



**RENNES
SCHOOL
OF BUSINESS**

UNFRAMED THINKING

CAPTOLOGY

HOW TO STEP INTO YOUR OWN BRAIN

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*“You are too shallow, Hastings,
much too shallow,
To sound the bottom of the after-times.”*¹

¹William Shakespeare, *Henry IV Part 2*: Act IV, Scene II

INTRODUCTION

Disappointingly unspectacular as the truth may be, the internet's magnetic effect on our brains is in no way derived from the claimed technical genius of California's IT professionals. In fact, screens owe their irresistible power over our minds to the rational, systematic use of discoveries made regarding animal and human behavioural conditioning since the mid-19th century. This intelligent use of the "classics" has enabled social engineering to divert our attention quite radically away from the functions it was initially programmed for, namely spotting imminent dangers to protect the group or tribe; concentrating uninterruptedly on an object so that we can use our skills to make it useful; communicating with others by sensing multiple different body languages; and, above all else, examining the mysteries of the Great Beyond that lies outside earthly life's brief candle. This is why, in the space of two decades, information technology has formed a screen between humankind and Eternity. Whether we like it or not, the global internet prospers from the *reductio ad bestiam* of the human sphere. We too will be treated with the same regard as Pavlov's dogs, John B. Watson's rats or B.F. Skinner's pigeons. However, immense improvements have been made since the interwar period. Now that the internet is personally informed by our personal tastes, its social engineers will be able to happily direct us towards websites and virtual spaces which tap into our animal natures. Thus caged by our basest instincts, we may become willing prisoners to our own ignorance. The deprivation inherent to classic thinking around human and animal conditioning is therefore at the root of our mental slavery. This enslavement has been carefully orchestrated via academic engineering that robs students of the only intellectual resources that enable them to grow, specifically silent reading and disputation, substituting them for ideological conditioning and technical hyper-specialisation. These "empty boxes" now having been created (and fed by research centres in which charlatans meticulously construct truncated sciences), they find themselves in natural harmony with digital teaching which is, in fact, teaching in name only.

Of course, this magnetic power varies from individual to individual. Its influence over a person is inversely proportionate to his or her penchant for creativity, be it artisanal, intellectual or artistic in nature. Despite what practitioners of mental confusion may profess, there are also significant differences between the sexes. On the whole, girls appear to be much better equipped to resist the most extreme forms of internet addiction than boys, yet are, conversely, more attached to their smartphones². This phenomenon can be explained in two ways. First, educational methodologies designed and crushingly implemented by women automatically correspond to girls' aspirations, while ascribing male creativity with an unpredictable, marginal quality. Because they are in synchronicity with school, girls have less time to devote to keeping pace with the internet. Second, the male sex's genetically programmed predilection for hunting renders boys irremediably curious about the world wide web, the feminine prey with which it abounds and their virtual male adversaries against whom they can test their skills through play. On the other hand, women's genetic programming to disseminate life makes the internet less attractive, except where it enables them to seduce and live out the fantasy of reproducing.

² Young male students make up more than 70% of patients at Kanagawa hospital's internet rehab centre in Japan.

The new science of captology was, moreover, formed at the dawn of the 21st century. This recently invented term refers to the study of how computers can be used to persuade people to change their attitudes or behaviours. Its designer is one Brian Jeffrey Fogg, a student of Sicilian-American psychologist Philip Zimbardo. Zimbardo became famous in 1971 for the Stanford Experiment in which he randomly assigned his students the role of prison guard or prisoner within a simulated penitentiary. The initiative was funded by the American Navy and Marine Corps. Its official aim was to uncover why conflict breaks out in the prison system. In his role as superintendent, Professor Zimbardo imposed particular conditions on participants in the hope of increasing their sense of disorientation, depersonalisation and deindividuation. He advised the guards to spread fear so that prisoners could be dehumanised and, later, conditioned. The experiment lasted six days and resulted in serious abuse. As for Zimbardo, he drew interesting conclusions about how human conditioning can be enacted within a very short space of time. In 2003, Fogg published a book entitled *Persuasive Technology: Using Computers to Change What We Think and Do*. Six years later, he completed his Fogg Behavior Model (FBM), aimed at mapping our human behaviour and founded on three criteria: the subject's motivation, his or her ability to achieve the task in question and the presence of a prompt³. Motivation is influenced by factors such as pleasure or pain which form the basis of animal training. It is clear to see that Fogg's behavioural model hybridises behaviourism's⁴ long-standing lessons with neuroscience's more recent developments. If the subject on which captology focuses its attention remains rather opaque, this is because it is located at the intersection between several independent disciplines, namely history, psychology, biology and IT. The industrialisation of human knowledge having transformed once curious minds into a mass of disconnected specialists, only those who refused to be pigeon-holed remain to be co-opted. Blaise Pascal called such individuals "universal people".

"Universal people are called neither poets nor geometers, etc., yet they are all of these and judges of them too. They cannot be predicted. They will discuss whatever was being discussed upon their entry. One perceives in them no one quality any more than another, except when it is necessary to put such qualities into use [...] One can say neither that they are mathematicians nor visionaries nor that they are particularly eloquent, but honest men. This universal quality alone delights me [...] one must know a little about everything. It is much better to know something about everything than everything about something. Such universality is the finest."⁵

³ Christian Bastien and Gaëlle Calvary write that : "Pour Fogg, la persuasion par le biais des technologies de la communication prend place à deux niveaux : un niveau micro (la micro-persuasion) et un niveau macro (la macro-persuasion). Les systèmes de micro-persuasion sont des systèmes dont l'objectif premier n'est pas la persuasion, mais dont certaines de leurs composantes peuvent avoir de tels objectifs ou effets. La micro-persuasion est alors incorporée à certaines boîtes ou séquences de dialogue. C'est le cas par exemple lorsque Word vous indique des erreurs de frappe et vous propose des solutions. Pour Fogg, tout système qui vous rappelle ce que vous avez à faire, qui vous permet de visualiser votre activité ou encore vous encourage ou vous louange est un système de micro-persuasion, car il change votre façon de penser, d'agir. Toujours selon Fogg, des sites Web comme Amazon.com ou ebay.com dont l'objectif principal est de persuader les utilisateurs à acheter sont des exemples de macro-persuasion. Pour ces sites, la persuasion constitue leur seule raison d'être. Mais le commerce n'est pas le seul enjeu des technologies de macro-persuasion. Tous les aspects de la vie sont concernés (éducation, économie d'énergie, activité sportive, alimentation, conduite automobile écologique et durable, arrêt de la cigarette, développement durable, etc.)" J. M. Christian Bastien, Gaëlle Calvary. "Technologies persuasives", *Episciences*, p.1-200, 2015.

⁴ A variant of behavioural science, behaviourism is based upon the idea that all human beings can be trained using positive stimuli (or rewards) to behave appropriately to the best of their practical abilities.

⁵ Blaise PASCAL, *Pensées*, Hachette, 1950, p. 32.

It is not only the “finest” but the most useful too. Who, then, presides over persuasive technology’s uses?

There are no simple answers to this question. There is a varied, sharply defined range of operators in whose interest it lies to orientate our choices. All that can be said of them is that these “*lucid*” operators are few in number but share an initial aim of encouraging the purchase of consumer goods. *Their ultimate end, therefore, is to create 00104} “oniomaniacs”,* or sufferers of compulsive buying disorder. *Oniomania* was studied by Emil Kraepelin in the late 19th century. It entails the alternating highs and lows that characterise addiction. The euphoria of a purchase is immediately followed by guilt. The addictive buying cycle is fundamentally connected to a need for social recognition⁶. As for the hand directing these purchases, it remains invisible. This is nothing out of the ordinary. The animal world is governed by territories whose heart is ruled by male aggression. This heart is invisible to potential prey. It forms neither the space’s geometric centre nor its uppermost parts, nor even the place where food reserves are most abundant. It is simply the centre of gravity for an animal’s movement. The male sparrow never fails to start his day by singing at the centre of his territory, before ceaselessly moving in such a way as to obscure the invisible centre’s location.

Captology’s lucid operators are, without a doubt, a minority. It is entirely within their interests to confine IT specialists to a purely technical role so that they get only the most diffuse and indistinct glimpse of the aims behind remotely programmed imperceptible movements. As for the consumer masses, they must, of course, never emerge from an ignorance enforced through permanent connectivity. This is not a new phenomenon. The history of social transformation has been exclusively shaped by minorities working in mutual opposition to ensure their individual interests prevail. Having from the year 1870 invested all his energy in creating a colossal archive of France’s Revolutionary transition⁷, the positivist historian Hippolyte Taine was struck by the fact that the French Revolution was driven entirely by a violent, determined minority. He wrote that:

“The regime projected by Saint-Just envisages an oligarchy of invaders gaining and maintaining power upheld by a subjugated nation. Through such a regime, 10,000 Spartans took control of 300,000 Helots and Perioeci after the Dorian invasion of Greece. It was through such a regime that 60,000 Normans took control of two million Saxons after the Battle of Hastings in England. It was through such a regime that 200,000 English Protestants took control of one million Irish Catholics after the Battle of the Boyne in Ireland. And it was through such a regime that 300,000 French Jacobins were able to take control of six or seven million Girondins, Feuillants, royalists and merely indifferent citizens. It is simplicity itself, as it entails maintaining the subjugated population in a state of both extreme weakness and extreme terror. To this end, the people are disarmed, monitored, deprived of all right to common endeavour, under constant threat of violence and imprisonment, ruined and decimated.”

⁶ “Les achats d’objets de toute nature sont devenus des indicateurs de statut dans la société actuelle. Les valeurs sociales favorisent la dictature de la mode et du superflu, et de nombreuses personnes partagent la croyance que posséder plus, c’est valoir plus ou exister davantage. Acheter est une activité banale et sans importance de la vie quotidienne pour la plupart des personnes mais, pour un petit nombre d’individus, elle devient difficile à maîtriser au point d’entraîner des conséquences néfastes sur la vie familiale et sociale. Les achats compulsifs sont considérés comme une conduite addictive...” Lucia ROMO, “L’addiction aux achats”, Isabelle VARESCON éd., *Les addictions comportementales. Aspects cliniques et psychopathologiques*, Mardaga, 2009, pp. 19-47.

⁷ Hippolyte Taine wrote *Les Origines de la France Contemporaine* between 1870 and his death in 1893.

Keenly aware of the impending danger, Danton wrote that “*we must maintain our hold in Paris by all means necessary. The republicans are the lowliest minority and the only ones we can count on when it comes to combat. The rest of France is attached to royalty. We must strike fear in the royalists!*” Ultimately, it mattered little that there were no more than 300,000 Jacobins in all, as their strength was not measured in number. They were a gang in a crowd or, more precisely, a gang in a disorganised, inert crowd which was determined to surge ahead like an iron tool through a heap of rubble. After all, the Jacobins were under orders themselves. Behind them lay clubs’ own strength.

There is no more effective machine; there has never been a better combination at manufacturing artificial, violent opinion, lending it the appearance of a spontaneous, national avowal and conferring the rights of a silent majority upon a noisy minority, thereby forcing the government’s hand. Our tactics were simple,” said Grégoire. “We agreed that one of us would seize an opportune moment to suggest their proposal in a sitting of the National Assembly. It would undoubtedly be applauded by a very small few and booed by the majority. No matter. He asked and we agreed that it be sent to a committee, where its opponents hoped to bury the issue. Paris’ Jacobins seized their chance. Through circulars or in their newspaper, the issue was discussed in three or four hundred affiliated societies and, three weeks later, addresses rang out in the Assembly demanding a previously rejected decree. It would now be backed by a resounding majority, because public opinion had matured through discussion.”

The techniques of mental manipulation used during the Revolution to enable a minority to exert power over a majority are of great interest during the era of *digital revolution* . One can claim a sort of parentage over the other. This parentage works in two ways. First, it transposes the old blueprint onto new times; and second, it hybridises technology.

Contrary to popular opinion, captology’s masters do not necessarily operate from the top down. In fact, they are more likely to operate from *the space beyond* – in other words, from the opaque circles just below power. Consider, for example, the class system. At the bottom is a mass of inert conservatives who use 90% of their energy protecting micro-fiefdoms and occasionally uniting to resist change. Their main tactics are simply to be present and delay the action that is to be taken as far as possible. Change management is beyond them, so they adopt a strategy of inching along as slowly as possible. The bureaucratic heart of this mass of people is protected by a cartel of obtuse centurions. At the top, there is a small minority of rather comical and piffling decision-makers. They are merely passing through a transitory stage in their *cursus honorum*. They adopt ambiguity as their strategy to coerce their subordinates into accepting whatever whim their own bosses have favoured, while claiming it as their own. Most crucial for them is ensuring that the instruction they receive from on high remain unseen so that they can expertly play the empty role of decision maker. When they take a firm stance, it is generally because their superiors have backed them to do so. It is between these two strata that the interloping world of influencers is found. Their objective could hardly be clearer, and they operate in small, fluid and complex groups that can be recomposed any which way. They are akin to a small colony of cuckoos which seeks to take the so-called “decision-makers” place. They play several fiddles at once to achieve this and advance their interests. Very often, their political aim is simply window dressing for their individual interests, although this is not always the case. These influencers align themselves into competing groups. To be effective, they have to be up to date with the latest information, coordinate information-sharing and use their intuition to decipher the weakest signals emanating from the mysterious phony decision-makers. They have to position themselves such that they can move their pawn forward and take their adversaries by surprise. These

adversaries are twofold: the inert masses represent one; their rivals for influence another. As a result, neither the bureaucratic masses nor the phony decision-makers shapes opinion. The captology which emerges out of this *netherworld* operates via three successive, clinical acts: first it hypnotises; then it conditions; and finally it manipulates the mental slaves it has created.

HYPNOTISING AN ANIMAL

In his writerly portrait of Frédéric de Nucingen, Balzac wrote that “*he is fat and as heavy as a sack of potatoes, and as immobile as a diplomat. Nucingen has thick hands and the eyes of a lynx which never come to life; his depths do not precede him but hang behind; he is impenetrable, one never sees him coming.*”⁸ One cannot help but note that this predator always hypnotises his victim before snapping its spine. Hypnosis therefore precedes possession, although it is certainly true that sleepwalkers are easier to manoeuvre than a waking soul⁹. One means of achieving a state of hypnosis is to enforce mental confusion by quickly shifting the target’s attention from object to object so that his or her mind drifts further out of his or her control¹⁰. Blaise Pascal noted during his own era that reason was a perfectly ineffectual means of persuading people¹¹. During the late 18th century, Franz Anton Mesmer studied animal magnetism¹². One hundred years later, hypnosis reached its apogee, before coming under the control of medical science. A trace remains of these three centuries of experimentation in the desire to form suggestible beings. With this aim in mind, *captology* analyses individuals’ instinctive needs and, informed by the automatic behaviour of crowds, it shapes leaders identified via numerical data¹³.

Animal instincts and drawing lessons from microbiology and biomimetics

In *The Rape of the Masses; the Psychology of Totalitarian Political Propaganda*, microbiologist Sergei Chakhotin examined living beings’ most basic needs in order to identify the mechanisms used to condition animals and human beings. The four he uncovered all relate to preserving life:

Let us consider an extremely simple being, an amoeba for example, and analyse its reflexes and immediate reactions. They can be reduced to four vital reactions: the amoeba flees danger, absorbs food, multiplies and can even shelter its progeny by encysting. From a biological point of view, we can draw the following conclusion regarding living beings and their reactions: Nature seeks to preserve life and, with this aim in mind, it differentiates between two principles, soma and germen. The first – the individual – bears the second, the species. The first is mortal and discontinuous, while the second is

⁸ Honoré de BALZAC, *La maison Nucingen*, op. cit., p. 27

⁹ Hypnosis is characterised by reduced levels of consciousness, hallucinations, feelings of dissociation and a loss of one’s sense of space and time. It gives easy, rapid and extensive access to the unconscious mind.

¹⁰ For example, a person might be encouraged to think first of her right foot, then her left hand and the colour of her father’s eyes in very quick succession. Her coherent mind is quickly overwhelmed and seeks refuge in the calm netherworld created by the hypnotist. In French, this technique is also called “*confusion des sens*”, or sensory confusion.

¹¹ “L’art de persuader a un rapport nécessaire à la manière dont les hommes consentent à ce qu’on leur propose, et aux conditions des choses qu’on veut faire croire. Personne n’ignore qu’il y a deux entrées par où les opinions sont reçues dans l’âme, qui sont ses deux principales puissances : l’entendement et la volonté. La plus naturelle est celle de l’entendement, car on ne devrait jamais consentir qu’aux vérités démontrées ; mais la plus ordinaire, quoique contre la nature, est celle de la volonté ; car tout ce qu’il y a d’hommes sont presque toujours emportés à croire non pas par la preuve, mais par l’agrément. Cette Voie est basse, indigne et étrangère ; aussi tout le monde la désavoue. Chacun fait profession de me croire et même de n’aimer que ce qu’il sait le mériter.” Blaise PASCAL, *De l’art de persuader*, Paris, 1864, p. 39.

¹² Agnès SPIQUEL, “Mesmer et l’influence”, *Romantisme*, 1997, n°98, p. 33-40.

¹³ Three-dimensional analysis of a group of individuals’ telephone data can immediately reveal, for example, the nexuses which form central points of influence.

immortal and continuous. To guarantee the individual a certain longevity and preserve him from the abyss before he has completed his duty of passing on the species' germ, Nature has gifted him with two special mechanisms. There are also two further mechanisms for preserving the species. Regarding the preservation of the individual, these mechanisms or fundamental instincts are defence (or combat) and nutrition. Regarding the preservation of the species, organisms' two innate mechanisms are sexuality and maternity. These innate mechanisms are generally called "instincts". I prefer to call these four innate and basic mechanisms "impulses".¹⁴

Chakhotin's analysis is resumed in the table below:

Nature seeks to preserve life	The individual's preservation mechanisms	1 – Combat impulse
		2 – Nutritional impulse
	The species' preservation mechanisms	3 – Sexual impulse
		4 – Parental impulse

Ultimately, living beings' every reaction can be boiled down to this diagram. As for the numbers Chakhotin includes, they correspond to the impulses' biological importance. Number 1 – fight or combat – is the most important impulse, as all living beings have to battle against death and danger. This risk is more immediate than food scarcity. When confronted with danger, the threat is imminent and may result in death. On the other hand, the danger of death from a lack of food is chronic, in that one does not die of hunger instantly¹⁵. This is why this impulse has been numbered second. It is, however, shared by all living things, unlike the sexual impulse which is listed third and is more limited in scope. Lastly, the maternal or parental impulse is more limited still in terms of the number of individuals to whom it applies. As such, all healthy physiological and psychological mechanisms tend towards the preservation of both the individual and the species¹⁶.

Propaganda meets its aims when it can capture, in the form of an image, the archetype of the vanquisher successfully defending his territory through physical exertion, easily satisfying his nutritional impulses thanks to his great fortune, happy in love and the founder of a large, stable family. This archetype generally appears in fairy tales' closing acts. Consider, for example, a few of Charles Perrault's stories. At the end of Bluebeard, the combat impulse of the monster's wife is sated by her two brothers (one a dragoon and the other a musketeer), who run Bluebeard through with a sword. As Bluebeard dies without an heir, his wife can quench her nutritional impulse by remaining mistress of all his belongings. "*She used some of her wealth to marry her sister to a gentleman, some to buy captain's commissions for her two*

¹⁴ Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 50

¹⁵ "On est frappé de constater que cette loi de la prépondérance du système combatif sur le système de nutrition, régit les réflexes conditionnés des êtres supérieurs, comme ceux des êtres les plus infimes : elle doit être une loi générale, inhérente à la matière elle-même." Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 53

¹⁶ "Les religieux de tous les ordres importants sont astreints à prononcer trois vœux solennels qu'ils s'obligent à respecter. Ces trois vœux sont celui de pauvreté, celui de chasteté et celui d'obéissance. Nous reconnaissons donc immédiatement que ce sont respectivement nos trois pulsions – alimentaire, sexuelle et combative – sauf la pulsion parentale – au profit de laquelle toutes les autres doivent être supprimées." Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 187

brothers, and the rest to marry a very good man, who helped her to forget the terrible time she had spent with Bluebeard.” Her second marriage enables her to satisfy her sexual and parental impulses. A similar scenario occurs at the end of *Puss in Boots*. This time, the hero first uses his feline intelligence to satisfy his combative and nutritional impulses. The king rewards him by guaranteeing him marriage and children. “*The King, charmed by the Marquis de Carabas’ qualities and seeing his great possessions, said to him after five or six drinks: ‘It will be your own fault, my Lord Marquis, if you do not become my son-in-law.’ Bowing most humbly, the Marquis accepted this great honour and married the Princess that very day. The Cat became a great lord and never again chased after mice, except for fun.*” As for Cinderella, she marries the prince who, at long last, guarantees her protection from her sisters’ jealousy as well as food security. “*After making his living as a messenger for some time and earning a lot of money*”, Little Thumb returns to his father and makes his entire family comfortable. Fairy tales end with happy, unbreakable marriages because this institution is best placed to respond to the four impulses (so long as the chosen husband is both dominant and devoted). While it is vital to identify elementary impulses, this needs to be carried out at group level if the motivations behind social animals’ behaviour are to be understood and utilised.

Captology’s hypnotic effects would be entirely ineffectual if they did not tap into a fundamental element of animal behaviour, namely domination. The domination common to all animal societies helps to reduce aggression within a group. Bumblebees, wasps and hornets enjoy relative peace because a dominant insect exerts control over their colonies. If that individual is removed, aggression immediately increases and rivals enter into competition for control. The aim of the endless fighting that occurs within groups of macaques is to preserve or modify the pack’s hierarchy in such a way that benefits the alpha male. In this hierarchy, aggression and submission are stratified. The simplest version entails despotic domination of a single animal over all other group members, who are not ranked in terms of relative subordination. More often, the alpha individual dominates all others, while the beta animal immediately below him dominates all except the alpha male. This hierarchy then cascades down through every individual in the pack, modified by threats and fighting between individuals. However, once the hierarchy has been firmly established, hostility ebbs away. Sometimes, social animals’ collective life appears to be so peaceful that its underlying hierarchy is imperceptible. It surges back into view, however, as soon as a crisis emerges. This is particularly apparent among baboons, whose hierarchy is only visible when quarrels break out a scrap of food. Conversely, wolves’ hierarchy is characterised by outer signs of social status, such as the way a dominant male holds his head, for example, or orients his ears and tail when he approaches other members of the pack. In 1936, Abraham Maslow noted that rhesus macaques use group strategies to ensure dominance. As such, an isolated macaque loses status in the social hierarchy, while second-rank males can gain status when they are protected by the dominant male or supported by peers. In the virtual world, moderators have become the dominant parties. The purpose of the moderator – who fulfils an active and esteemed role in the forum – is to limit aggression between members.

The second fundamental characteristic to take into account is centripetal movement to protect the group. A species gains its defensive superiority by concentrating itself in a specific location. By amassing in this way, the group dissuades potential predators who are not able to approach unseen. Because predators tend to pick off individuals situated at the periphery of the group, it is safer to be inside (hence the centripetal movement practised by fish). Pack instinct or herd behaviour is simply a response to the need for safety. Having studied cattle’s

behaviour when threatened by lions in South Africa around the year 1871, Sir Francis Galton wrote that:

“Although cows feel no particular affection for their kith and kin, they cannot bear to be separated, even momentarily, from the herd. If one cow is separated by a predatory ruse, it manifests every sign of real mental agony and makes enormous efforts to get back into the group and regain the comfort its fellows afford.”

This behaviour is also very clearly apparent among insects. Maurice Maeterlinck wrote that:

“Bees are first and foremost creatures of the crowd, to a greater extent even than ants. They can only live in multitudes. When a bee leaves a hive so tightly packed that it has to barge through the living walls enclosing it, it is no longer in its element. For a moment, it delves into a space filled with flowers, as a swimmer plunges into an ocean filled with pearls, yet it must return regularly to breathe in the multitude upon pain of death, just as the swimmer has to breathe air. Isolated from the abundance of life, even in the most favourable temperatures, the bee expires after a few days not from hunger or cold, but loneliness. Accumulations and agglomerations provide nourishment which, despite being invisible, is just as vital as honey.”¹⁷

It should be said that the margin’s most exposed individuals are also the most innovative. In 1971, Tiger and Fox noted that, when a new object is introduced to a group of Japanese macaques, its establishment ranks remain calmly seated so that they do not risk any loss of status. It is the females and younger macaques who explore new territories or objects. On the internet, individuals have joined strongly identity-based closed groups, where they can feed off endlessly recycled themes. By contrast, certain peripheral individuals are open to new experiences. They can act as a gateway, the other side of which lies experiments in new behaviour.

Using imagination to govern the web’s crowds

These compact crowds of people who are irresistibly drawn to the warm centre where peace and security reside can be controlled via the imagination. In Blaise Pascal’s view, satanic imagination most often defeats divine reason:

“This superlative power that stands in opposition to reason and takes pleasure in control and domination in order to show the full extent of its capabilities has, in Man, established a second nature. It has its happy and unhappy hosts, some healthy, some ill, some rich, some poor. It induces credulity and incredulity and denies reason. It suspends the senses and makes Men feel. It has foolish hosts and wise, and nothing disappoints us more than seeing it fill these hosts with a satisfaction whose completeness and comprehensiveness is of an entirely different order than reason’s.”¹⁸

The imaginative power which tricks a crowd’s senses achieves its full power in the virtual space of the internet, thereby tricking our own sensory perceptions:

“Imagination magnifies small objects until our fantastical estimation of them subsumes our entire souls; its foolhardy insolence also shrivels large objects to fit its own size.”¹⁹

¹⁷ Maurice MAETERLINCK, *La vie des abeilles*, 1901.

¹⁸ Blaise PASCAL, *Pensées*, Hachette, 1950, p. 48

¹⁹ Blaise PASCAL, *Pensées*, Hachette, 1950, p. 51

Contrary to popular opinion, imagination develops concurrently with rationality. Because industrial societies' success relies on technical specialisation, this success simultaneously develops the irrational mind. This is a very ancient phenomenon. In Rome, as the official religion became increasingly conformist and civic-oriented, people's need to experience a sense of emotional mysticism grew. This is why the Imperial era saw the progressive expansion of two mystical cults around Isis and Mithras. The sect was finally toppled by Christianity in the 4th century²⁰.

It is true to say that *captology* has reanimated Gustave le Bon's observations around the psychology of crowds, to verifiably profitable effect. What, then, did le Bon teach captologists? He believed that imagination's power over the masses can be summed up as follows: *crowds think through images*. These mental images are not linked by any logical connections. They are simple and exaggerated. *The crowd's feelings are thus exaggerated too, spreading very quickly through suggestion and contagion, and their power is considerably boosted by open expressions of approval*. Identities are hardened by networks' apparent anonymity:

“The violence of a crowd's feelings is increased further by its dearth of responsibility. When impunity becomes increasingly certain as the crowd swells in size, and its members experience a fleeting impression of power because of their number, the collective is able to feel and do things that an individual never could. With its heightened levels of emotion, the crowd is only impressed when sentiments are excessive.”²¹

Crowds are thus almost entirely driven by the unconscious. Their actions are influenced to a much greater extent by the nervous system than the brain. They are also easily swayed by fables:

“As neutral as we might think them to be, crowds are most often in a state of attentive expectation that makes them highly suggestible. Whatever suggestion emerges first immediately and contagiously spreads from brain to brain, and the directive process has taken root. As in all suggestible beings, when an idea has penetrated humans' brains, it tends to transform into action. Moreover, crowds are only ever exceedingly credulous because they always skirt the limits of the unconscious mind, are easily swayed by suggestion, have the violent emotionality of creatures unsusceptible to the influence of reason and are stripped of all critical thinking skills. Improbability does not exist for the crowd, a fact we must bear in mind if we are to understand the ease with which the most improbable myths and stories emerge and spread.”²²

To hypnotise a crowd, all it takes is the following triptych:

²⁰ M. L. FREYBURGER-GALLAND, G. FREYBURGER, J.-C. TAUTIL, *Sectes religieuses en Grèce et à Rome*, Collection Realia, Paris, Belles Lettres, 1986, 338 p.

²¹ Gustave LE BON, *Psychologie des Foules*, 1895

²² Gustave LE BON, *Psychologie des Foules*, 1895

Gustave le Bon's triptych for manipulating a crowd	Affirmation	Affirm an idea via a mental image ²³ , without actively backing it up with proof. ²⁴
	Repetition	Repeat the chosen theme incessantly to saturate the reader's attentional capacities.
	Contagion	Base the narrative in emotional contagion, so that its theme is spread from person to person ²⁵ .

It is therefore hardly surprising in these circumstances that internet users' *information system* is fundamentally based on the repetition of sensational images:

“Everything that shapes the imagination of crowds presents as an arresting and very clear image unconnected from any supporting interpretation and unaccompanied by anything other than a few marvellous or mysterious facts, such as a great victory, miracle, crime or hope. Things must be presented as a monolith, with no explanation as to their genesis. Neither one hundred minor crimes nor one hundred minor incidents would impinge in the least upon crowds' imagination, yet a single great crime or incident would make a profound mark, even if its consequences were infinitely less deadly than the hundred minor incidents combined.”²⁶

The magnitude of these images' power also depends on the individual internet user's personality. The undecided are the most susceptible to manipulation. In his *Traité de Caractérologie*, René Le Senne notes that sentimental characteristics (which are emotive and secondary yet not active) are particularly prevalent among this group. It was, moreover, sentimentality which led to Robespierre's demise at Thermidor, as it sparked his fatal indecisiveness. It was also due to sentimentality that most of Alfred de Vigny's time at Maine-Giraud dwindled away in essays he could not finish, the author shuttling instead from one incomplete work to the next²⁷.

For Gustave le Bon, crowds naturally fall under the authority of a leader. He writes that “*it is not the need for freedom, but the need for servitude, which always dominates the soul of the crowd*”²⁸. To understand how to govern crowds, all one need therefore know is how to impress them.

²³ These image-ideas are not connected together by any logical similarity or sequence and can be swapped around like glasses for a magic lantern which an operator chooses from a stack in a box.

²⁴ Logically reasoned arguments are entirely incomprehensible to crowds. As such, it is possible to say that they do not use reason or use it inaccurately, and are not under its influence. It can be quite astonishing, upon reading about them, to see how weak certain immensely influential narratives have been to the crowds listening to them. We forget, however, that these narratives were made to lead collectives, not to be read by philosophers.

²⁵ When, through various means, an idea ultimately takes root in a crowd, its power becomes irresistible and triggers an entire series of effects which must be undergone. It took nearly a century to implant the philosophical ideas that culminated in the French Revolution within the soul of the crowd. The irresistible force they possessed once established is clear.

²⁶ Gustave LE BON, *Psychologie des Foules*, 1895.

²⁷ René LE SENNE, *Traité de caractérologie*, 1945, p. 197.

²⁸ Gustave LE BON, *Psychologie des Foules*, 1895

The leader is the primary organising element in heterogeneous crowds and prepares their later division into sects. In the meantime, he directs them. The crowd is a servile herd which could never do without a master. The leader has most often initially numbered among the led. He has himself been hypnotised by the idea he now proselytises. It has taken root in him to the extent that nothing else exists any longer and any contrary opinion presents as mistaken or superstitious. One such example was Robespierre, who was hypnotised by Rousseau's philosophical ideas and used the techniques of an inquisition to disseminate them. Most often, leaders are not men of thought, but men of action. They are not clear-sighted and neither can they be, because clear-sightedness generally leads to doubt and inaction. They are mostly recruited from the neurotic, enervated, somewhat alienated types who are at one remove from madness. As absurd as their precious idea or aim might be, reasoning evaporates away when it comes into contact with their conviction. Scorn and persecution simply glance off them, or serve to enflame them further. Everything is sacrificed, including their own and their families' best interests. Self-preservation instincts are eradicated, to the extent that the only reward they seek is to become a martyr."²⁹

In his 1904 work *Les Suggesteurs et La Foule*, the Italian criminologist Pascal Rossi wrote that weak or unwell individuals with rare personality types easily fall prey to hypnosis³⁰. As for leaders, they commonly have dual personalities which enable them to sink into the crowd only to suddenly rise up out of it, impressing upon it their own distinction. Julian the Apostate and Napoleon both had these abilities:

“One entered the Christians' temples in Gaul during Pentecost, the other entered heathen mosques during the great Egyptian campaign. All the great generals reduced themselves to the level of the soldiers, sometimes taking their place and joining life in the bivouacs, only to rise quickly to the distinguished ranks of authority surrounded by glory and pomp.”

The leader can thus alternate between different and varied personalities, which take precedence depending on suggestion from the crowd. Dramatic actors exemplify this alternating succession of mental states. In them, the individual has multiple emotional cores³¹. For Rossi, mental suggestion has one aim only, which is to awaken the animal lying dormant in the human mind. All these warlords seek to rouse as much of the primitive savagery dormant within all men that they can, as they sense that victory can only be sealed through the greatest possible and most unexpected explosion of animality³².

Hypnosis is thus the first technique for capturing others' mental focus, and perhaps the most human and natural. Statesmen are natural practitioners of this art. As Talleyrand put it, “what madness to claim to govern the world through abstractions and analyses using unfinished notions of order and equality, with an

²⁹ Gustave LE BON, *Psychologie des Foules*, 1895

³⁰ Pascal ROSSI, *Les suggesteurs et la foule*, Michalon 1904, p. 149

³¹ Pascal ROSSI, *Les suggesteurs et la foule*, Michalon 1904, p. 12

³² Pascal ROSSI, *Les suggesteurs et la foule*, Michalon 1904, p. 193

entirely metaphysical morality! We have seen the sorry results of these illusions.”³³ Suggestion’s effects vary wildly in their intensity. They range from the gentle nudging of a salesperson who wishes to make us buy their product to the neurotic subject who blindly obeys all their hypnotist’s whims and the influence of the illuminati on the elites³⁴. Consider, for instance, the famous Countess Tarnowska, who had no difficulty suggesting murders for her admirers to carry out. Her power was such that the carabinieri who escorted her and the prison officers who guarded her had to be constantly changed. Nonetheless, hypnosis (which can be enacted effectively over the internet) is an act of undivided domination. Napoleon would never have tolerated another claiming a share of his monopoly and, as a result, a new genre arose out of his empire, namely the *literature of ennui*³⁵.

³³Charles-Maurice de Talleyrand, *Mémoires du Prince de Talleyrand*, Paris, 1891, p. 85

³⁴ In his lectures on Fénelon, Jules Lemaître expressed the view that the prelate was under the influence of the neurotic Madame Guyon who, having taken him as her director, quickly reversed their roles. Fénelon was under her influence so entirely that he did not hesitate to submit her doctrine to a bishops’ conference presided over by Bossuet. Bossuet claimed that: “*I went away, astounded to see how such a great mind could admire a woman whose reasoning was so limited, who was so short of merit and whose delusions so palpable and yet who acted the part of prophetess*” .

³⁵ “Bonaparte ordonna une fois à un ministre de faire faire une Histoire de France. Il n’obtint rien. Le vide, le néant, ce nouveau roi du monde, le néant seul lui répondit. Les salons bruyants et causeurs du Directoire, maintenant surveillés, devant les écouteurs qu’y envoyait Fouché, sans oser se fermer, s’étaient peu à peu dépeuplés et devenaient déserts. De là partit le signal du bâillement universel. A la fermeture du Tribunat, son très brillant parleur, le jeune Benjamin Constant, écrivit son roman d’Adolphe (1802) où l’on voit que l’amour, seule ressource du temps, ne préserve pas de l’ennui. Madame de Staël, de son côté, fit le roman si diffus de Delphine (1802), puis dans *Corinne* le fade personnage d’Oswald, l’indécision qui tourne au spleen”, Jules MICHELET, *Du 18 décembre à Waterloo*, 1847, p. 95

CONDITIONING THE IMMOBILISED SUBJECT

Once a subject has been hypnotised, his or her will must be substituted for the orders of a third party. Methods used to this end combine gentleness with cleverly judged moments of violence. Together, they are referred to as “*conditioning*”, a term which, although seemingly neutral, gives a sense of the subjugated person’s alienation. The technique is used by certain insects within their own species. Ants, for example, condition their offspring to transform them into useful workers. They protect and care for the offspring, repel predators (including hoverfly and ladybird larvae), clean the colony and move their miniature workers from one plant stem to another. Having been conditioned, the offspring allow their overlords to take the rich honeydew that emerges in droplets from the end of their abdomen. The ants remove this droplet and ingest it. This practice of regimenting others’ lives appears to be inherent to organised societies. As Maurice Maeterlinck saw it, insect colonies (which are more ancient than our own civilisations) become more and more tyrannical as they grow in complexity.³⁶ While conditioning has several schools of thought, the techniques used remain the same in each one. Most frequently, they involve the use of imprisonment and violence in order to robotise behaviour as effectively as possible.

Training animals and internet users

At the dawn of the 20th century, biologists took an interest in the question of how subjects are conditioned. This teaching technique has been tried on various different animals, including dogs, pigeons, and rats. It enables a neutral stimulus to induce a reflexive reaction and artificially reproduces a mechanism which exists in nature. A large section of the animal’s outward behaviour appears to be a series of conditioned reflexes. The animal’s environment endlessly provokes these reflexes, yet it simultaneously represses them too. Ivan Pavlov was particularly interested in the ways reflexes could be inhibited. He wrote that pleasure and pain present as the language of organic and affective life and express whether the organism is in a state of balance or disequilibrium. They are nature’s way of obliging living things to do carry out certain actions, and without them existence would be impossible to maintain. Pavlov’s research enables us to effectively condition a dog. Sergei Chakhotin observed that “in training techniques [...] it is only desire and fear of sanction or pain which form the drivers of animal learning which therefore combines impulse no.2 (nutrition) and impulse no.1 (combat)³⁷.”

With help from the advances made by the Pavlovian school, John B. Watson drove behaviourism’s development in the USA. Watson took a purely objective view of behaviour, and his school of thought reached its apogee in 1921. Its roots lie in the utilitarianism of the era, and it was concerned primarily with efficiency. It was utilitarian in that it wanted psychology to be effective and practical. Watson’s reflections were further enhanced by B.F. Skinner, who identified two types of conditioning. The first was the classical conditioning of Pavlov’s dogs, while the second was known as operant conditioning and was illustrated through his box experiment³⁸. It was dubbed “operant” because it is the animal’s own actions

³⁶ Maurice MAETERLINCK, *La vie des termites*, 1927, p. 166.

³⁷ Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 119.

³⁸ B.F. Skinner created his box experiment in the early 1930s to make it easier to study conditioning’s mechanisms. Its purpose was to test rodents’ and pigeons’ ability to undergo operant conditioning by bringing together animal behaviour and reinforcement via stimuli.

which determine whether the behaviour-reinforcing stimulus appears. Operant conditioning is founded on the notion of reinforcement and punishment. Reinforcing a behaviour makes it more likely to be reproduced, while punishment makes it less likely. Reinforcement or punishment is triggered when a stimulus is provided or withdrawn. Four modes of controlling behaviour result³⁹. Of the four, positive reinforcement is most commonly used to condition internet users. A stimulus might, for instance, encourage him or her to *share content*. In behaviourists' view, humans should not be considered "superior" beings whose behaviour originates from a different place than animals'. Man is simply a machine, albeit an extraordinarily complex one. The psychologist's role is to gather data in order to get a better idea of how the machine works⁴⁰. Behaviourism created Applied Behavioural Analysis (or ABA), which positions itself as an alternative to psychoanalysis.

Although positive reinforcement did not emerge as a theory until the early 20th century, it is built upon a reward system which has been in place since the dawn of time. Tolstoy believed that the rewards endowed upon heroes of the battlefield (such as promotions, sabres, and medals) went at random to any which soldier, yet successfully stoked his fellows' courage⁴¹. This system is not alien to our own biological functioning. Neuroscience demonstrates that our hedonic responses work through rewards. The reward system is essential to survival, because it provides us with the motivation we need to perform the right actions or behave in the most appropriate way for the survival of the individual and species. After their ingestion, inhalation or injection into the body, certain psychotropic drugs such as alcohol and opioids work directly on this reinforcing system. When it goes awry, it causes behavioural disorders and dependence on psychotropic substances. In the human body, the main neurotransmitters involved in reinforcing behaviour are dopamine⁴² (which has a motivating effect) and endogenous opioids and cannabinoids (the impact of which is affective). The human machine can therefore function automatically using punishments and rewards. It remains to be seen whether these drivers can be enacted on a large number of individuals simultaneously.

Drivers for conditioning

³⁹ The four modes are as follows. In positive reinforcement, a stimulus which makes it more likely that a behaviour be repeated is added. The stimulus therefore fulfils an appetite. For instance, I might ask my dog to come to heel and he does it, so I reward him with a treat. The dog is now motivated to come to heel again, because I rewarded him by adding a stimulus that satisfies his appetites. In negative reinforcement, the removal of a stimulus makes it more likely that a behaviour be repeated. By implication, the stimulus is coercive or repulsive in nature. For instance, my dog barks when he sees people walk near my door. The people go away as a result, thereby rewarding the dog for having barked. The dog is motivated to repeat his barking behaviour because he was rewarded by the removal of a repulsive stimulus. *Positive punishment* involves the introduction of a stimulus which makes it less likely a behaviour be repeated. By implication, the stimulus is coercive or repulsive in nature. For instance, I might ask my dog to come to heel. For example, my dog does not come to heel, so I pull sharply on his lead. The dog is dissuaded from not coming to heel again, because he was punished through the use of a repulsive stimulus. Lastly, *negative punishment* entails the withdrawal of a stimulus, making it less likely that a behaviour be repeated. The stimulus therefore fulfils an appetite. For instance, when my dog tries to jump up at me to get my attention, I decide to ignore him. I have therefore punished him by taking away the response he wanted. The dog is less likely to repeat the behaviour of jumping up for attention, because he has been punished by the withdrawal of a satisfying stimulus.

⁴⁰ Jacques REINBOLD, "Le behaviorisme et les psychologues sociaux", *Philosophie et psychologie*, Volume 4, no. 2, October 1977, p. 335-340.

⁴¹ Pascal ROSSI, *Les suggesteurs et la foule*, Michalon 1904, p. 96

⁴² Dopamine reinforces actions that are usually beneficial, such as eating healthy food, by triggering a sense of pleasure which, in turn, activates the reward system. It is therefore essential to an individual's survival.

One way in which a crowd can be conditioned is to guide its leaders from a distance using symbolic or pecuniary rewards.

“We still hold the strings which move the popular masses, Barnave once said to M. de Jaurias, holding up a large tome containing the names of everyone that could be made to act by the power of gold alone. A considerable number were paid to ensure their loud approval, at which point the King and his family would join the spectacle as the constitution was accepted.”⁴³

In her *Mémoires*, Madame Campan claimed that the King was not unaware of this state of affairs, writing that “*he also knew of the days on which money had been paid out in Paris and, once or twice, the Queen told me not to go and to stay in Versailles instead, as there would surely be much commotion the next day as plenty of ecus had been sprinkled through the city’s districts*”⁴⁴. Rewards can also be symbolic. As it sought to shift American public opinion to support joining the First World War, the Creel Committee installed by US President Woodrow Wilson on 14 April 1917 found a number of hitherto unknown journalists, illustrators and PR professionals and enacted a full-blooded communications strategy. Taking research into the American public’s attention span as its basis, its “*Four Minute Men*” operation identified people who played a major role in their respective communities and asked them to stand up suddenly during public meetings to recount a four-minute speech or poem reiterating the government’s position on the need to go to war. Tens of thousands of individuals were recruited. In return, the state symbolically rewarded them by recognising their current social status.

Once the agents were in place, public discourse simply needed to be guided from a distance. True to form, “public opinion rose up fearsomely, impressing upon the most august people a character which was often untrue but almost always implacable”.⁴⁵ The clamour of public opinion guided from afar left its mark on the French Revolution. Upon witnessing its events, Madame Campan wrote that “*after [the storming of the Bastille on] 14th July, after a ruse by the Assembly’s insurgents which history’s most skilful subversives would have admired, the whole of France was armed and organised into national guards. One the same day at very nearly the same hour, they spread the rumour that four thousand mercenaries were marching towards the very towns and villages they wished to take up arms. Never was a plan more cleverly executed. Terror spread simultaneously across the entire kingdom, reaching even the most far-flung cantons.*”⁴⁶ It is worth noting that people become more vulnerable to rumour when they are isolated⁴⁷. Rumour whispers the loudest in silence and solitude:

“Open your ears, for which of you will stop / The vent of hearing when loud Rumour speaks? / I, from the orient to the drooping west, / Making the wind my post-horse, still unfold / The acts commenced on this ball of earth. Upon my tongues continual slanders ride, / The which in every language I pronounce, / Stuffing the ears of men with false reports. / I speak of peace while covert enmity / Under the smile of safety wounds the world. And who but Rumour, who but only I, / Make fearful musters and prepared defence, / Whiles the big year, swoln with some other grief, / Is thought with child by the

⁴³ Madame CAMPAN, *Mémoires*, Mercure de France, 1988, p. 363

⁴⁴ Madame CAMPAN, *Mémoires*, Mercure de France, 1988, p. 270

⁴⁵ Madame CAMPAN, *Mémoires*, Mercure de France, 1988, p. 114

⁴⁶ Madame CAMPAN, *Mémoires*, Mercure de France, 1988, p. 282

⁴⁷ Nicolas AURAY, “Manipulation à distance et fascination curieuse”, *Réseaux*, La Découverte, 2012 n° 171, p. 103-132.

stern tyrant war, And no such matter? Rumour is a pipe / Blown by surmises, jealousies, conjectures, / And of so easy and so plain a stop / That the blunt monster with uncounted heads, The still-discordant wavering multitude, / Can play upon it.”⁴⁸

As soon as the agents played their part, the vast majority of opinion moved with them⁴⁹. It is worth pointing out that conditioned responses disappear if they are not regularly returned. This is why dictators always govern through two essential actions. First, they assemble the masses into crowds and mentally whip them into shape through vehement harangues; second, they disperse the crowds, transforming them back into masses⁵⁰.

Four mental “devices” for conditioning were identified by the journalist Clyde Miller, whose research into the effects of propaganda was used to help implement the *Springfield Plan*⁵¹ in 1940. The aim of “virtue devices”⁵² was to ensure people, things and ideas are accepted by associating them with words and symbols widely held to be positive. The aim of “poison devices”⁵³ was to ensure certain ideas and people are rejected by associating them with negative words and symbols. “Testimonial devices”⁵⁴ use the voice of experience, knowledge or authority to make us approve or disapprove of people, things or ideas. They make use of well-known figures’ personal experiences and opinions. Lastly, “together devices”⁵⁵ encourage us to accept or reject people or ideas by calling upon our sense of solidarity and leveraging emotional pressure and collective (often mass) action⁵⁶.

Clyde Miller’s conditioning devices	Virtue devices
	Poison devices
	Testimonial devices
	Together devices

The American intelligence services, meanwhile, identified four psychological factors that would manipulate individuals. Their aim was to buy individuals’ services, win them over using their own ideas, intimidate them with one of their weaknesses or flatter them by massaging their ego.

The four factors which enable intelligence services to buy an individual	Money
	Ideology
	Compromise
	Ego

Pressure, or even a certain measure of violence, sometimes accompanied the four factors.

⁴⁸ William SHAKESPEARE, *Henry IV*, London 1842, p. 143.

⁴⁹ Gustave LE BON, *Les opinions et les croyances*, p. 122

⁵⁰ Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 140

⁵¹ The Springfield Plan was used to promote multiculturalism and democracy in an effort to eradicate racism from schools.

⁵² Virtue device

⁵³ Poison device

⁵⁴ Testimonial device

⁵⁵ Together device

⁵⁶ “Il est à noter que l’imitation joue un rôle dans le dressage des animaux : des animaux voyant leurs semblables exécuter certains mouvements, se les approprient plus rapidement.” Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 119.

First enclose, then abuse

One of conditioning's weaknesses is that it is difficult to enact from a distance. To get around this problem, a series of operations can be put into action to limit a person's freedom. The series starts by separating the public into clearly distinct identities. Gustave le Bon described the process of creating a fractured public thus:

“Modern evolution tends to break up society into small, distinct groupings with identical feelings, ideas and opinions. In short, the group shares a soul. It is easy to demonstrate how this fusion of individual souls into a collective marks a return to a stage in history's extremely distant past, a stage still in survival among primitive, inferior peoples. These primitives still organise themselves into small groups known as “tribes” which form momentary alliances, usually during war. The individual plays only a minor role, because individual souls have not yet emerged. They have but one collective soul, which is why all members of a tribe are considered responsible for the actions of a single person.”⁵⁷

This fracturing has now become more commonplace on social media due to the use of *filter bubbles*. In Elis Pariser's view, the term “filter bubbles” refers both to the process of filtering information before it reaches an internet user, and the state of intellectual and cultural isolation in which users find themselves when the information they are looking for online has, unbeknownst to him, been pre-shaped. Because algorithms utilise the various data collected about an internet user to discreetly select the content he or she can see, he or she ultimately accesses a significantly different version of the world wide web. A unique bubble optimised to suit the user's personality is therefore instated, built on the user's personal choices. Websites such as Google, Facebook and Yahoo do not display all their content. Instead, they display whatever has been selected for the user in hierarchical order of his or her assumed preferences. Using these data, websites can predict what content is most relevant to the individual. Algorithmic personalisation apparently makes it *infinitely* possible to settle the internet user in virtual security before deploying advertisements which appear to be peripheral but which are, in fact, the heart of the world wide web – and all without his or her knowledge.

Once the individual has been identified and pinned down within his or her clearly determined group, he or she can be manipulated on a near-individual level by a multitude of intermingling anxieties. This process is nothing new. Châteaubriand wrote about the Napoleonic Empire's police regime: “*Fouché created a phony terror filled with imaginary dangers*”⁵⁸. We know that the quality which video game dependency; constant text messaging; and the ways the internet is managed in terms of its music, film and photo functionalities all share is the *fear of downtime*, a fear of the void closely associated with death⁵⁹. Entertainment can help to fill this void or, conversely, it can be amplified through the use of appropriate triggers. This basic idea was investigated in the 1930s. It posits that, when in a state of fear, individuals demonstrate the most fundamental (and therefore predictable) reactions of flight and avoidance. When the brain's more complex functions do not offer an immediate solution, they are deactivated, thus making it easier to manipulate people in a state of terror. Like an animal pursued by a hunter, they cannot help but fall into the traps laid for them. When it comes to better automating, programming, planning, controlling, directing and mechanising human behaviour, nothing is more effective than plunging the mind into chaos

⁵⁷ Gustave LE BON, *Les opinions et les croyances*, p. 160

⁵⁸ François-René de CHATEAUBRIAND, *Mémoires d'outre-tombe*, 1849, p. 388

⁵⁹ Michel CLAES et Lyda LANNEGRAND-WILLEMS, *La psychologie de l'adolescence*, Presses de l'Université de Montréal, 2014, 385 p., p. 246.

and panic. The way the *information network* is provisioned is designed to generate an optimal level of anxiety. The most fragile personalities are destabilised by this influx of anxiety from a variety of different sources:

“Fear’s effects are amplified when a man is hungry, thirsty, ill or tired, or if a pre-existing emotion has served to depress his spirits. This explains why fear-based propaganda always works more easily on people in precarious economic conditions or who have been overworked or terrorised by other influences.”⁶⁰

Sergei Chakhotin examined the use of electric shocks to manipulate individuals’ thinking⁶¹. Surgery was also performed on depressives in an effort to improve their condition. The procedure was as follows:

“The cerebral mantle’s prefrontal lobes are disconnected from the centres at its base, where life’s essential instinctive, vegetative and emotional workings are located and wrapped in a cortex of inhibitions. These inhibitions are lifted, leaving way for a more carefree state of mind, liberating the afflicted person from his depressive melancholy and, if he is suffering from an agitated kind of madness, calming him.”⁶²

During the Second World War, both the Germans and Americans experimented on prisoners as a means of forming psychological slaves through violence. Project BLUEBIRD, for instance, concluded with experiments on human subjects using LSD⁶³. Project ARTICHOKE, which began on 20 August 1951, experimented with hypnosis, induced opiate addictions and separated new-borns from their mothers in an attempt to generate amnesia and other states in which subjects lost all sense of self, rendering them highly vulnerable⁶⁴. Its efforts were not entirely conclusive. For instance, North Korea observed that 15% of prisoners were immune to all forms of brainwashing⁶⁵. The circadian rhythms of the remainder⁶⁶, however, were fully reprogrammed.

In the final stage of the conditioning process, behaviour is robotised. Mechanisation of this sort uses ancient tried-and-tested methodologies. The first is *repetition*. This rhetorical style appeared in every 19th-century speech-writing guide for students. Racine’s *Athalie* explores the concept *thus*:

“As snare will catch itself, and abyss fall
They’ll take advantage of your untried youth
To make you hate in time the candid truth.”

Yet, after all, “there is no lie, however flagrant, which does not inspire some belief if told audaciously and repeated obstinately enough? Weak imaginations cannot withstand this

⁶⁰ Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 214

⁶¹ Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 75

⁶² Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p., p. 76

⁶³ The American scientist Franck Olson (who was murdered in Manhattan in 1953) studied the use of drugs as a form of mind control.

⁶⁴ This research programme’s central question was elucidated in January 1952: “*is it possible to control someone to the point that he does what we ask him, even against his own will, overriding nature’s fundamental laws such as self-preservation?*”

⁶⁵ Prisoners who fell into this category were then killed so as not to compromise the others’ re-education.

⁶⁶ Described for the first time in 1729 by the French mathematician and astronomer Jean-Jacques Dortous de Mairan, circadian rhythms run for a cycle of about a day – *circa* means “around” in Latin, and *diem* “day” – and exist in most living organisms.

double impingement, and fervent imaginations grasp it so firmly that they are stirred all the more⁶⁷". Advertising's use of repetition has led to the creation of *echo chambers*. This concept as described by John Scruggs (a lobbyist for cigarette maker Philip Morris International) refers to the repetition of a single message via various sources. Scruggs saw the echo chamber as a strategy for increasing information's credibility among its target audience. Echo chambers have become more common with the democratising forces of the internet and arrival of social media⁶⁸. Repetition's traction is further increased by humans' need to imitate. In 1890, Gabriel Tarde published *Les Lois de l'Imitation*. A magistrate from the Périgord region of France, he believed that imitation was nature's greatest force and true inventors were few in number. There is a considerable amount of recurrence in the ways our societies work⁶⁹. This is particularly true of social media, whose foundational mechanism is to duplicate opinions judged to be interesting. Nonetheless, imitation generates counter-movements. In his words:

"There are two forms of imitation: replicating one's model exactly, or doing the polar opposite. People often imitate others by positioning themselves in exact opposition, especially when they have neither the modesty to simply copy nor the ability to invent something new. Just as is the case when one says or does exactly what one observes others say or do, by doing or saying the diametric opposite one becomes increasingly assimilated. When an idea is put into the public sphere by the press, without fail people divide into two camps. In one, there are those who "agree"; in the other, there are those who "do not agree".⁷⁰

Various factors work to reinforce imitation. Generally speaking, an individual (or subject) will imitate a model all the more if he or she considers it likeable, benevolent and rewarding. The model must have special status⁷¹. Moreover, imitation is made more likely when the subject shares a certain number of characteristics with the model. Research into this phenomenon has led to the emergence of *synchronisation technique*. This methodology is based on the fact that people's movement naturally and spontaneously coordinates when they are in a setting they trust. Synchronisation involves the conscious reproduction of our interlocutor's body language in order to generate a sense of trust. Within internet cells' small, closed groups, homogeneity is achieved through conformism. These groups are limited in number. We know that a single person cannot maintain ongoing relationships with more than 150 other people. Once that upper limit has been reached, institutions structured by rule-based systems must make up for the shortfalls in our brains' capacity and organisational abilities. "Dunbar's number", as it is known, restricts the size of our social networks. As a result, "*shaping*" occurs within our small circle, and must be maintained if it is to retain its full efficiency. Outside the bubble, however, cognitive saturation prevents us from building deep relationships with others⁷².

⁶⁷ Camille JORDAN, *Sur la révolution du 18 fructidor*, 1797

⁶⁸ Often, individuals isolated in the media's echo chambers are enclosed both intellectually and in terms of the information they have access to. Their particular enclosure is designed in line with their vision of the world. Their pre-existing beliefs are therefore bolstered, making them unable to take critical, constructive viewpoints. Such people are also less able to distinguish between real and false information. This kind of intellectual narrowness is evident in the theory posited by the *Flat Earth Society*, for example.

⁶⁹ Gabriel TARDE, *Les lois de l'imitation*, 1890

⁷⁰ Gabriel TARDE, *Les lois de l'imitation*, 1890.

⁷¹ Monkeys only imitate new behaviour when it is displayed by their social superiors.

⁷² Nicolas AURAY, "Manipulation à distance et fascination curieuse", *Réseaux*, La Découverte, 2012 n° 171, p. 103-132.

Human conditioning methodologies (which are inspired by animal training techniques) have identified particular drivers that help to gently enclose an individual within a mental space. The effect of this is to make others harder to predict. It is as if predictability and inferiority were equivalent qualities. Internet users' mental enclosure creates a schism between their real and virtual personalities. In doing so, it reinforces a natural tendency by which:

“We are not satisfied with our inner lives and existence. We wish to live an imaginary life via others' conception of us, and we do everything in our power to make this life real. We work tirelessly to embellish and construct our imaginary existence, neglecting our real life in the process.”⁷³

In short, over the course of a century, we have shifted from Emile Coué's autosuggestion to suggestion operated by an undefinable *other*.

⁷³ Blaise PASCAL, *Pensées*, Hachette, 1950, p. 71.

THE ART OF MANIPULATION

Once a subject has been immobilised and tenderised by conditioning, he or she can be directed from a distance. The art of manipulation remains subtle, however, in that a section of the population resists being ruled by others. The Duke of Saint-Simon commented of Louis XIV that “*no Prince was ever more protective of his independence and ungoverned state, yet no Prince had ever been less so; in order to govern him, however, he must not suspect what one was really doing*”⁷⁴. The King tended to focus excessively on details and was often manoeuvred by his own ministers⁷⁵. Manipulation can be defined as a means by which persuasion or domination are used to control a person and his or her actions, without his or her prior agreement. It operates through the rational use of the target person’s vulnerabilities. It has flourished in liberal spheres, where restrictions are less numerous than in authoritarian regimes. Manipulation and influence were subjects of much fascination during the 19th century⁷⁶. On 2 April 1829, Eckermann declared to Goethe that “*Your Excellency should execute his plan and write a chapter on influences. It is an important subject, and the more one thinks about it, the richer it becomes*”. Goethe responded that: “*It is only too rich as, ultimately, everything is influence*”. At the time, the art of influence was considered to be integral to feminine ingenuity⁷⁷. Depending on its degree of subtlety, it can take two different forms: manipulation and brainwashing.

The art of manipulation transposed into the virtual world

It would be a significant misunderstanding to believe deception is practised by the human race alone. In fact, manipulation is commonly employed across the animal kingdom. Camouflage enables certain animals to seem other than they really are. Predators such as humpback angler fish manipulate their adversaries psychologically by disguising themselves

⁷⁴The Duke of Saint-Simon, *Mémoires secrets* (1974) Neuilly sur Seine: Union général d’éditions, p. 63

⁷⁵ “Il voulait régner par lui-même. Sa jalousie là-dessus alla sans cesse jusqu’à la faiblesse. Il régna en effet dans le petit ; dans le grand il ne put y atteindre et jusque dans le petit il fut souvent gouverné. Il se piquait des détails, ce qui le persuadait, aidé de l’adresse, de l’intérêt, des artifices de ses ministres, qu’il voyait, qu’il faisait, qu’il gouvernait tout par lui-même, tandis qu’amuser par des bagatelles, il laissait échapper le grand qui devenait la proie de ses ministres. Le Tellier, longtemps avant d’être chancelier de France, connaissait bien le Roi là-dessus. Un de ses meilleurs amis l’avait prié de quelque chose qu’il désirait fort et qui devait être proposé dans le travail particulier de ce ministre avec le Roi. Le Tellier l’assura qu’il y ferait tout son possible ; Son ami ne goûta point sa réponse et lui dit franchement que dans la place et le crédit où il était, ce n’était pas de celles-là qu’il lui fallait donner. Vous ne connaissez pas le terrain, lui répliqua Le Tellier. De vingt affaires que nous portons ainsi au Roi, nous sommes sûrs qu’il en passera dix-neuf à notre gré” Duc de SAINT-SIMON, *Mémoires secrets*, Neuilly sur Seine, Union général d’éditions, 1974, 402 p., p. 97

⁷⁶ José-Luis DIAZ, “Un siècle sous influence”, *Romantisme*, 1997, n°98, p. 11-32.

⁷⁷ The Countess of Soignes wrote in *La Revue des Deux Mondes*: “Que faut-il pour régner dans le monde, pour avoir vraiment un rôle dans une société où les traditions ont encore leur prix ? Je ne parle pas du nom, du rang, de la fortune ou de ces circonstances exceptionnelles qui font souvent une réputation mondaine. Il faut surtout de la grâce, de l’esprit, de la séduction, du tact, de la fidélité dans quelques amitiés choisies et une indulgence savamment dirigée dans les relations ordinaires, le don de captiver les hommes et de les retenir en les intéressant à la prospérité de ce petit empire qui s’appelle un salon, l’art de rapprocher et de grouper dans un milieu où les opinions, les caractères les plus divers se retrouvent sans se heurter, — tout ce qui est enfin l’essence la plus pure et la plus subtile du génie féminin.”

as prey. They shake a filament resembling a tempting morsel above their head to attract soon-to-be-devoured predators. Certain angler fish which reside in the depths of the bathypelagic zone emit light to attract prey. This bioluminescence is generated through bacterial symbiosis. Mimetics enable harmless animals to look inedible or toxic. Some may appear to have eyes that extend beyond their own head, which helps to avert attacks and increase their chances of survival. Animals which employ more active defence mechanisms might distract predators by releasing ink or making themselves look stronger than they really are⁷⁸. Certain males are attracted by what appears to be a sexually receptive female, only to find themselves consumed. For instance, *photurius* fireflies give off the same light signals as females of the *photinus* genus do when they are ready to mate. As a result, male *photinus* fireflies are attracted to these “femmes fatales”. Predatory mimetics are not necessarily visual in nature. For example, *assassin bugs* eat spiders by stepping onto their web and imitating the vibrations which would normally indicate trapped prey, inducing the arachnid to rush towards its open jaws. Similarly, the death’s-head hawkmoth forestalls any attacks by bees by giving off a scent much like their own, before using their proboscis to pillage their honey. Lastly, *thanatosis* – the process by which an animal feigns death – is common among reptiles. When disturbed, non-venomous snakes stretch out belly up, open their mouth and release a malodourous liquid via their cloaca that simulates the smell of a dead body.

Manipulation is so widespread among humans that it has been interiorised. Blaise Pascal wrote that:

“We loathe the truth, so it is hidden from us; we want to be flattered, so we are flattered; we love to be deceived, so we are deceived [...] Man is nothing but deception, lies and hypocrisy practised both towards oneself and others. He does not wish to be told the truth. He balks at telling it to others. All these dispositions, which are so remote from justice and reason, have a natural root in human hearts.”⁷⁹

This urge for self-manipulation has found an ideal home on the internet. In Francis Jauréguiberry’s view, because we cannot play out our borrowed identities within society, we play them out virtually online instead. Manipulation enacted on the self can cause individuals to collapse into their virtual reality. As they indulge unrestrainedly in the delights of seeing their fantasies recognised by a network, they risk finding themselves compulsively using the internet, a habit which, in turn, generates within them a quasi-“autistic” character. It is not by chance, however, that the internet has become a trap for addicts⁸⁰. Cognitive sciences have recently discovered how the brain controls our attention. It decides on our actions using three mechanisms: habits, the reward system and the executive system. Habits form a detection system that allows us to use pre-existing knowledge to identify objects. The reward system links an object with a sensation, causing the former to take on a positive or negative connotation. The executive system regulates the impulses produced by the first two systems by formatting and memorising occasional actions as per the following dictum: “If I perceive this, I must react like that”. These systems are not always aligned – in fact, they often conflict with one another. The executive system wins out by making us concentrate on a task, but we can often be distracted by signals which trigger the other two mechanisms. Advertising

⁷⁸ A mantis shrimp which has just shed its skin often adopts the same intimidating posture it would have were its still-soft exoskeleton able to sustain impact.

⁷⁹ Blaise PASCAL, *Pensées*, Hachette, 1950, p. 57

⁸⁰ It is worth noting that addiction has been a subject for analysis since the early 20th century, having been examined by Sigmund Freud, Karl Abraham, Sandor Rado, Otto Fenichel and Herbert Rosenfeld. For these theorists, it provided a means by which they could understand people’s unconscious, impulsive and regressive inner mechanisms.

experts understand this well. All their modern techniques to persuade us, from Edward Bernays' Engineering of Consent to contemporary advertising and marketing, are based on a drive to capture our attention. The attention economy treats our focus like a rare resource.

The art of capturing attention (which is central to social networks' functioning) did not come about by chance. It was inherited from illusionism, the precise aim of which is to divert spectators' attention. In the three-card Monte trick, for example, two cards are held between the conjurer's thumb, index and middle fingers, while a third (*whose only purpose is to distract the watcher's attention*) is found in his or her other hand. Stage magicians are sometimes supported by assistants whose sole role is to misdirect the audience's attention. Sometimes, a trick is constructed around two or three increasingly spectacular denouements. The first two suggest that the trick is over, so the spectators' attention relaxes. The magician might point to an object at her right in order to complete an action to her left, or straighten a pack of cards as she does something else. Our attention can equally falter when it is asked to focus on too many things at once, a fact which illusionists exploit⁸¹. Illusionism reveals certain cognitive biases which orient our memory and senses. One such bias is that we are better at remembering the last piece of information we were presented with,⁸² or the first entries on a list we have memorised⁸³. In his era, Gustave le Bon noted that we tend to make judgements based on first impressions⁸⁴. If our cognitive biases can be exploited intelligently, our attention can be drawn to something we were not originally looking for, from a "*honeypot*" designed to trigger a cyber-attack to the little red dot which tells us we have a message – red being associated with vitality, the combat instinct, sexual dominance and social recognition⁸⁵. It is no coincidence that *red sights* for weaponry sell in greater numbers than any other colour in France.

⁸¹ The most famous study demonstrating our attentional blind spots is the invisible gorilla test conducted by Daniel Simons (of the University of Illinois) and Christopher Chabris (of Harvard University). During their research, they asked subjects to watch a short video of two teams wearing black or white basketball shirts passing a ball back and forth. The subjects were tasked with counting the number of passes made by one team, or to compare the number of overhead passes with the number of bounce passes. During the game, a woman in a gorilla suit walks across the court. Once they had completed their task, the subjects were asked if they noticed anything out of the ordinary. In most test groups, 50% of subjects had not noticed the gorilla. This oversight has been put down to the way in which the subjects utilised all their attentional abilities to complete a difficult task.

⁸² Recency effect

⁸³ Primacy effect

⁸⁴ "L'élaboration d'un jugement étant lente et pénible, on se contente généralement des premières impressions, c'est-à-dire des suggestions de l'intuition pure. Les femmes, les enfants, les primitifs et beaucoup d'hommes très civilisés même, se fient entièrement à leurs premières impressions. Dans certains éléments de la vie sociale, les impressions s'associent quelquefois à des raisonnements. Mais il en est d'autres, les sujets artistiques et littéraires notamment, où nos premières impressions restent à peu près les seuls guides (...) Nos premières impressions sont parfois subitement détruites par des impressions contraires, mais il arrive aussi qu'elles soient assez fortes pour ne disparaître que lentement par simple usure. Les jugements fondés sur elles persistent alors, très longtemps. Les impressions premières devraient être considérées comme de vagues indications, toujours à vérifier. S'y abandonner sans examen, ainsi qu'on le fait trop souvent, condamne à traverser la vie dans l'erreur. Elles n'ont, en effet, pour soutiens que des sympathies et des antipathies instinctives que n'éclaire aucune raison. Et c'est pourtant sur d'aussi fragiles bases que s'édifient le plus souvent nos conceptions du juste et de l'injuste, du bien et du mal, de la vérité et de l'erreur." Gustave LE BON, *Les opinions et les croyances*, p. 160

⁸⁵ Cardinals' galeros and the Legion d'Honneur both illustrate this point.

Professional manipulators share several characteristics, including flexibility, discretion and subtlety⁸⁶. Their skills are not as innate as one might imagine. For Talleyrand, they emerged out of long and painstaking research in both books⁸⁷ and on humans:

“I lodged in a small, comfortable house in Bellechasse. My first concern was to put together a library, which then became precious to me thanks to its selection of books, rare editions and elegant gold binding [...] I was in no rush, I taught myself and travelled.”⁸⁸

This enabled Talleyrand to become so skilled that all powerful people felt obliged to call on his services. Upon the diplomat’s death, Victor Hugo contemplated the mind which had plotted so many intrigues:

“In this palace, like a spider in his web, he attracted and seized, one by one, heroes, thinkers, great men, conquerors, kings, princes, emperors, Napoleon, Sieyès, M^{adame} de Staël, Châteaubriand, Benjamin Constant, Alexander of Russia, Wilhelm of Prussia, Holy Roman Emperor Francis, Louis XVIII, Louis Philippe: all the gilded, shining bees which buzzed through the forty previous years of history. This dazzling swarm was fascinated by the man’s penetrating eye and passed one by one through the dark door on whose architrave it is written Hotel Talleyrand.”⁸⁹

Talleyrand was brighter than many of his contemporaries. Consider, for example, the banker Ouvrard who duped Napoleon. Michelet wrote that: “Spain, which was as miserable as a dried bone, yielded nothing. The adroit and bold Ouvrard gracefully introduced himself there, ready for any challenge and with an answer for everything, able practically to perform acts of magnetism or raise the dead [...] Napoleon was so ill-attuned to these things that, even if one wished to serve him, one first had to deceive not just him but also the ignorant minister he tasked with guiding his ignorance”⁹⁰. Ouvrard’s ploy did not last, however, and his ruses finally led to his disgrace.

⁸⁶ “Le prince devant donc agir en bête, tâchera d’être tout à la fois renard et lion : car, s’il n’est que lion, il n’apercevra point les pièges ; s’il n’est que renard, il ne se défendra point contre les loups ; et il a également besoin d’être renard pour connaître les pièges, et lion pour épouvanter les loups. Ceux qui s’en tiennent tout simplement à être lions sont très malhabiles.” Nicolas MACHIAVEL, *Le Prince*, 1515

⁸⁷ “La bibliothèque du séminaire de Saint-Sulpice, enrichie par M. le cardinal de Fleury était nombreuse et bien composée. J’y passais mes journées à lire les grands historiens, la vie particulière des hommes d’Etat, des moralistes, quelques poètes. Je dévorais les voyages. Une terre nouvelle, les dangers d’une tempête, la peinture d’un désastre, la description de pays où l’on voyait les traces de grands changements, quelquefois de bouleversements, tout cela avait un vif attrait pour moi. Parfois, il me semblait qu’il y avait dans ma situation quelque chose de moins irrévocable à l’aspect de ces grands déplacements, de ces grands chocs dont les descriptions remplissent les écrits des navigateurs modernes. – Une bonne bibliothèque offre les secours à toutes les dispositions de l’âme. Ma troisième et véritablement utile éducation date de ce temps. Et comme elle a été fort solitaire, fort silencieuse ; comme j’étais toujours tête à tête avec l’auteur que j’avais entre les mains, et comme je ne pouvais le juger qu’avec mon propre jugement, il m’arrivait presque toujours de penser que lorsque nous étions d’avis différents, c’était moi qui avais raison. De là, mes idées sont demeurées miennes : les livres m’ont éclairé, mais jamais asservi. Je n’examine point si c’est bien ou si c’est mal ; mais voilà comme j’étais. Cette éducation prise à soi tout seul doit avoir quelque valeur.” Charles-Maurice de Talleyrand, *Mémoires du Prince de Talleyrand*, Paris, 1891, p. 21

⁸⁸ Charles-Maurice de Talleyrand, *Mémoires du Prince de Talleyrand*, Paris, 1891, p. 58

⁸⁹ Victor HUGO, *Portrait de Talleyrand*.

⁹⁰ Jules MICHELET, *Du 18 décembre à Waterloo*, 1847, p. 203-210

It was in fact during the first third of the 20th century that psychological manipulation was theorised by Edward Bernays, nephew of Sigmund Freud, in his famous 1928 work *Propaganda*. In it, he famously advocated for “invisible government”:

“The conscious and intelligent manipulation of the organised habits and opinions of the masses is an important element in democratic society. Those who manipulate this unseen mechanism of society constitute an invisible government which is the true ruling power of our country. We are governed, our minds are moulded, our tastes formed, our ideas suggested, largely by men we have never heard of. This is a logical result of the way in which our democratic society is organised. Vast numbers of human beings must cooperate in this manner if they are to live together as a smoothly functioning society. Our invisible governors are, in many cases, unaware of the identity of their fellow members in the inner cabinet: They govern us by their qualities of natural leadership, their ability to supply needed ideas and by their key position in the social structure. Whatever attitude one chooses to take toward this condition, it remains a fact that in almost every act of our daily lives, whether in the sphere of politics or business, in our social conduct or our ethical thinking, we are dominated by the relatively small number of persons – a trifling fraction of our hundred and twenty million – who understand the mental processes and social patterns of the masses. It is they who pull the wires which control the public mind, who harness old social forces and contrive new ways to bind and guide the world.”

For Bernays, who made his living as a PR consultant, the invisible leaders among whom he knowingly belongs are essential to the smooth running of collective life. Theoretically, every citizen has a vote, yet in reality, his or her choices are directed. The author went on to write that: “The minority has discovered a powerful help in influencing majorities. It has been found possible so to mould the mind of the masses that they will throw their newly gained strength in the desired direction”. With Bernays, therefore, we move away from simple psychological manipulation to the realms of *possession*.

Brainwashing: manipulation’s endgame

Brainwashing is manipulation’s final end. With it, a human body becomes nothing more than a skin inhabited by another. Sergei Chakhotin wrote that:

“The great danger which could befall humanity [...] is that there are men who have spied that the state in which most of their contemporaries find themselves affords them the opportunity to turn their fellows into puppets and have them serve their own ends – in short, to rape them psychologically.”⁹¹

The fantasy of manipulating global public opinion from a secret base was expressed in literary form in 1627 when Francis Bacon wrote *New Atlantis*. In it, the author imagined a secret island which dazzled the senses with its “*perspective-houses*” that create artificial rainbows, its *motor-houses* that create submarines and *illusion-houses* that generate apparitions⁹². In fact, brainwashing involves making an adversary believe what they need to believe so that they are always surprised by reality and their view of a situation is never correct. This way, the adversary can only pursue war or policy first in the dark, then in a state of paralysis. Of all this subversive ammunition, brainwashing is the most dangerous and constitutes a form of

⁹¹ Serge TCHAKHOTINE, *Le viol des foules par la propagande politique*, Gallimard, 1952, 605 p.

⁹² Francis BACON, *The New Atlantis*, London, 1845, p. 262.

intellectual attack on the human spirit. It is intelligence’s weapon par excellence⁹³. In his work *L’Intoxication*, Pierre Nord describes brainwashing’s three stages with reference to an example taken from the Bible:

“The intelligence services’ handbook has remained valid for centuries and appears in the Book of Esther [...] The extremely powerful Ahasuerus’ sovereign reign extended from India to Ethiopia. The Jews were scattered across this immense empire, despised and oppressed wherever they went. In its capital city, Susa, a Jewish man named Mordecai succeeded in making his young cousin Esther queen by hiding her Jewishness from everyone, from her emperor husband to his very last subject [...] When it comes to creating the right conditions for any major attempt at brainwashing, nothing has changed. First, an agent is not only fraudulently placed in a position of particularly great safety amongst the enemy, but afforded the highest of ranks in their social hierarchy. Once there, the ever-perceptive Mordecai uncovered a vicious plot by the court’s eunuchs to assassinate Ahasuerus. He informed Queen Esther, who repeated the story to the King. It will become apparent that, in modern times, once he or she is in position, every brainwasher’s first step is to provide his or her adversary with both true and useful information so that they can be deceived later on. With Esther as his go-between, the masterful Mordecai could start to get to work. He got his chance when court favourite Haman convinced Ahasuerus to authorise him to cut the throat of every Jew in the empire. Esther conspired to make sure Ahasuerus saw Haman apparently making advances on her (although, for once, the latter was in fact doing nothing wrong). Ahasuerus exclaimed that Haman would even go so far as to brutalise his wife in his own palace. To cut a long story short, Haman was hanged, the people of Israel were saved and Mordecai became a vizier. The Jews’ victory was so comprehensive that many people belonging to the country’s other ethnicities converted to Judaism out of sheer terror of Jewish might. Secret services have been dreaming of this kind of coup for many centuries, without success.”⁹⁴

Intelligence services’ playbook as described by Pierre Nord	1	Introduce a particularly safe agent into the highest rank of a hierarchy
	2	Have him or her fulfil a useful role
	3	Enact brainwashing

Brainwashing’s three commonly practised steps enabled Germany to penetrate Russian minds in 1917, introducing the *idea of a communist movement* in line with head of the *Nachrichtendienst* Colonel Nicolai’s master plan. This allowed Lenin and 29 other Bolsheviks (plus two children) to arrive in Russia on 16 April 1917 and spark revolution. The three steps also later enabled Germany to break up the Soviet General Staff during the Tukhachevsky Case. The latter led Stalin (at General Heydrich’s instigation) to the execution of the Russian high command, as well as 35,000 high-ranking and junior officers. In total, this represented half of the Russian Army’s officer class. No victor had ever annihilated the military leadership on such a scale, even among their bitterest vanquished foe⁹⁵.

⁹³ Like counterespionage’s shapeshifters, practitioners of brainwashing have borrowed their terminology from German, referring to “*Spielmaterial*” or “*Spielpsychologie*”.

⁹⁴ Pierre NORD, *L’intoxication*, Fayard, 1971, p. 16

⁹⁵ Pierre NORD, *L’intoxication*, Fayard, 1971, p. 73

These successful manoeuvres generated a certain amount of fear among the French. In his interwar work *Les regards sur le monde actuel*, Paul Valéry intuits that civilisation would one day enter a new era following the triumph of technology over contemplation. For Valéry (who worked as a clerk in the French War Ministry), an intelligence-disrupting regime had already been established by fraudulent intellectuals who disconnected thought from real life:

“We are living through the most extraordinary times in which the most widely accredited ideas that were once seemingly incontestable are being attacked, contradicted, ambushed and dissociated by facts, to the extent that we are now witnessing a kind of imaginative failure and a collapse of comprehension.”

He goes on to say that “this state of affairs prompts me to believe that we might be able to directly alter the soul and mind of man from the outside”. Half a century before the birth of the internet and personalised marketing, Valéry writes:

“Undoubtedly, some slightly more powerful and subtle means than our own will one day enable us to impinge remotely not just on living beings’ senses, but on the most hidden depths of a person’s psyche. An unknown distant operator could stimulate the very sources and systems of our mental and emotional lives and expose our minds to illusions, impulses, desires and artificially induced madness.”

He even imagined hacking the human brain: “We are well aware [...] that the pathways via which the castle of the soul can be penetrated and mastered are defenceless. There are substances that can coax their way in and seize their prize. What chemistry can do, physics’ waves will soon find a means to match.” Paul Valéry goes on to picture the terrifying consequences of these potential manipulations:

“Imagine a world in which the power to make men live at a faster or slower pace, communicate ideas to them, make them frown or smile, discourage or encourage them, to stop a whole people’s hearts from beating when required, has been mastered, defined and exerted! What would become of our pretensions to selfhood? Men would be in constant doubt as to whether they were ‘themselves’ or puppets, down to the deepest roots of their sense of existence.”

The world of permanent connectivity is undoubtedly upon us. Modern persuasive technologies employ “*nudge*” theory, by which a “*choice architect*” guides consumers’ choices. Rooted in behavioural economics and neuro-marketing, they lend algorithms a governing power. This new economy considers our attentional capacities a rare natural resource. This state of affairs is not without political consequences. In *Manufacturing Consent*, Noam Chomsky analysed the propaganda model used by the media to shape public opinion. Chomsky identified a number of manipulation techniques. These include entertaining the public; inventing both an imaginary problem and a solution; staggering the resulting measures’ roll-out; announcing long-term impacts; infantilising the public; manipulating their emotions; keeping them in a state of ignorance; suggesting candidates through the use of polls; blaming them through reference to a falsehood; or getting to know their behaviour so precisely that they can be hypnotised. The last of these techniques has been perfected to a quite remarkable degree by the far-reaching use of *big data* during elections. Data is currently handled over three phases: first it is collected; then processed; and finally targeted. A hierarchy has gradually taken hold in electoral marketing professions between *data analysts*, who create and manage databases, and the *data scientists* who use the mass of information

that has been gathered. During an election, the most important factor is being able to set aside those groups which are already won by or lost to a side, so that the focus can zero in on undecided voters. Once these undecided voters have been identified, they can be enclosed within a digital bubble in which they only receive messages that correspond to their hopes and aspirations. Swing voters' attention is then drawn to a *manufactured candidate* through the purchase of polls promoting the favourite. Once this psychological suggestion has been put into play, the "*bandwagoning*" effect aggregates the undecided masses around the promoted politician. Societies which use old-style communications have thus been overrun by new specialist enterprises. Having initially worked in psychological operations, *Cambridge Analytica* switched its analytical focus to gathering data on five psychological characteristics: openness, self-awareness, extroversion, likeability and neurosis. These data were gathered using a company that acts as a screen by offering free personality tests. Over time, the brainwashing process became complete. We have long known that subliminal imagery has an instant effect on impulse buys⁹⁶. However, social engineering works very much upstream of these ancient techniques by, for example, implanting false memories in the consumer's mind. In his words:

"Our brains are not comparable to a computer's hard drive in which details are absolutely reliably recorded, stored and finally retrieved. Much like visual perception, memory is a creative process. Memories can be overhauled, intermixed, imagined, altered, and forgotten. Descriptions of events we have not personally experienced may be accepted in such a way that we believe we had ourselves been present. Our memories are vulnerable to suggestion and leading questions."⁹⁷

When we repeat incorrect information that has found its way into our thoughts as we attempted to fill the gaps in our fragmentary memory, we might accidentally create erroneous beliefs about past events.

Manipulation can thus take different forms with different degrees of seriousness, from simple influences, to full-blown brainwashing. The

⁹⁶ After subliminal images were inserted into the television show *Popstars* broadcast on channel M6 on 6 December 2001, France's state council made the following recommendation to all television services: "Conformément aux articles 28, 33-1 et 43-11 de la loi n° 86-1067 du 30 septembre 1986 modifiée, les services de télévision sont tenus d'assurer sur leur antenne l'honnêteté de l'information et des programmes. Aux termes de l'article 9 du décret n° 92-280 du 27 mars 1992 modifié, la publicité clandestine est interdite. "Constitue une publicité clandestine la présentation verbale ou visuelle de marchandises, de services, du nom, de la marque ou des activités d'un producteur de marchandises ou d'un prestataire de services dans des programmes, lorsque cette présentation est faite dans un but publicitaire". En application de l'article 10 dudit décret, "la publicité ne doit pas utiliser des techniques subliminales", entendues comme visant à atteindre le subconscient du téléspectateur par l'exposition très brève d'images. Or, le Conseil supérieur de l'audiovisuel a récemment pu relever sur l'antenne d'un service de télévision la présence d'images subliminales, introduites lors des opérations de montage mettant en œuvre des technologies numériques. La présence de telles images n'est pas conforme aux dispositions précitées. Tout éditeur de service est responsable du contenu des émissions qu'il programme et à ce titre est tenu d'assurer la maîtrise de son antenne. Aussi le Conseil supérieur de l'audiovisuel appelle-t-il l'attention de l'ensemble des services de télévision sur la nécessité de veiller à ce que leurs émissions, qu'elles aient été produites ou réalisées par leurs soins ou par des sociétés tierces, ne comportent en aucun cas d'images subliminales, à caractère publicitaire ou non. Il demande à l'ensemble des acteurs assurant la production et la diffusion des images de mettre en place les moyens de vérification adaptés à l'environnement numérique et d'en informer aussitôt le Conseil." Cette recommandation a été adressée à M6 accompagnée d'un courrier spécifique."

⁹⁷ Anne GUYARD et Pascale PIOLINO, "Les faux souvenirs, à la frontière du normal et du pathologique", *Psychologie et Neuropsychiatrie du vieillissement*, vol. 4, n° 2, June 2006, p. 127-134.

latter has been made more widespread by the individual data collection made possible by spyware. The digital world has been organised to ensure each individual emits the greatest possible amount of data. We are entering into the era of “*compliance without pressure*”, or submission by consent. This persuasive process gives individuals the impression that they have made certain decisions themselves. As such, a person might believe he or she is the force behind the changes he or she makes to his or her behaviour, aims and choices. In this light, Chateaubriand’s *Memoirs from Beyond the Grave* take on a rather prophetic quality: “*Solitary traveller, a few days past I was meditating on the ruins of destroyed empires. And I can see a new empire rise before me.*”⁹⁸

⁹⁸ François-René de CHATEAUBRIAND, *Mémoires d’outre-tombe*, 1849, p. 29

CONCLUSION

Having emerged out of a hybridisation of historic research into animal behaviour and neuroscience's latest advances, *captology* gives its users the triple capability of identifying, shaping and finally infiltrating their subject. This science has its apologists who believe that, far from being alienating, influence enables individuals to construct their own sense of self. After all, influence only works with the victim's consent. *Captology* would seem to spirit us back to the world of the Iliad, in which all human action was guided by the gods. Our being *captured* is not actually a *fait accompli*. There are, moreover, people who capture our attention to free us. This was the case for Hubert Lyautey when General Gallieni welcomed him to Lang Son on 7 February 1895. That very evening, Gallieni gave him the first of his life's lessons and it was the revelation he had hoped for: "'I think,' he said to me over dinner, 'that you, as a recent graduate of the metropolitan general staff, have brought with you documents containing all the latest ideas for your role as the chief of the general staff?' – 'Certainly, Colonel.' 'Please show me them after dinner, they interest me greatly.' I returned to my office and took out from my trunk the recent *Service en Campagne*, the latest edition of *L'Agenda d'Etat-Major*, and the latest course in *General Tactics* by the *Ecole de Guerre*. 'How excellent, please give these to me.' Without another word, he fetched a large piece of grey paper and used it to carefully wrap the three volumes. He tied the packet with string and put it away, concluding that 'I am going to send this to Hanoi. I do not wish you to be tempted to cast your eyes over it while you are with me. All these guides will do here is confuse us, and it is on the field, directing men and action, that you will learn your profession'."⁹⁹ In the events that followed, it was as if Gallieni had redeployed to Hanoi the dead man who was lying dormant in Lyautey. The transformation was extraordinary. Lyautey wrote that his new superior had "*struck [him] deeply as a thoughtful, precise man with great breadth of spirit*". These lessons in life's realities were delivered one after the other, every one as appreciated as the last. Lyautey wrote that: "*beyond the practical results, that in which I take most delight is to observe this magnificent specimen of a complete man, and to see the absolute leader, soldier and administrator made manifest in rustic yet cerebral form, to touch this man who, despite his uniform, does not consider himself defined by Regulations and who has developed an entire and unshackled personality through the course of life*". In this way, Lyautey was simultaneously captured and liberated by this invitation to become himself.

⁹⁹ Charles BUGNET, *Le Maréchal Lyautey*, Mame, 1935, p. 65.