

Hiram Caton

The New Horizon of Biosocial Science

Surveying the progress of science at the turn of the century, engineer Edward W. Byrn captured the wonder of it when he wrote that "it has been a gigantic tidal wave of human ingenuity and resource, so stupendous in its magnitude, so complex in its diversity, so profound in its thought, so fruitful in its wealth, that the mind is strained and embarrassed in its effort to expand to a full appreciation of it." He meant to express the awesome consequences of the link-up between science and manufacture, which altered the face of things in the second half of the last century.

Biologists have lately followed that act with one of their own that earns the full marks Byrn gave the physical sciences. In the past two decades especially, research has advanced rapidly on many fronts, with such stunning success, that to tell of it defies the narrative art. Some of life's deepest mysteries have been penetrated, explored, and mastered, while the threshold of others has been confidently crossed. Research areas scarcely feasible twenty years ago now bustle with activity. Biotechnology is no longer a fantasy on the science fiction bookshelf; it is a growth industry.

Extraordinary as all this may be, it is not the main event. There has been an explosion of new disciplines whose names march through the press like fugitive enigmas — urban biology, human ethology, genetic anthropology, human biology, sociobiology, neuropsychiatry, biopolitics, behavioural biology, biosocial science. What on earth is happening? Are the biologists merely empire-building, or is there something serious afoot in this confused Babel?

There is indeed something significant aborning — more significant, humanly speaking, than any discovery since Copernican astronomy incited far-reaching changes in science, letters, and politics.

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The cascade of new disciplines are so many commentaries on the proposition that man is an evolved primate species. They flesh out the proposition by adding detailed evidence to support the corollary which Darwin noticed must follow from his evolutionary discovery: if *Homo sapiens* is an evolved primate, then human behaviour and psychology must be aspects of human biology. In a nutshell, behaviour is biology.

This insight was disturbing in 1859, and its reiteration has already produced culture shocks whose force may be gauged by the number of *biologists* it has traumatized (by my count, above three dozen). Shock waves are bound to resonate far and wide, for the renaissance of Darwinian biology represents an irresistible force of modern culture colliding with a massive wall erected to stop it. The irresistible force was set in motion not by Darwin but by the founders of modern science. Paging through their books today, we are astounded by their prescience. The mechanistic conception of nature was a rank impertinence, judged by the evidence then available; yet it called the march orders for centuries of triumphant investigations. Part of the mechanistic conception was *l'homme machine*, whose evidential value at that time was not far above zero. But again, the progress of science vindicated that audacious bunch of Hobbes, Descartes, and Newton. From this perspective, the rediscovery of *Homo sapiens* assumes the character of a fatality, as the ineluctable outcome of three centuries of modern science.

The opposed force is both old and recent. Old in the sense that all those vanities Copernicus wounded are bruised once again. But there is a recent opposition that arose in response to Darwin. Biologist Thomas Huxley is one of those who had second thoughts after initially defending his friend from theological odium. Discerning the convergence of Darwin's discovery with the brilliant progress of experimental biology in that day, he saw with disquiet that the man machine was rapidly ceasing to be a philosophical fantasy; it was fast becoming, as Henry Adams put it, "a damned serious possibility". Huxley's disquiet was shared

by many, among them leading intellectuals who launched a search for an alternative to what they feared might become cultural mayhem. Hobhouse, Durkheim, Weber, Radcliff-Brown decided that man must be conceived of as more than mere nature. He had to be endowed with a soul, or a soul substitute, lest he lose all belief in ideals and sink into cynical moral indifference, perhaps even criminality. The soul substitute they invented was called Social Man. Social man was soulless because he too was a machine, but with the difference that he is determined by society rather than by nature — a self-made machine, so to speak. In any event, the social sciences and the public way of thinking about man has for the last century been based on this wraith hastily conceived by *fin-de-siècle* anxiety.

The idea that human behaviour owes nothing to biology and everything to socialization smacked so hard against common sense and fact that dexterous evasions were needed to confine the facts to black boxes labelled "drives" and "instincts". However, just as one fact leads to another, so does one evasion lead to more. Fact-dodging encouraged mental habits of deviousness; thus, the evolutionary social thought of T. H. Green and L. T. Hobhouse claimed to be consistent with Darwin while actually denying that there was anything at all animal in human behaviour. Once these habits wormed their way into the cultural command posts, chronic failures of logic and foresight were built into public policy. For example, their anti-naturalism made social scientists insensitive to the environmental consequences of industrial expansion. Like the common man, they were able to appreciate only the social benefits of prosperity, although natural scientists were sounding conservationist and ecological warnings well before 1900.

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A biologically-oriented social science would have digested this problem and placed it on the public agenda long ago. Again, anti-naturalism is a precondition for "demand-side" economics, with its notion of soaking the next generation as a substitute for soaking the rich. John Maynard Keynes used to tell his students that "supply will take care

of itself". He might as well have said, "The Lord will provide", while ignoring Malthus's computations of what the Lord provides, and at what rates. Thanks to demand-side faith, domestic economies of industrial nations have reached a critical impasse of stagflation and staggering debt, while a general calamity of world-wide famine among our 4 billion is held at bay thanks only to the "green revolution" in agriculture engineered by genetics. Or again, our consensus-oriented political science failed to predict major features of politics in this century: the persistence of ethnicity and nationalism; wars; the resurgence of tyranny; chronic civil strife.

This dismal track record increasingly persuades social scientists that their house is in disarray and requires major repairs. Its reputation among scientists and politicians is not good, and everyone knows that social "science" is a title without pedigree. Social scientists who have successfully diagnosed this malaise beat a path to the door of the nearest natural science, and the traffic is raising dust. Psychology and social psychology are now thoroughly mingled with neurology, endocrinology, and ethology.

Archeology and prehistory have ceased to be adjuncts of the theological seminary, and draw substantially on a variety of physical and biological sciences. Social anthropology and human ethology are on a converging course, while genetic anthropology has been a natural outgrowth of physical anthropology. These trends are certain to gain momentum and spread.

For an impression of the style of the biosocial science, let us glance at neuropsychiatry. This field illustrates the principle that behaviour is biology. Even more, it shows that psychology is biology.

II

Neuropsychiatry is based on the fact that behavioural or psychological disorders are often traceable to brain pathology or disturbance. In medical terms, this means that the etiology of the disease or disturbance is not in the mind but the brain. The Lesch-Nyhan syndrome, for example, induces purposeless and uncontrollable movements, together with self-destructive psychotic behaviour. Often it is accompanied by depression. Its etiology is an enzyme deficiency resulting from a defective or missing gene. This syndrome is typical of genetic-related disorders. Genes manufacture the proteins that serve as structural material and enzyme catalysts responsible for the growth and maintenance of the brain. When enzymes are wanting, or when they produce too much of the biochemical substances that they naturally produce, disorder may result.

In addition to genetic-related disorders, which account for about 30% of neuropsychiatric cases,

biochemical breakdowns, viruses, environmental toxins, and nutritional deficiencies are causes of mental diseases. Environmental toxins are of particular interest. There was a high incidence of madness among hatmakers of the last century because the felt they handled had been processed in a mercury solution which passed into their bloodstream. In the Middle Ages epidemics of madness were caused by a parasitic fungus used in making rye bread; the fungus contains alkaloids that have a potent effect on the nervous system. Recognition that biochemical imbalances may cause disorders sparked the successful search for a psychopharmacopoeia. Two of the commonest disorders, schizophrenia and manic-depressive psychosis, are alleviated by drugs that lower levels of dopamine at the brain's synapses. Epilepsy has been successfully treated with Dilantin, which alters the electrophysiological state of the brain.

This is a long way from Freud and his captivating psychodramas of Ur-incest, parricide, and the primal scream. Freud doggedly pursued the idea that the causes of mental disorders lie entirely in the subconscious. This was an evasion. As a physician he knew that certain drugs induce quasi-psychotic states, but he declined to explore neuropharmacology. In his own lifetime neurology underwent momentous development, but he warned his students away from it. Freud was not interested in facts. He preferred to mask or implicitly deny them by inventing new soul myths, whose total effect was to displace sexuality from its biological setting. The incest taboo, for example, has a straight-forward explanation in the genetic imperative of exogamous meeting: outbreed, or perish. But this simple fact was too superficial. The Viennese bourgeoisie required some grotesque, decadent Gothic profundity as a safe dungeon for their exotic self-crucifixions. Freud built them a hell which explained their (unnecessary) agonies as fated by the psyche's original sin; so, it would have been bad taste to dwell on the simple genetic facts of life. Well, decadence has its cost, and today psychoanalysis is happy enough to be tolerated as a "humanistic alternative" to the "crass scientism" of neuropsychiatry.

This is not to say that the mind is an idle gear in the etiology of mental disorder. That consciousness is causally functional appears to be established by experimental induction of neurosis in animals. Primate infants, for example, develop neurosis when their natural behaviours are frustrated by social isolation. Primates, and indeed mammals, are susceptible to neurosis because the relationship between perception, behaviour, and physiology is basically the same in them and us. The study of this relationship belongs to endocrinology, for the endocrine system controls the biochemistry of aggression, avoidance, and anxiety. Current studies of stress in small mammals and primates have

produced remarkable findings of drastic effects on behaviour. They show that the sorts of stress that drive animals around the twist are also the sorts we intuitively perceive as hazardous to our mental health. One application of these studies is to diagnose stress points in the workplace that may cause tension, absenteeism, or nervous breakdowns.

These examples help correct a number of misconceptions about biological explanations of behaviour. Anthropologists have long objected that biology explains only regularities — what is common to the species — whereas their interest is in cultural differentiation. However, like all scientists, biologists deal equally with uniformity and diversity. Sexual reproduction guarantees diversity, since each individual is genetically unique. Moreover, the gene pools of all species develop characteristics peculiar to each breeding population. Genetic anthropology amply documents variation among the small groups social anthropologists study. One of the exciting frontiers in population genetics today is the study of behavioural variations resulting from differences of gene pools. It could well turn out that significant cultural variations owe something to gene pool differences.

III

All this may be interesting and important, but what does biosocial science say about the big picture — about society, politics, and all that? The better part of valour is to acknowledge that in these areas the evidence tends to be convoluted and circumstantial. Clean, direct causal lines are seldom to be found, and a systematics tying together all the biosocial sciences is not in sight. On the other hand, some facts of the first importance are supported by evidence converging from a number of quarters. That *Homo* is an evolved primate species in one such fact. It is a fact so complex, so great with consequences, that we are not surprised if Darwin's contemporaries handled it badly. To one side stood the "nature red in tooth and claw" party, with their let-them-perish sociology. From the other side came the counter-dogma of Social Man. Happily, these mental misdemeanours are not much in evidence today. The new evolutionary picture of man displays no territorial predator. Instead we see a creature eminently sociable, who, like his simian ancestors, was a tireless social groomer and negotiator, even unto tediousness. Since this picture answers so well to current opinion, where is the rub? Just this: human sociability evolved for and within the hunter-gatherer social organization, and stopped there. We are biologically endowed with a set of social behaviours that, willy-nilly, make tribesmen of us all. This is not so good. But there is more: the situation cannot be mended short of fiddling with the human genome. This is terrible.

Such is the message coming from popularizations of ethology by Konrad Lorenz (*On Aggression*), Desmond Morris (*The Naked Ape*), and that improbable duo of anthropologists, Lionel Tiger and Robin Fox (*The Imperial Animal; Men in Groups*). Of these works, only Lorenz's suggests something of the factual richness and methodological ingenuity of ethology, the science of comparative animal behaviour. To enter the ethologist's world is to discover an entire sublunary cosmology. The animal kingdom lies before you, in a prodigious variety of habitat and behaviour. You watch spellbound as the ethologist sets to work teasing regularities from the apparent chaos. From his fixed reference point, field observation of behaviour, he moves nimbly through an array of sciences to pick the ones that need to be brought to bear on his problem. And the job is done without doubtful appeals to the morality or immorality of animals. It transpires that many behaviours are cranked out with the regularity of clockwork. Lorenz drove this point home to the public with the now legendary photo of the queue of imprinted ducklings following him about the paddock. Imprinting occurs at a sensitive learning time, shortly after birth, when sensory-motor circuits register the image of the nearest moving object and call it Mum, as it usually is. While such rigid mechanisms are numerous (we have a few ourselves), they do not tell the whole story of behaviour. The behaviours most pertinent to human ethology involve a "reaction range", meaning, that the animal has behavioural options with respect to a particular stimulus situation. When you put the usual food before your hungry cat, but it turns up its nose and attacks the cuff of your trousers, that is reaction range in action.

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Ethology studies human behaviour using methods that have served so well with animals. Social life in our villages is not so very different from social life among the apes. Like them, we are avid communicators, and most of what we say pertains, as their signals do, to the endless grooming of immediate social relations. The social truck and barter falls into patterns: courtship, competition

for place and position in the social hierarchy, social grooming, common defence, sport and play, caring for and teaching the young, brow-beating and standover tactics, especially about food and women, occasionally mortal combat when an alpha male is challenged, sibling rivalry and weaning conflict, protective mothers and jealous husbands, hatred and strangers, mourning the dead. It is all there. And why should it not be, since our species branched from the apes only 7.5 million years ago? Not only are these behaviours present in apes, many are present well down the mammalian phyla. There is no mystery here. Unless we revert to the special creation theory, and say that the same behaviours observed in men and primates are socially created by the former but evolved by the latter, we may with confidence draw the obvious conclusion. As the dean of American geneticists, Theodosius Dobzhansky, declared: "Every physical organ of every animal without exception, evolved under specific environmental conditions; and every behaviour of every animal, also without exception, evolved under specific environmental conditions." Whether this iron-clad prediction from evolutionary biology will prove correct, down to the last twitch, remains to be seen. But at the very least we have located the taproot of human sociability. It was laid down among the primates, and developed during the evolution of hominids to *Homo*. Our species' social behaviours developed specifically under the environmental conditions of hunter-gatherers, where they remain today, plus or minus some genetic tracking of culture. Let's look at the picture.

IV

Homo evolved from hominids who emerged at least 5.5 million years ago. The record tells of a creature about four feet tall, with upright gait, and a brain capacity of 600 cc, a little less than half that of a modern man. He was a tool-maker who hunted small and medium-size game. Darwin had conjectured, by shrewd interpretation of scanty evidence, that the key to human evolution was not increased intelligence (the enlarged cranium), but tool-use. In a recent review of modern evidence, J. S. Weiner styled Darwin's reasoning "completely justified". Our forebears converted intermittent tool-use, observable among chimps today, to regular use. Tool-use led to bipedal locomotion, which freed the hands. The mouth ceased to be a grasping and fighting instrument; canines and incisors diminished in size and the brow ridge receded. In this way, hominids, though but marginally brighter than chimps, became specialized for culture: hominids *had* to fabricate in order to survive. Needless to say, this necessity was enforced in the usual way, by natural selection, there being no welfare safety nets in those rude Pleistocene

times. The consequence of tool-use, then, was the development of feedback between behaviour and evolution: tool-use resulted in specialization for tool-use, which then had further consequences for the evolution of behaviours and physical characteristics. The consequence is that *Homo* established himself as the self-made species, so to speak; for by making that initial crude culture, he set off on a path that made him a *product* of a higher (hunter-gatherer) culture.

A striking illustration of this curious evolutionary route — which probably occurs with other animals — is the character of human childbirth. About three million years ago, hominid evolution reached a crisis. The upright gait had decreased the size of the birth canal, which made childbirth more difficult and dangerous. Yet the cranial capacity was increasing. What to do? The solution was in effect premature birth — a fetus much less advanced, and more vulnerable, than those of the apes. Social patterns among apes are substantially influenced by reproductive characteristics, including the long (1-3 year) maturation period of offspring. What was the effect of the very dangerous premature birth? The hominids must have evolved behaviours to compensate for that exposure, as well as for the very long maturation period of their offspring. Direct evidence of what those behaviours were is not available, but we may infer them by comparing the behaviours of *Homo* with the apes'. We notice two differences at least. One is a pronounced male-female bonding, which lies at the base of the hunter-gatherer's monogamous reproductive arrangements. The other is a strong male-male bonding, which becomes especially active at puberty and continues in that way for perhaps five years. These two behaviours are observable in surviving Neolithic hunter-gatherers. They function to construct a cultural shield around mother and offspring. The men are a tight social group who co-operate in hunting and share the spoil. Moreover, they dutifully return to their wives. Among apes, by contrast, food-sharing is mandated only from mother to infant, and the males do not bond.

This much of the evolutionary story leaves without support the notion of human evolution that was for so long current among social anthropologists. It was believed that *Homo sapiens* arose from some bright ape around 100,000 years ago, and thanks to his new-found intelligence, set about making culture. On this supposition, man creates culture and the social behaviours that go with it. We now see that culture does not depend on so unstable a thing as intelligence; on the contrary, the evolution of behaviours supporting a stable hunter-gatherer culture were the condition for the evolution of intelligence. And this brings us to the matter of language.

In legend, philosophy, and scholarship, speech

was long associated with intelligence. The first substantial break with this tradition occurred in the seventeenth century, when the new philosophy, sporting the twin emblems of experiment and mathematics, threw language out on its ear as a tool inadequate for knowledge. *Nullus in verba*, the motto of the Royal Society, marks that proud victory over scholasticism and indeed over the entire classical legacy. But in time the meaning of the victory was lost, at least on philosophers; and the past fifty years have witnessed a resurgence of language mystagogy of gigantic proportions, summed up by the dictum that science is a language game. This amounts to saying that the real world is just talk, so nobody knows anything. (The sociological variation holds that reality is "socially constructed".)

Today we are able to consolidate the seventeenth-century insight by empirical evidence. The evolutionary function of the large brain may be inferred from the function of the enlarged cortical areas, which are specialized for the sensory-motor circuits of the hands and mouth. The big brain, in other words, mandated not so much the intelligence for speech, but the mouth for it. This suggests to the evolutionary biologist that speech evolved primarily as a *social behaviour*, not to serve intellectual functions; it further suggests that intelligence and speech are independent capacities.

Fortunately, there is a generous supply of proofs for both these hypotheses. Neurological experiments with aphasia and the split brain show that the capacity to verbalize is distinct from the capacity to conceive; they are, in fact, located in different cortical areas. Aphasiacs cannot verbalize what they conceive, owing to damage to neural connectors in the speech centres. Victims of the Down's Syndrome exhibit the converse case. These persons suffer from severe mental deficiency induced by the failure of enzymes to produce a certain biochemical. Although they are baffled by the intricacies of tying a shoelace, yet Down's Syndrome victims utter grammatically correct sentences and exhibit other normal speech behaviours. This evidence suggests that speech is an evolved behaviour dependent upon neural organization. It appears to be confirmed by studies of the ontogeny of speech in infants, which shows that it develops in well-defined patterns, and at sensitive times, quite like the ontogeny of other infant behaviours.

Finally, after decades of exhausting and futile efforts, ethologists have taught chimps to speak. The trick lay in shifting the sign vehicle from the mouth to the hands. Jane Goodall taught her chimps a vocabulary of 600 words in fourteen months, using the standard deaf-mute sign language. And what do they say, these talking chimps? Roughly the same things that six-year-olds say. They talk of food, play, exploration, chastisement, and announce innumerable wants. Granted then

that speech is an evolved social behaviour, what is its function? It is probably a mechanism of approach and avoidance to facilitate social congress among creatures whose hands are occupied.

For a long time — five million years at least — hominids and *Homo* clung tenaciously to the hunter-gatherer existence with its small group social organization. Cro-Magnon introduced some innovations; he made cave paintings, buried the dead in ceremonial fashion, and probably entertained notions about his creator and future destination. But there was no detectable change in social structure until he began to dabble in agriculture ten thousand years ago. That touched off a chain reaction of sudden, convulsive change. In a mere five thousand years, he had built a host of arts. And he had drastically altered his social organization. In place of the equality and reciprocity of the small group, there were massed populations divided into classes, each with a vocational function. A warrior caste forced some into slavery, and the god-king exacted obedience from all. The newly invented command structures enabled him to wage war and aspire to empire. And he celebrated his victories with ferocious religious ceremonies featuring human sacrifice.

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What dire circumstances brought about this astounding change? How *could* the tedious social groomer suddenly alter his behaviour? The pre-historians have probed this riddle, and the results, though incomplete, harmonize with the general evolutionary picture. Robert Mc. Adams and his team surveyed the sites of villages that antedate the oldest known city, Uruk, in the Euphrates valley. They show that the hunter-gatherer as agriculturalist clung to the old social organization. When the villages reached populations much over one hundred, they divided. This process went forward until about 460 villages sprang up in a radius of thirty-five miles. Then suddenly, this dense population “imploded” toward the center to found Uruk. It is uncertain whether population pressure against food supply, or some other circumstance, touched off this event. But it is a good bet that man was driven out of his ancient social organization by

force — force applied by other men. The bet is a good one because we know for certain that coercion kept him in his new condition, as indeed it does today; for nowhere have there been cities wanting coercive institutions judicial, military, and penal. In the heyday of the enlightenment, the *philosophes* contrasted civilization favourably to man’s primitive state; civilization was mild and gentle, the primitive state rude and ferocious. Today we reverse this contrast. Among hunter-gatherers, violence is infrequent, and conflicts are heavily ritualized as sham fights and agonistic displays, as so often happens among mammals. The institutionalization of force is a cultural achievement of *Homo politicus*. It is the means he uses to superimpose on his hunter-gatherer sociability a set of artificial forms of association. The city was his first imposing work of art, and remains in some ways still the most awesome.

Though it is not part of the evidence for this explanation, I note that it lends coherence to old and persistent legends. From Mezo-America to China, legends attribute the origin of cities to the violence of some Nimrod or Achilles, with hints that this state of affairs represents a catastrophic decline from some primaeval golden age or happy garden, when men were pure and good. These legends have a mirror-image in utopian literature. The corruption, exploitation, vice, and inequality of cities are invariably the objects of utopian censure. The preferred city is small, and usually situated in a rural setting. Luxury, faction, and private vice do not exist. The citizens compose a genuine community tied by the bonds of equality, amity, and sharing. In those circumstances, community of property comes naturally. This is obviously an unconscious idealized picture of hunter-gatherer sociability, superimposed on civic life.

Again on the subject of legend, we can scarcely avoid mentioning that ancient chestnut: is man by nature sociable or selfish, mild or rapacious? Were we to respond in global terms, we must say both. It is true of mammalian behaviour generally that conflict is inherent in even the strongest social attachments; for example, weaning conflict in the mother-infant bond. Conversely, apparently unsociable behaviour, such as threats or agonistic displays, often have a social function. Evolutionary theory must say that man slammed himself into the city powered only by the old behaviours, but now stretched or exaggerated out of all proportion. Thus, the rudimentary division of labour is stretched to specialization; classes are based on aggregates of clans; the warrior caste formalizes the hunting group; competition and struggle for supremacy springs from the tribal agon. And even in swollen Babylon, whose diameter legend put at two hundred leagues, the individual’s social space remained that of the small group, as it does in our own cities.

The biological sciences in Australia are a vigorous growth that enjoy high international standing; it is no coincidence that both the nation's Nobel laureates are biologists. This fund of talent is a national asset, capable of conducting quality research in human biology and biosocial science. I say it is a national asset because industrial nations today are balanced so precariously that they cannot afford to be without a tough-minded social science that can lay its finger on cause. Soft social science is not enough, and "socially committed" social science is righteous bombast. Above all, social science that systematically excludes nature must today forfeit all credit. The time is ripe for tertiary authorities to review the policies pertaining to social and biosocial science. A review is likely to show that as yet we have no national policy on biosocial science. There precisely is the problem. The social science establishment is devoted to the

good old causes: in politics, pluralist; in history, local; in economics, spendthrift; in philosophy, scholastic; in sociology, adjustable; in research, minute; in new ideas, suspicious. These worthy endeavours certainly deserve continued support. But let us be clear about what the research dollars are buying. They are not buying knowledge; they are buying lubricants for the social machine.

The need for hard knowledge is scarcely less than urgent and the path to it is clear. We dare not delay. But beyond these reckonings of costs and benefits, there lies the poetry of the enterprise. *Homo sapiens*, that last knot of an ancient thread, that baffling mixture of sentimentality and cruelty, of genius and stupidity, of bigotry and grace; that lover of illusions, cunning in concealing himself from his own gaze, is at last sectioned, stained, and clamped under the microscope. Who among us can avert his eyes?

I Whistle and They Come

The boy stands in the middle of the painting, a tin whistle in his mouth, a bucket of wheat in his hand, and bantam hens flocking to his feet, stretching out their necks as they run. And the painting's title extends its loveliness: *I Whistle and They Come*

Why was it included in the selection? There is no other like this one among all the drawings in the collection of *Pictures by Chinese Children*. It alone does not trumpet or tell the Foreword's claim that the children "learn socialist cultural subjects well."

"Let's All Criticize Lin Piao and Confucius" suggests one drawing, with conscientious children brandishing their small fists. "The Army and the People Are One Family" insists another. And a girl aged seven has drawn a picture called "Sparkling Red Stars" of little children, all in uniform, wearing army caps, and carrying spears.

I Whistle and They Come is the only one, the only one among all the paintings that celebrates God's creation without the slightest taint of utility and indoctrination — that says "I", and does not assume as absolute the "we" of the commune. This is a small triumph, then, in the face of the darkest works of men.

And surely these other drawings boast of dark things indeed. They celebrate the ignoring of every simple and lovely human need. In each one, the seed of self and personality, of celebration and spontaneity, has fallen on the sterile ground of what some men perceive and enforce as collective good. How these children must grieve over the joys they have never understood!

And are the teachers proud of what they have done? Does their Party boast aloud: *We Whistle and They Come?*

Andrew Lansdown