, reduced to conjectures. Faulkner also elects to present his heroes from the outside, when their consciousness is complete, and then to show us, suddenly, the depths of their souls – when there is no longer anything there. ("American Novelists in French Eyes", 117)

Annie Cohen-Solal reproduces private notes, possibly from the same period, in which Sartre links such techniques to the doctrines of Watson and Skinner: "Les tendances américaines chez Dos Passos… l'homme américain… émigrants refondus dans le creuset américain… Behaviorisme… l'homme vu du dehors…" (297). Despite his rejection of behaviorist psychology in this period, then, Sartre praises the externalist American style, but, crucially, praises it as a study in being-for-others, in which the other's inner life is present but inaccessible to us.

Sarraute spearheads the second wave. With the American externalism beginning to make its presence felt in French literature, acknowledged by Albert Camus as an influence on *L'Étranger* (1942) and by Louis-René des Forêts on *Les Mendiants* (1943), Sarraute perceives the trend as a threat to the psychological novel as an art form. She writes to the *Times Literary Supplement* in 1959: "Tous mes articles s'efforcent de défendre ce que l'on désigne avec mépris aujourd'hui sous le nom de 'psychologie' contre les tendances dites 'behavioristes'" (2079). The conflict in literature between behaviorist writing and psychological analysis forms the topic of her first published article on the novel in 1947, and will recur throughout her later essays. In 1953 she opines that psychological novels like Proust's now appear (to the arbiters of literary fashion) as relics of a bygone age, and that in the current climate, "le mot 'psychologie' est un de ceux qu'aucun auteur ne peut entendre prononcer à son sujet sans baisser les yeux et rougir. Quelque chose d'un peu ridicule, de désuet, de cérébral, de borné, pour ne pas dire de prétentieusement sot, s'y attache" (1588).[5]

[5] The essay in question, "Conversation et sous-conversation", was written in 1953 but published only in 1956.

Among the practitioners of the "behaviorist" novels which are replacing them she cites Hemingway, Dos Passos, Steinbeck, Camus, and, rather unfairly, Kafka. Like Magny and Sartre, Sarraute sees these novels as marked stylistically by an emphasis on dialogue and external presentation of the characters: "[Le romancier] peut, comme les behavioristes, faire parler sans aucune préparation ses personnages, se tenant à une certaine distance, se bornant à paraître enregistrer leurs dialogues, et se donnant ainsi l'impression de les laisser vivre d'une 'vie propre'" (1600). And like Magny, Sarraute acknowledges the influence of cinema on the "behaviorist" style, but regards the result as a pale imitation of the visual medium:

> D'ailleurs, s'il s'agit de montrer du dehors, vides de tous grouillements et frémissements secrets, des personnages, et de relater les actions et les événements qui composent leur histoire, ou de raconter à leur propos des histoires, comme on l'incite si souvent à le faire […], le cinéaste qui dispose de moyens d'expression bien mieux adaptés à ce but et bien plus puissants que les siens arrive, avec moins de fatigue et de perte de temps pour le spectateur, à le surpasser aisément. (1591)

Returning to the topic in a later essay, using the theatre as her point of comparison this time, she argues that the loss of interiority in the novel not only robs it of the characteristics that distinguish it from the 'external' arts of film and drama, but may rob it of the one attribute that gives it value:

> Les romanciers behavioristes, qui se servent abondamment de dialogues sertis de brèves indications ou de discrets commentaires, poussent dangereusement le roman sur le domaine du théâtre, où il ne peut que se trouver en état d'infériorité. Et renonçant aux moyens dont seul le romancier dispose, ils renoncent à ce qui fait de lui un art à part, pour ne pas dire un art tout court. (1662)

Externality is a natural corollary of storytelling on stage or film; in the novel, though, the renunciation of psychological analysis, a territory that the form had long made its natural home, gives the reader the impression either that the characters' inner life is being deliberately withheld or that it is not there at all. The American 'behaviorist' novel allows us to prefer the former of these two options, as Sartre did in his reading of Hemingway and Faulkner. It is a French writer, however, who

first presents us with a consciousness that is blankly inscrutable from inside and out, with the first-person perspective of Camus's *L'Étranger.*

Gérard Genette characterizes the narrative perspective of *L'Étranger* as a unique splicing of the "cinematic" viewpoint of external third-person narratives and the internal focalization of the first-person narrative (77–89). Sarraute is one reader to link *L'Étranger* to American externalism, and present it as a stage further into alignment with behaviorist psychology:

> [Meursault] avait sur les héros de Dos Passos ou de Steinbeck eux-mêmes cet incontestable avantage d'être dépeint non, comme eux, à distance et du dehors, mais du dedans, par le procédé classique d'introspection cher aux amateurs du psychologique: c'était de tout près, et, pour ainsi dire, installés aux premières loges, que nous pouvions constater son néant intérieur. ("De Dostoïevsky à Kafka", 1560)

It is undeniable that Meursault resembles the behaviorist subject in his passive reaction to events, his lack of emotion, opinion or will, and the absence of any indication of inner monologue or complex thought (at least until the closing pages). It is not entirely facetiously that we might characterize *L'Étranger's* central event, the shooting of the Arab on the beach, as a heliotropism, the involuntary reaction of an organism to a powerful stimulus of sunlight.

For Sarraute, Meursault is the exemplar of a new *homo absurdus* spreading across the contemporary novel. Drawing on largely positive accounts of the blank psychological canvas of Camus's and Dos Passos's characters by Magny and Maurice Blanchot, Sarraute details with heavy irony the cultural abandonment of psychology for a behaviorist view of human nature:

> On pouvait enfin sans remords abandonner les tentatives stériles, les pataugeages épuisants et les énervants coupages de cheveux en quatre; l'homme moderne, corps sans âme ballotté par des forces hostiles, n'était rien d'autre en définitive que ce qu'il apparaissait au-dehors. La torpeur inexpressive, l'immobilité qu'un regard superficiel pouvait observer sur son visage, quand il s'abandonnait à lui-même, ne cachait pas de mouvements intérieurs. Ce "tumulte au silence pareil", que les amateurs du psychologique avait cru percevoir dans son âme, n'était, après tout, que silence.

> Sa conscience n'était fait que d'une trame légère "d'opinions convenues, reçues telles quelles du groupe auquel il appartient", et ces clichés eux-mêmes recouvraient "un néant profond", une quasi-totale "absence de soi-même". Le "for intérieur", "l'ineffable intimité avec soi" n'avait été qu'un miroir aux alouettes. "Le psychologique", source de tant de déceptions et de peines, n'existait pas. (1558)[6]

In Sarraute's view, Camus does not carry his project through consistently, lapsing into more conventional psychological realism in the final pages of the novel, for which the reader is likely to feel "un certain ressentiment" (1563) towards the author. Nevertheless, his novel provides Sarraute with the strongest example of the behaviorist influence on modern literary culture, since it intimates not only that mental life is unknowable to third parties, but that it is irrelevant even to the self.

Camus was certainly aware of the purported link between the externalist style and a behaviorist conception of human nature, and acknowledged their influence on his writing. Questioned in interview with Jeanine Delpech about the stylistic similarities between *L'Étranger* and the modern American novel, Camus recognizes the behaviorist worldview implied in its narrative style, while, only three years after the novel's publication, expressing deep ambivalence about the technique he used and its broader impact on literature:

> La technique romanesque américaine me paraît aboutir à une impasse. Je l'ai utilisée dans *L'Étranger*, c'est vrai. Mais c'est qu'elle convenait à mon propos qui était de décrire un homme sans conscience apparente. En généralisant ce procédé, on aboutirait à un univers d'automates et d'instincts. Ce serait un appauvrissement considérable. C'est pourquoi, tout en rendant au roman américain ce qui lui revient, je donnerais cent Hemingway pour un Stendhal ou un Benjamin Constant. Et je regrette l'influence de cette littérature sur beaucoup de jeunes auteurs. (2, 657–58)

In *L'Homme révolté* (1951), he discusses the American novel in more detail, emphasizing its behaviorist outlook, "purgé de vie intérieur", réduisant l'homme […] à ses réactions extérieurs et son comportement", and presenting its characters "comme si les hommes se définissaient entièrement par

[6] In the passage, Sarraute cites Paul Valéry's "Le Cimetière marin" in the first paragraph, and quotes extensively in the second from Magny.

leurs automatismes quotidiens" (3, 289). He is once again negative about the generalization of such a method to a default novelistic procedure. Meursault, it is clear, was never intended to represent a typical human mentality.

Sarraute's fears about the long-term influence on western literature of behaviorism were to prove unfounded: external narrative perspectives continued to flourish through the twentieth century on both sides of the Atlantic in the *roman noir*, but were never a significant trend in European literary fiction, and were largely supplanted in America by a return to the psychological novel in the following generation in the work of writers like Philip Roth and John Updike. Given those fears, though, and the strength of her aversion, how does the proto-behaviorist concept of the tropism come to form the heart of Sarraute's own creative practice? After Loeb, the word *tropism* admittedly falls from favor in behaviorist discourse, replaced by its component elements of *stimulus* and *response*, but these latter terms too are regularly employed by Sarraute to describe her own tropisms, as we shall see. Explaining her choice of title for the psychological vignettes of her first book, she refers to the botanical origins of the word: "Je les ai appelées 'Tropismes' parce que ces mouvements intérieurs, ces actions invisibles que je montrais ressemblaient aux mouvements des plantes qui se tournent vers la lumière ou s'en détournent" (1651). At the same time, though, she asserts the metaphorical nature of her tropisms, and makes clear to Serge Fauchereau and Jean Ristat that she does not consider herself bound by the precise scientific meaning of the term:

> Ce terme "tropisme" était un pis-aller. Je cherchais pour mon premier livre un titre qui puisse évoquer tant bien que mal toutes ces sensations indéfinissables et, à l'époque, "tropisme" était dans l'air. Je pensais qu'il pourrait s'appliquer à ces sortes de mouvements instinctifs qui sont indépendants de notre volonté, qui sont provoqués par des excitations venant de l'extérieur. (9)

How far, then, can Sarraute's tropisms, situated "somewhere between motion and emotion" (Minogue, 8) with characteristics of both reflex and thought, bear comparison with the animal tropisms of Loeb and the stimulus-response of his successors?

Minds in Sarraute overflow with the 'grouillements et frémissements secrets' of tropistic activity and function on a continuum from the social self on the surface of the conscious mind, down through the private self of *sous-conversation*, to the pre-linguistic penumbra of the tropism on the border between conscious and subconscious mind. They are emphatically not the voids of behaviorist consciousness, despite the enthusiasm of some of Sarraute's readers to interpret her work in these terms. Sartre, for instance, suggests in his preface to *Portrait d'un inconnu* (1956): "Nathalie Sarraute nous fait voir le mur de l'inauthentique; elle nous le fait voir partout. Et derrière ce mur? Qu'y a-t-il? Eh bien justement *rien*" (37), while the critic Jean Pierrot suggests that consciousness in Sarraute is "un réceptacle vide et informe, que vient incessamment envahir plus quitter une matière commune, impersonnelle et invisible, la pensée, qui en quelque sorte flotte en suspension dans l'espace intersubjectif" (84). Such a reading was perhaps inspired by the anxious struggle of Sarraute's characters to infer from the words and gestures of the other an inner life that remains frustratingly opaque to them. It is nevertheless a serious misrepresentation of the Sarrautean mind, which holds far more than shared commonplaces. But while the profusion of tropisms may disprove any notion that Sarraute is a "behaviorist" writer on the model of Hemingway or early Camus, they do suggest an alignment with behaviorist thinking on the mind in a different respect. In fact, there are three characteristics of Sarraute's tropisms which are shared with the animal tropisms at the roots of behaviorism: in both cases the phenomena are quasi-physiological, in both they are involuntary, and in both they are responses to an external stimulus.

The first tropism of Sarraute's memoir, *Enfance* (1980) demonstrates all three of these attributes. When the child Natacha declares that she intends to slash the upholstery of a sofa with scissors, her governess issues a stern prohibition. In the text, the governess's words are presented as an oppressive weight or an invasive flood: "ces paroles […] ont pénétré en moi, elles appuient, elles pèsent de toute leur puissance, de tout leur énorme poids… […] dans ces mots un flot épais, lourd coule, ce qu'il charrie s'enfonce en moi pour écraser ce qui en moi remue, veut se dresser…' (991–

93). Natacha's response is to assert her intention more forcefully, and then to carry out the act. The text, however, represents this decision as if were a reflex action of the body, triggered by the stimulus of the governess's words: "sous cette pression quelque chose en moi d'aussi fort, de plus fort encore se dégage, se soulève, s'élève… les paroles qui sortent de ma bouche le portent, l'enfoncent là-bas… […] sous cette pression ça se redresse, se dresse plus fort, plus haut, ça pousse, projette violemment hors de moi les mots… "Si, je le ferai"(993). Avoiding the familiar labels of "désobéissance" or "rébellion" with which the exchange would conventionally be depicted, Natacha's response is described in terms of movement within her body, counteracting the downward pressure of the governess's words with upward force of its own, before violently ejecting the words from her mouth. Despite the prevalence of biological images in the exchange, Sarraute is not proffering simple physiological similes, such as "enforcing obedience is like force-feeding" or "rejecting authority is like vomiting". Rather, the tropism is evoked via a range of images, not all of them compatible with each other, in an attempt to encompass collectively a nameless psychological event.

While not all of Sarraute's metaphors are biological, the body and the natural world are her predominant choices in illustrating tropisms. In *Tropismes* (1939, 1957), the old lady whose intimidates those around her with fear of disapproval is a "fragile et douce plante sous-marine toute tapissée de ventouses mouvantes" (21), and elsewhere, we see gossamer threads reach out to ensnare the unwary, ravenous predators prey on weak minds, or characters withdraw into themselves like a snail into a shell. Often the images are more vague, suggesting the inner functions of a living organism without identifying detail: within Sarraute's characters we witness quiverings, creepings, wiltings, or surgings forth, their words and attitudes are odours and secretions, their personalities are hard carapaces or vulnerable flesh, fixed structures or flowing liquids. Of course, for behaviorism, biological discourse for mental processes is no mere metaphor. As Watson puts it: "The organism is constantly assailed by stimuli – which come through the eye, the ear, the nose and the mouth – the so

called objects of our environment; at the same time the inside of our body is likewise assailed at every moment by stimuli arising from changes in the tissues themselves" (12). Sarraute, however, is clear that nothing literally stirs or thrusts upwards inside the rebellious Natacha in the earlier example. The physiological responses described are symbols to evoke pre-cognitive mental activity for the reader as best the text can, as Sarraute explains: "ces mouvements, […] produisant en nous des sensations souvent très intenses, mais brèves, il n'était possible de les communiquer au lecteur que par des images qui en donnent des équivalents et lui fassent éprouver des sensations analogues" (1553–54). Equally, the 'stimulus' in Sarraute often involves the subjective interpretation of another person's words or gestures, as in the original example, putting it at some remove from the reductive mechanisms favoured by behaviourism in the illustration of their doctrines. Nevertheless, the strongly physiological flavour of Sarraute's imagery conjures up a continuum running from higher-order cognition down towards the basic mental functioning of instincts and reflexes. Natacha's revolt is not a simple neural reflex in the same way that the triggering of the vomit-reflex involves the brain but not the mind, but it is presented as having much in common with such phenomena, and perhaps more in common with them than with the distinct emotions and clear exercise of will that the conventional psychological novel employs to represent such matters. As Ann Jefferson remarks, Sarraute may advocate a form of representation that "vaporizes the body" (82) in order to focus on states of mind, but her own use of corporeal images and physical experiences as an index for mental ones leaves her work "best described as a writing of the body" after all (94). Her model of a mind in which conscious and subconscious mental activity are thoroughly enmeshed, with no line of division between them and the most significant activity not clearly attributable to one or the other, is very different from the psychoanalytic view. It is little surprise to find that Sarraute and Watson are

equally contemptuous of Freud and his theory of a complex, semi-autonomous Unconscious sealing off repressed thoughts from the self.[7]

Sarraute's biological imagery is meant figuratively, but there is nothing metaphorical about her characterization of tropisms as involuntary responses to external stimuli, making this aspect their most significant point of contact with behaviorism. We have already seen Sarraute declare tropisms to be "indépendants de notre volonté"; elsewhere she refers to them as "la source secrète de notre existence" and "à l'origine de nos gestes, de nos paroles, des sentiments que nous manifestons, que nous croyons éprouver et qu'il est possible de définir" (1553). If conscious decision-making can be disassembled into originating involuntary reactions, then Sarraute would appear to be flirting with the behaviorists' determinist view of human psychology. Skinner "rejects the conscious mind as an agent" (169), and declares that "feelings are merely collateral products of the conditions responsible for the behavior" (52), rather than the cause. For behaviorism, human life, like all of nature, is a mechanistic phenomenon, obeying fixed laws, and human behavior is at least theoretically predictable, if only the complete data of the state of the organism and the input from the environment could be ascertained. It is this, rather than the notorious 'black box' of consciousness, that is arguably the central tenet of the discipline and its most important legacy to contemporary psychology.

Characters' behavior in Sarraute is often presented as being outside their control, as in *Ouvrez* (1997), where a phone conversation is abruptly ended when one of the interlocutors suddenly blurts out "au revoir" for no reason (23–32). Tante Berthe's obsessive worries about her door-handle in *Le Planétarium* (1959), or the memory processes which, independently of consciousness, restore lost information in the opening fragments of *Ici* (1995), sideline the role of conscious intention in

[7] Watson dismisses psychoanalysis as "based largely upon religion, introspective psychology, and Voodooism" (18); Sarraute calls the discipline "une croyance [qui] n'a rien d'une science", and says of its founder: "Freud montre un univers qui n'a rien de commun avec ce que je cherche à écrire" (1738).

mental activity (341–50, 1295–301). Even creative thought is described in terms of an involuntary process in *Entre la vie et la mort* (1968):

> Les mots sont ses souverains. Leur humble sujet se sent trop honoré de leur céder sa maison. Qu'ils soient chez eux, tout est à eux ici, ils sont les seuls maîtres. […] Ils se réflètent, ils miroitent… Et il est pris dans le dédale de leurs miroirs, emprisonné dans les entrelacs de leurs reflets… Il tourne, renvoyé des uns aux autres… (663)

Such passages show us, on the one hand, a buzzing, complex inner life that has no resemblance to the behaviorist void, but on the other hand, passivity in the subject, and an involuntary quality to their mental activity that holds parallels with the psychologists' view. Mark Lee describes Sarraute's characters as reminiscent of people in a state of asthenia, suffering "a general loss of will and force" (103). Sarraute's account of her own mental activity as a child has similar characteristics, as when she recalls her tendency to fall prey to distressing thoughts which occupied her mind against her will: "Maintenant cette idée s'est installée en moi, il ne dépend pas de ma volonté de la déloger" (1043).

The exercise of free will may be little in evidence in Sarraute, but it is not entirely absent. In *Enfance*, Natacha learns to exert conscious control over these "idées" as she gets older, and the mechanistic stimulus-response of the sofa-slashing scene is counterbalanced by the autonomy with which the mischievous act is (we presume) originally conceived. In the same text, the choice she must make about which of her divorced parents she will live with is presented unequivocally as a free and conscious decision. Sarraute emphasizes the self's active role with repeated pronouns — "ce sera douloureux pour moi de trancher moi-même le lien qui m'attache encore à ma mère" — and endorses the child's view of her own self-determination: "j'avais fait pour moi d'abord le bon choix" (1086). Sarraute's one reference to determinism, quoting from Magny in "De Dostoïevsky à Kafka" is not complimentary (1557), and links the belief to the novels of Camus and the American

externalists, which the same essay compares unfavorably to the work of Proust and Dostoyevsky.[8] While she may not be a determinist in the behaviorist sense, the representation of free will in her fiction has more in common with the limited autonomy of the later Sartre than the optimism of *L'Être et le néant*. For Sarraute, conscious exercise of free will may be a possibility, but for much of the time, a detailed exploration of apparently freely chosen words, thoughts and actions will reveal them to be the product of simpler processes at a deeper level of the mind, processes which have more in common with the automatic responses to stimulus found in plants and in other animals than with the liberty and autonomy that *homo sapiens* likes to consider characteristic of itself.

In the mid-twentieth century, as behaviorism's radical disregard for subjectivity and skepticism towards free will swept through the human sciences and questioned some of the most fundamental assumptions about the mind, it is unsurprising to discover that European literature both absorbed influence from and reacted against the movement's theses. Alongside other theories of mental life that left their mark on the literature of the period—psychoanalysis and phenomenology notable among them—behaviorist ideas were attributed to several novels of the time, and have parallels with the work of other writers with whom the movement is not generally associated. To sum them up briefly: following Magny, and, to a lesser extent, Sartre, behaviorism in literature became closely assimilated to externalist narrative perspective, primarily in the work of American writers like Dos Passos, Hemingway, Faulkner, Caldwell and Steinbeck. To this list Sarraute added two European names, Kafka and Camus, and a strongly negative value-judgment. Kafka's inclusion is misplaced, as Sarraute herself later recognized: his characters are not devoid of mental life, they simply see it projected before them in nightmarish situations which seem conjured from their unconscious.[9] Of the others, the five American novelists do indeed offer an external point of view on

[8] Sarraute quotes a reference by Magny to the "triple déterminisme de la faim, de la sexualité, de la classe sociale: Freud, Marx et Pavlov", which is seen as characteristic of the beliefs of those who turn against introspection and psychological detail in fiction

[9] Decades later, Sarraute tells Simone Benmussa that her opinion of Kafka would change once she read *The Trial*: "*Le Procès* a été une revelation. J'avais, tu vois, des partis pris terribles, de cette

their characters, and in Hemingway's and Dos Passos's case, often exclusively so, even if the cinema is arguably a more significant influence on this technique than behaviorism itself. Even *L'Étranger*, which unambiguously presents us with the spectacle of Meursault's inner emptiness, is not a perfect candidate. Meursault is clearly psychologically out of step with the other people in the story, as we have seen his author confirm, and his blankness thus offers a poor example from which to generalize a view of human mentality. If Camus intended to suggest that all minds were like Meursault's, he would presumably have given his novel a different title. While these works echo the behaviorist "black box" of human consciousness which Magny diagnosed and to which Sarraute objected so deeply, none finally presents a fully behaviorist view of human nature.

However, as we have seen, there is more to behaviorism than a disregard for consciousness, even if the literary world rarely saw beyond this most sensational of its tenets. There is the stark reductionism (the neurophilosopher Daniel Dennett calls it "greedy reductionism' (395)) that would substitute the brain and body for the mind, and correspondingly seek to replace "mentalist" discourse with the physiological. There is the insistence on external causes of our actions, which are to be understood as responses to outside stimulus. And, most importantly, there is the abolition of free will and the substitution of a mechanist conception of (theoretically) predictable cause and effect, opening a path for psychology to join the natural sciences. Huxley, Orwell, and perhaps Burgess, along with Skinner himself, have behaviorist aspects to their novels in this sense through their focus on behavioral modification in response to conditioning, even if only the last of them fully expresses a behaviorist view of the mind. In French literature, while behaviorism plays a role in Sartre's growing interest in conditioning as a limiting factor in human freedom, even at his most pessimistic he maintains a respectful distance from the movement. But there is a French author whose work echoes this model of the mind more than has generally been recognized. Sarraute's work is the antithesis of

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manière, j'ai laissé passer des choses." Simone Benmussa, *Nathalie Sarraute, qui êtes-vous ? Conversation avec Simone Benmussa* (Lyon: La Manufacture, 1987), p. 54.

the "behaviorist novel" in the usually accepted sense of an external perspective and a disregard for subjectivity. Neither does she share the behaviorists' outright rejection of free will. Yet in her focus on mental life as response to outside stimulus, her deconstruction of complex mental activity into simple quasi-physiological movements, and her emphasis on the involuntary over the willed, Sarraute's representation of psychology in fact has more in common with behaviorism, in the original sense of the word, than any of the other writers we have considered here. As the most outspoken detractor of the "behaviorist novel", it is a parallel she would not have been pleased to acknowledge. As a keen student of human psychology, however, she might have been mollified to discover that there is more to behaviorism than the caricatured mindlessness by which twentieth-century readers and writers so often understood it.

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