Cybernetics, Corruption and the Problem of Institutional Learning

Why paradigm shift is not merely a scientific problem

The second problem: institutional pathology

The Cybernetic Hypothesis of Periodontal Disease in Mammalian Carnivores began as a scientific proposition. It asked that periodontal disease be understood not as an isolated local affliction, nor as a simple linear infection, but as part of a wider biological, ecological and regulatory system. The mouth, diet, microbiome, immune system, inflammatory mediators, behaviour, population pressure and environment form interacting loops. The oral cavity is not merely an anatomical compartment. It is an interface.

In recent periodontal medicine, similar language is now increasingly accepted. Researchers speak of multiple interacting variables, common determinants, bidirectional relationships and uncertainty. Such language is welcome. It moves discussion away from simplistic cause-and-effect thinking and towards systems understanding.

However, there is a danger. Neutral systems language can describe complexity while leaving untouched the human conduct that blocks understanding. It can speak of uncertainty, barriers, determinants and culture while avoiding the harder words: conflict of interest, suppression, dereliction of duty, wilful blindness, reckless indifference, fraud and cruelty.

That omission matters. A cybernetic account of disease must be accompanied by a cybernetic account of institutions. If an animal body can become locked into pathological feedback, so too can a profession. So too can a university, a regulator, a journal, a political department, a media organisation or an industry.

The present article attempts to identify that second problem: the structural, anthropological and institutional obstacles to cybernetic thinking and reform.

The old opposition to paradigm change

Paradigm shifts have never been easy. Germ theory, antisepsis, handwashing, continental drift, heliocentrism and many other changes met social, cultural, religious, professional and intellectual resistance. Those who first saw the anomaly were often ignored, mocked or punished. Institutions tend to defend the assumptions upon which their authority rests.

In earlier times, obstruction was often rooted in doctrine, habit, pride or theology. Those forces remain. But today the obstacles are arguably greater. Modern opposition to paradigm shift is not merely cultural or intellectual. It is commercial, professional, bureaucratic, legalistic and media-managed. The old dogmas now have public relations departments, endowed chairs, sponsored research programmes, continuing education channels, trade associations, political access and legal teams.

The obstruction is therefore not passive. It is organised, funded and self-reinforcing.

In veterinary medicine the problem is especially acute. The prevailing small animal model has, for decades, been built around the normalisation of industrial pet food. A carnivore fed from packets and cans becomes the assumed baseline patient. Dental disease, digestive disturbance, skin disease, obesity, diabetes and chronic inflammatory states then become routine clinical material. The

profession treats the consequences while failing to confront the primary distortion. The pet food industry sells the initiating product. The profession sells the downstream management. Universities teach within the same assumptions. Journals publish within the same frame. Regulators decline to intervene. Welfare bodies repeat the approved messages. Pet owners are left to believe that the system is acting in the interests of their animals.

A cybernetic analysis reveals something more disturbing than error. It reveals a closed loop.

When feedback is blocked

Healthy systems depend on corrective feedback. A body regulates temperature, blood glucose, immune response and tissue repair by detecting deviation and responding appropriately. A healthy profession should do something similar. It should notice anomalies, investigate adverse outcomes, test assumptions, correct error and warn the public.

But captured institutions do the reverse. They block corrective feedback.

Evidence that should trigger investigation is reframed as anecdote. Dissent is described as extremism. Commercial relationships are normalised. Students are taught inherited assumptions as fact. Researchers avoid questions that might embarrass sponsors. Journals become gatekeepers. Regulators hide behind procedure. Politicians defer to the very experts whose conflicts require investigation. Journalists prefer human-interest sentiment or industry-approved commentary to difficult inquiry. The loop closes.

Once that happens, the institution becomes anti-cybernetic. It no longer learns from reality. It learns how to defend itself from reality.

This is the central institutional problem confronting the Cybernetic Hypothesis. The hypothesis is not merely an addition to existing veterinary, dental or medical thinking. It challenges the way existing professions generate, filter and reward knowledge. It asks whether disease is being understood at the wrong level. It asks whether profitable treatment paradigms have displaced prevention. It asks whether institutions entrusted with health have become dependent on the persistence of ill health.

Such questions cannot be expected to receive a warm welcome.

The anthropological problem

It is tempting to speak only of systems, structures and incentives. Those terms are useful. But they can become evasive if they obscure the human beings who operate the systems.

Human beings are capable of sympathy, courage, curiosity and sacrifice. They are also capable of laziness, cheating, lying and predation. Provide even a small amount of power, status or financial advantage, and some people will use it to protect themselves rather than serve the purpose for which the power was entrusted to them. The problem worsens when the surrounding institution rewards conformity and punishes honesty.

This is not a claim that every individual within a profession is corrupt. It is a claim about selection pressure. Systems select behaviours. If speaking the truth threatens career, income, reputation or institutional peace, then silence becomes adaptive. If repeating approved slogans brings promotion, grants, sponsorship or professional safety, then slogans multiply. If harms are diffuse, victims voiceless and responsibility easily shifted, then evasion becomes routine.

In that sense the 'mafiosi modality' is not best understood as a loose insult. It is a pattern: silence, mutual protection, extraction, intimidation of dissent, plausible deniability and loyalty to the group over duty to the public. In formal language we might call it institutional omerta, regulatory capture, cartel-like conduct, mutual non-accountability or a self-protecting guild system.

Whatever phrase is used, the cybernetic structure is clear. The system rewards concealment and punishes correction.

Neutral language and moral evasion

Modern institutional language often drains agency from wrongdoing. We hear of barriers, challenges, stakeholder complexity, cultural factors, uncertainty, communication gaps and unintended consequences. Sometimes those terms are accurate. Often they are anaesthetic.

A veterinary school that fails for decades to test the diet-dental-systemic health relationship in carnivores is not merely experiencing a 'knowledge gap'. A regulator repeatedly placed on notice but declining to act is not merely navigating 'complex stakeholder terrain'. A journal that refuses discussion of inconvenient findings is not merely exercising editorial discretion. A profession that profits from treating preventable disease while endorsing the products that help generate that disease is not merely operating within 'historical norms'.

There are circumstances where softer language becomes a form of complicity.

The task is not to abandon careful wording. The task is to use accurate wording. Scientific uncertainty should be called uncertainty. Honest error should be called error. But where people and institutions have duties, knowledge, warnings, power and benefit, continued inaction moves into a different category. It raises questions of dereliction, wilful blindness, reckless indifference, professional misconduct and possible criminality.

Those questions should be investigated, not neutralised by euphemism.

Veterinary medicine as warning to medicine and dentistry

Veterinary medicine provides a vivid case study because the animals cannot speak. Dogs, cats and ferrets cannot organise politically, instruct lawyers, complain to regulators or ask why the same professionals who sell dental procedures also recommend diets that fail to provide the necessary mechanical, biological and ecological conditions for oral health. Pet owners rely on professional advice. That reliance creates a duty.

The failure is therefore not simply technical. It is fiduciary and moral.

The same warning applies, in different forms, to human medicine and dentistry. Wherever chronic disease is interpreted through narrow linear categories, wider regulatory systems are missed. Wherever treatment is rewarded more than prevention, disease becomes economically useful. Wherever journals, universities, corporations and regulators share assumptions and funding streams, corrective feedback is weakened. Wherever patients are managed as isolated cases rather than as participants in biological, social, dietary and microbial systems, the same conceptual failure recurs.

Cybernetic thinking does not claim that all disease can be prevented, nor that all existing treatment is worthless. It claims that health and disease arise within loops. To intervene wisely, we must understand the loops. We must ask what is being amplified, what is being suppressed, what feedback is missing, who benefits from the existing pattern and who pays the cost.

That last question - who benefits and who pays? - is often the beginning of honest science.

The burden of proof

When a new industrial product, treatment or technology replaces an evolved biological standard, the burden of proof should rest on those introducing the replacement. They should demonstrate safety, suitability and superiority against the natural or prior standard.

In pet feeding, that burden has been inverted. Industrial diets became the assumed norm. The evolutionary standard - whole prey, whole carcasses or the practical domestic equivalent of raw meaty bones - was pushed to the margins. Instead of manufacturers proving that ultra-processed products could safely replace the natural feeding apparatus and its effects, critics have been asked to prove harm within systems controlled by the beneficiaries of the replacement.

That inversion is central to the scandal. It is also central to many wider failures in medicine, dentistry and public health. Once an artificial baseline is normalised, the consequences of that artificial baseline are treated as ordinary disease. The institution then builds itself around managing the damage.

Cybernetic thinking restores the proper question: compared with what?

Compared with the evolved regulatory system, what does the industrial substitute do? Compared with the intact biological interface, what happens when the interface is bypassed? Compared with prevention, what is the cost of treatment? Compared with open inquiry, what is the cost of suppression?

Why incumbents will mostly resist

It is naive to expect incumbent institutions to embrace a paradigm that exposes their prior failure. The greater the failure, the stronger the resistance. The longer the delay, the higher the reputational cost of admission. The more money involved, the more elaborate the defence.

For veterinary schools, acceptance would require asking why generations of students were not taught to investigate diet, oral health and systemic disease from first principles. For professional associations, it would require explaining decades of industry alignment. For regulators, it would require asking why warnings were ignored. For journals, it would require revisiting editorial exclusions. For pet food companies, it would require confronting the safety and suitability of products sold worldwide. For politicians and administrators, it would require admitting that delegated authority failed.

No institution wants to make such admissions voluntarily.

This does not mean reform is impossible. It means reform must not depend on institutional generosity. The strategy must assume resistance.

What needs to be done

The **first task** is to preserve and clarify the record. Documents, correspondence, publications, rejected submissions, historical warnings, clinical observations and owner testimonies must be organised so that denial becomes progressively harder. Memory is a regulatory tool. Institutions rely on forgetting. Reform requires archives.

The **second task** is to refine the language. We need three registers.

- For science, we should speak of feedback loops, interfaces, non-linearity, amplification, suppression, dysregulation, ecological context and system-level causality.
- For professional ethics, we should speak of duty, breach of trust, conflict of interest, failure to warn, failure to investigate, wilful blindness and reckless indifference.
- For legal and regulatory purposes, we should speak of matters warranting independent investigation: possible consumer deception, possible animal welfare breaches, possible professional misconduct, possible false or misleading claims, and possible failures of statutory duty.

The **third task** is to build routes around captured institutions. Students, dissident practitioners, pet owners, patient groups, independent researchers, lawyers, journalists and politicians must be addressed directly. Waiting for permission from the existing hierarchy is a recipe for further delay.

The **fourth task** is to demand proper comparative research. In veterinary medicine that means comparing the industrial feeding model with the natural or pragmatic raw meaty bones standard, while examining oral health, microbiome effects, inflammatory markers, systemic disease, behaviour, longevity and quality of life. In human medicine and dentistry it means research designed around interacting systems rather than isolated variables.

The **fifth task** is to enforce accountability. If professional and regulatory systems refuse to correct themselves, then external pressure becomes necessary. Freedom of information requests, parliamentary questions, consumer protection complaints, animal welfare complaints, professional conduct complaints, public-interest litigation and class actions all become legitimate avenues. The purpose is not revenge. The purpose is restoration of corrective feedback.

The **sixth task** is education. Cybernetic literacy should not be confined to specialists. Children can understand loops, balance, unintended consequences and the difference between living systems and machines. Pet owners can understand that carnivores need to rip, tear, gnaw and crunch. Students can understand that 'evidence-based' is meaningless if the relevant questions are excluded. Practitioners can understand that prevention is not an optional extra but the foundation of health care.

Hope without naivety

The history of paradigm shifts gives grounds for hope. False systems do not last forever. Reality continues to press upon them. The anomaly persists. Victims accumulate. Costs rise. Documents survive. Younger minds ask forbidden questions. Outsiders see what insiders have trained themselves not to see.

But hope must be disciplined. The cybernetic paradigm will not advance because existing institutions graciously recognise their errors. It will advance when the cost of continued denial exceeds the cost of admission; when the documentary record becomes impossible to dismiss; when enough practitioners, researchers, owners, patients, journalists, lawyers and politicians understand that the old linear model no longer explains the facts.

Cybernetics teaches that systems change when feedback changes. Therefore the task is to alter the feedback received by institutions. Silence must become costly. Evasion must become visible. Conflicts must be documented. False claims must be challenged. Suppressed questions must be repeated. Alternative explanations must be made available in clear language. The public must be invited to see the pattern.

The Cybernetic Hypothesis began with periodontal disease in mammalian carnivores. Its implications now reach further. It asks us to reconsider disease, diet, medicine, ecology, regulation, professional duty and institutional behaviour. It asks us to see that biological pathology and institutional pathology may mirror each other.

In both cases, health depends on open channels of correction.

Where feedback is blocked, disease advances.

Where truth is blocked, corruption advances.

Where both are blocked together, a profession may continue to call itself scientific while functioning as a closed, self-protecting, anti-learning system.

That is the obstacle. It is also the reason the work must continue.