



Fig. 1
Engraving of Thomas Trotter
from *Sea Weeds* 1829

THOMAS TROTTER, M.D., NAVAL PHYSICIAN*

by

IAN ALEXANDER PORTER

DURING the eighteenth century service in the British Navy attracted many Scottish medical men. In importance, not the least of these was Thomas Trotter, Physician to the Fleet, graduate of Edinburgh University, medical reformer, author and poet. Overshadowed by Sir Gilbert Blane his contemporary, he is all but forgotten, but for his writings, his reforming zeal and his dedication to the Naval Medical Service he is worthy of remembrance.

The exact date of Thomas Trotter's birth is not known but the date of his baptism is recorded in the Parish Register of Melrose, Roxburghshire.¹ He was baptized on 3 August 1760, the third child and second son of John Trotter and Alison Marr. John Trotter, a baker and portioner in Melrose had in all five children, of whom Thomas became a physician while his younger brother Andrew, born in 1764, became a surgeon and practised in North Shields.

Trotter first attended school at Melrose and later an academy at Kelso run by a Mr. Perry, founder of the *European Magazine* and editor of the *Morning Chronicle*.² Nothing is known of Trotter's life until 1777. He attended the class of Anatomy and Surgery of Alexander Monro secundus at Edinburgh University during the session 1777–8.³ It is during these two years that we have the first evidence of Trotter's busy pen—in the form of poems which he contributed to Ruddiman's *Edinburgh Magazine*.⁴

At this point his university education appears to have ceased for in 1779 he joined the Navy and was appointed Surgeon's Mate to the *Berwick*, a ship of seventy-four guns, at that time serving in the Channel Fleet. In the spring of 1780 the *Berwick* sailed for the West Indies in a squadron, but when off Bermuda the squadron was hit by a hurricane, all the ships were dismasted, and some were lost. In great distress the *Berwick* at last arrived back in England, the crew having suffered greatly from scurvy and dysentery; forty died during the passage back to England and over 200 required hospital treatment on reaching home. Trotter himself suffered greatly from dysentery. As a result of this voyage he became familiar with scurvy—a disease which was to become a major preoccupation with him and one to whose control he was to contribute much.⁵

At the Battle of Dogger Bank on 5 August 1781 the *Berwick* was distinguished in the fight and Trotter received the public thanks of the commodore for his service to the wounded in the battle. In April 1782 Trotter was promoted to the rank of Surgeon and appointed first to the *Bustle*, a sloop of war and a few months later to the *William*, an armed ship on the Liverpool Station. In February 1783, the *William* ran aground at the mouth of the River Mersey and she was paid off.

* This paper is based on a communication to the Scottish Society of the History of Medicine at a meeting in Newcastle upon Tyne in November 1958.

At this time, the war being over, a general disarmament was taking place, and some 750 naval surgeons were dismissed, only 120 were entitled to half-pay and Trotter was not one of these.⁶ Liverpool, however, was not a bad place for an ex-naval surgeon to find a new ship. It was from this port that most of the Guineamen sailed on their horrible trade of carrying slaves from the African coast to the West Indies. At the beginning of June 1783 Trotter sailed as Surgeon of the *Brookes*, a vessel of 320 tons from Liverpool, the Master being one Mr. Clement Noble.

This slave-carrying voyage lasted from 3 June 1783 until August 1784, when the *Brookes* again reached Liverpool. Over nine months of that time had been spent off the coast of West Africa awaiting the cargo of slaves. When Trotter arrived back in England he was so disgusted with the slave trade and his state of health was so impaired from a fever, that he determined never again to sail to Africa in this trade, but he was not altogether finished with slavery. He appeared before a House of Commons Committee set up in 1790 to hear evidence on behalf of the Petitioners for the Abolition of the Slave Trade.

The *Abridgement of the Minutes of Evidence* and a pamphlet *An Abstract of the Evidence*, the latter printed in Newcastle upon Tyne 'at the Expence of the Society in Newcastle for promoting the Abolition of the Slave-Trade' make sad and sorry reading.⁷ We are not surprised that Trotter was revolted by the slave trade. In his evidence he told how the slaves were so crowded together below deck that it was impossible to walk through them without treading on them; how when the scuttles had to be shut the gratings were not sufficient for airing the holds. He related how he had seen slaves drawing their breath—'with all those laborious and anxious efforts for life, which are observed in expiring animals subjected by experiment to foul-air or in the exhausted receiver of an air pump'.

The total number of slaves collected from Africa on this voyage amounted to 638 and of these 58 died before reaching the West Indies. Trotter said that many of them died of scurvy and that between 200 and 300 of them had the disease when they arrived in the West Indies. He said that he was often thwarted in his prescriptions for the sick by the master of the *Brookes* who, in violent bursts of anger swore that they fell victims to his medicines. While they were still on the African coast scurvy broke out but the master treated with contempt his proposal of carrying with them a large quantity of fresh fruit. The result was that they left with not one-twentieth part of the amount of fresh fruit that Trotter considered necessary. His proposal, he tells us was justified in that, when a liberal supply of fruits was obtained at Antigua the recovery of those slaves with scurvy was rapid.

In his evidence, Mr. Noble, Master of the *Brookes* said that he had no knowledge of Doctor Trotter previous to this voyage; that Trotter had been recommended by one of his friends to one of the owners of the ship. He thought him often very remiss in his duty, often spending a great deal too much time in dress, for which he often reproved him.

The evidence which Captain Noble gave concerning the availability of space for stowing the slaves contradicts that given by Trotter.

On his return to England, Trotter resumed his studies. He attended the lectures of Cullen at Edinburgh during 1784–5 and, believing he had valuable facts in his possession on scurvy, sent a letter to Cullen when the latter came to deal with scurvy in his lecture course. The facts presented in this letter apparently so confounded Cullen that he stated to his class:

that he never came to that chair so badly prepared; that after the scurvy had been treated by different authors for two hundred years, he doubted much if we had yet acquired a stock of facts sufficient to enable us to form proper notions of its nature; but that he would consider a paper on the subject which he had received from a gentleman present which was the cause of him making his declaration.

However, on the following day he resumed his lecture without taking any further notice of Trotter's letter.⁵

Trotter prepared his information on scurvy for a discussion at the Medical Society of Edinburgh but being unable to speak he prepared it for publication, as *Observations on the Scurvy* (1786). A second edition with many alterations and additions appeared in 1792. A German translation of the first edition was published (1787) and an American printing of the second edition appeared in Philadelphia (1793).

Trotter published further material on scurvy in his *Medical and Chemical Essays* (1795) and later, in his *Medicina Nautica* (1797), he included valuable information about the treatment and prevention of this disease.

Trotter, like Lind and Blane before him, recognized the value of diet in the prevention and cure of scurvy and he knew of the necessity of providing lemon-juice. Blane had presented a memorial to the Admiralty in 1781 which contained suggestions for preventing sickness and lowering the mortality of seamen in the West Indies. One of the parts of this petition asked that a supply of fruits and especially of lemons should be available for the seamen. Shortly after Blane joined the Board of the Sick and Wounded Sailors as Commissioner in 1796, some fifteen years after this Memorial to the Admiralty, many of the reforms which he had previously suggested, such as the use of lemon-juice, were brought into operation.

Rolleston (1916)⁸ in his article on Blane gives him much credit for the introduction of this order and although it may be true that it was Blane who ultimately provided the official sanction, I believe that the writings of Trotter on scurvy may be equally important. The actions of Trotter in insisting on and obtaining fresh fruit, fresh vegetables and lemon-juice for the prevention and cure of scurvy, set the climate for official action or possibly forced the official hand.

Trotter's understanding of scurvy was more complete and rational than that of Lind and Blane. As regards diet in scurvy Trotter held that 'recent vegetable matter imparts a *something* to the body which fortifies it against the disease'. He recognized that preserved juice of lemons was very inferior to the fresh fruit in preventing scurvy. Three dozen of sound lemons did generally as much as a gallon of the juice he wrote.⁹ An excellent substitute was apples or any other 'recent vegetable matter such as cabbages or greens'. 'Scurvy appears when there has been a deficiency of fresh vegetable matter in the diet.'

In 1795, the year before Blane's suggested reform was made order, Trotter had dealt with a serious outbreak of scurvy in the Channel Fleet by approaching the Admiralty personally to secure permission to purchase locally the necessary supplies of antiscorbutics. These immediately cut short the disease as Trotter records, not without satisfaction. 'The reader may smile at the idea of a Physician to the Fleet attending the stalls of a vegetable market or perambulating the country to calculate the produce but it never appeared to me to be below the dignity of the profession,' wrote Trotter, 'nor did I consider it a mean task to serve the salad with my own hands from the Charon's quarter deck.'⁹

Trotter, however, was wrong in believing that citric acid was the active antiscorbutic principle in lemon-juice.

Trotter, matriculated at Edinburgh University for the session 1787-8 when he attended Francis Home's class of materia medica, James Gregory's class of medicine and medical theory, and Daniel Rutherford's class of medicine and botany. He also attended the lectures in clinical medicine at the Edinburgh Royal Infirmary given by Francis Home.³

In 1788 Trotter received his degree of M.D. from Edinburgh University for his thesis 'On Drunkenness'—*De Ebrietate*. He had decided on this subject for his thesis as it had never before been treated. It is recorded:² 'It fell to the lot of Dr. Gregory to peruse it for the press, who was highly pleased with it and said it would be highly acceptable to Dr. Cullen and a fine subject for him to comment on afterwards.' On the public day of graduation Dr. Cullen introduced the thesis with many compliments and concluded with saying of the author: 'Certe non ebrius erat, qui hanc dissertationem scribebat.'

It appears that Trotter settled in Wooler on his return to England and practised there when not attending classes at Edinburgh University. While acting as surgeon and apothecary at Wooler, he became friendly with Admiral Roddam, whose residence was at Roddam Hall, about six miles from Wooler. This was a friendship which benefited Trotter considerably. At Christmas 1788 Trotter again entered the Navy having received the appointment as surgeon to the *Barfleur*, the flagship of Admiral Roddam at Portsmouth. From then until 1802 Trotter was in regular employment in the Naval Medical Service and during the period 1789 to 1793 he served on the *Barfleur*, *Edgar*, *Royal William*, *Duke*, *Centurion* and in the *Vengeance* on a cruise to the West Indies.

In a pamphlet, *A Review of the Medical Department in the British Navy with a Method of Reform proposed in a letter to the Right Honourable, The Earl of Chatham, First Lord of the Admiralty* (1790), Trotter had some very pertinent remarks to make on the examination of surgeons prior to their entry into Naval Service, on the supply of medicines and on the fine of 15s. paid by each sailor for every cure of a venereal complaint on board His Majesty's ships. He gave good reasons for the appointment of a Physician General for the Navy. Without doubt, Trotter knew the Naval Medical Service well, understood the deficiencies of it and had the ability and courage to recommend the necessary changes. In time his proposals were put into effect.

In 1793 Trotter was appointed second physician at the Naval Hospital at Haslar and with vigour he set about making many changes in the organization

of that institution. Reforms were made in every department of the hospital. Trotter published a pamphlet, *Remarks on the Establishment of the Naval Hospitals and Sick Quarters with Hints for their Improvement* in 1795 and in this he put forward his views on the changes which were required for the improvement of these necessary parts of the Naval Medical Service.

Military discipline, Trotter believed, could only be supported by the constant and unremitting attention of the officers. He proposed, therefore, an establishment of naval officers at the Haslar and Plymouth hospitals—a post captain, 5 lieutenants, 4 midshipmen, 1 master at arms, 2 ship's corporals and 2 bosun's mates. In this way discipline would be kept, crimes punished and the general well-being of the sailors attained.

Trotter comments on the feigning of disease by seamen, evidently no new trick. He says:

There is not a captain or lieutenant in the Navy but well know that if a good man is sent on shore sick, he comes back with a very different character; and if he was sent away with a real complaint he has learned at these fountain heads of indolence how to feign and counterfeit others. It is here (the wards) that they instruct one another and as the cause is a common one, it is not always to be discovered who are the skulkers or how many of the doctor's bottles, boluses or pills have been consumed in the fire or thrown away. When at Plymouth in October last, a paper, taken from a sailor was put into my hand by Dr. Mein of the Caton hospital ship from which it appeared that deception was become a complete and scientific system. Among other articles to produce spitting of blood, gunpowder or salt petre is taken in large doses; haemoptysis quickly follows from the blood being overcharged with oxygene gas which these ingredients readily afford.

Trotter also desired a much larger medical staff for these hospitals. Haslar Hospital, when full, held over 2,000 patients for which there was a staff of 2 physicians, 2 visiting apothecaries with assistant dispensers in the wards for the physical patients, while in the surgical department there were 2 surgeons with assistant surgeons. He suggested that there should be 5 physicians, 4 surgeons, 9 visiting apothecaries and 13 assistant surgeons.

Before the publication of this pamphlet, however, Trotter had been appointed on 9 April 1794 by the Admiralty to be the Physician to the Channel Fleet, an appointment made, it was believed, solely on his professional ability. The Channel Fleet was then under the command of Earl Howe and consisted at that time of thirty-two sail of the line, eight frigates, a number of supporting vessels with the *Charon* hospital ship, on board which Trotter was ordered to embark. This was the fleet which sailed out from England to defeat the French Fleet at the battle ever famous as the 'Glorious 1st of June'.

After this magnificent victory Trotter drew the attention of Earl Howe to the part played by the surgeons and their assistants. When the Fleet returned to Spithead, Trotter was instrumental in calling together a meeting of the surgeons who laid before Earl Howe a memorial containing a note of the numerous defects and deficient pay of the medical department of the Navy. When the Commander-in-Chief visited London he presented it to the Board of Admiralty and insisted on greater encouragement being given to the medical officers. The first result of this, and the forerunners of others, was that 200 surgeons were added to the half-pay list.

During this period when he was Physician to the Channel Fleet, Trotter was active in carrying out not only the routine tasks of his office but in reforming and organizing, looking after the welfare of his medical officers and the seamen, and in writing. The first volume of his work *Medicina Nautica* (Diseases of Seamen) was published in 1797, a second volume in 1799 and the third volume in 1803. A second edition of these three volumes was published in 1804. The work contains much of interest. It gives an account of the health of the fleet, it has sections on scurvy, contagion, typhus, yellow fever, catarrh, dysentery and smallpox and in addition it contains letters or portions of letters which Trotter received from the naval surgeons in the ships of the fleet. Trotter had followed Blane's example in requesting information from the surgeons on medical matters which he included in this book.

There is extant a letter from Trotter to the publishers of *Medicina Nautica*.¹⁰ In it he answers a criticism which had apparently been made about the first volume of *Medicina Nautica*. He writes: 'Dr. Blane's Book is a valuable compilation, but it had no originality of matter: we flatter ourselves that in many parts we have trod a new path.'

In 1801 a gold medal was presented to Edward Jenner by Trotter on behalf of the naval medical officers. This mark of their esteem for his work on vaccination was the first public recognition which Jenner received. Trotter appears to have appreciated early the value of vaccination and although the practice of vaccination was not officially introduced into the Navy until 1858, many of the naval surgeons under Trotter's direction were vaccinating the seamen. Late in 1798 Trotter had written with regard to vaccination that if the conclusions which had been drawn so far were correct 'we shall hope to see some of the Gloucestershire cows transferred to the Naval farm that surrounds the walls of Haslar Hospital for the purpose of inoculating the whole seamen at Spithead'.¹¹

It is uncertain if Trotter and Jenner ever met but they were regular correspondents over a number of years. In the *Edinburgh Medical Journal* of 1859 and 1860 three letters from Jenner to Trotter are to be found. These had been given by Trotter's daughter Alison to Dr. John Brown and they indicate the terms on which Trotter and Jenner corresponded.^{12, 13}

In 1802 Trotter retired from the Navy but received no public recognition for his valuable work on behalf of the Naval Medical Service. His retirement pension was small and he received no increase to it when a few years later there was an addition to the pensions for medical officers in the Navy. Without doubt those in authority did not treat Trotter fairly, probably because Earl Howe, who had been his protector, was dead. It is, however, good to record that the medical officers on whose behalf Trotter had exerted himself so greatly did express their appreciation of his actions. In 1797 the surgeons of the Cape of Good Hope Squadron had presented him with a gold snuffbox and on his retirement from the Navy in 1802 the officers of the Medical Service presented him with a set of tea-plate.

On his retirement from the Navy in 1802 Trotter settled in Newcastle upon Tyne at 103 Pilgrim Street, next door to Bell's Court, the first home of the

Newcastle upon Tyne School of Medicine. Trotter's retirement was not idle. He practised as a physician in that city for twenty-five years and although he was not a member of the Infirmary staff his practice appears to have been a large one. When a vacancy occurred on the Infirmary staff he offered his services. Finding that it was expected that he should go round soliciting votes, he withdrew his offer. His house was open on Tuesday and Saturday mornings so that the sick poor of the city could obtain advice and medicine without charge.

There is much to interest us concerning Trotter's life in Newcastle upon Tyne. It was a period of great activity for him. In 1804, he published *An Essay, Medical, Philosophical & Chemical on Drunkenness*, which was an enlargement of his Inaugural Dissertation for Edinburgh University. This he dedicated to Edward Jenner. Three further editions appeared in 1807, 1810 and 1812, and in addition there was an American edition in 1813 and a German one in 1821.

Although Trotter may not have been the first to coin the phrase 'Alcohol addiction' he was the first to deal with this question from the medical standpoint. Trotter believed in the psychogenesis of the habit. 'The habit of drunkenness is a disease of the mind', he wrote.

A pamphlet entitled *A Proposal for Destroying the Fire & Choak Damp of Mines* was published in 1805 and a second pamphlet on the same subject appeared in 1806.

Of much greater importance, however, is his work which was first published in the year 1807, *A View of the Nervous Temperament, being a practical Enquiry into the increasing Prevalence, Prevention and Treatment of those Diseases commonly called nervous, bilious, stomach and liver complaints, low spirits and gout*. A second edition of this book was called for later in the same year and a third edition in 1812. An American edition was published in 1808. This work consists of an extensive study of the neuroses with particular reference to various complaints now generally referred to as psychosomatic. In it he emphasizes the physical effects of emotional disturbances. He writes:

A perfect knowledge of the temperament, in my opinion forms the only basis for a successful treatment of all nervous and bilious diseases so called; it leads to the fountain head; unfolds the source from which the evils flow and puts us in possession of the only means for prevention and cure.

In 1819 there appeared from Trotter's pen another pamphlet, *A Practicable Plan for Manning the Royal Navy without Impressment*—a subject on which he had previously given his views in Volume I of *Medicina Nautica* in 1797. This provides further evidence of the interest he had in the Navy and the concern he had for the well-being of the seamen.

In 1829 Trotter published *Sea Weeds: Poems written on various occasions, chiefly during a naval life*.⁴ This book is of interest, not so much for the poetic value of the pieces it contains as for its autobiographical preface and an engraving of Trotter at the age of thirty-seven by Lizars.

It was presumed by Laughton, who wrote the life of Trotter¹⁴ for the *Dictionary of National Biography*, that this engraving was after a portrait by Orme, but

Rolleston has pointed out that it differs considerably from a stippled engraving published by Orme in 1796. Rolleston says:

The representation in *Sea Weeds* is the more attractive of the two and as it apparently shows the author in a uniform which was not given to medical officers of the Navy until 1805, it seems not unlikely that it was if based on Orme's portrait of 1796, modified at the sitter's direction in various ways before it met the public eye in *Sea Weeds*.

He was unable to reach any definite conclusion about these engravings. In Dillon's *Narrative 1790–1802*¹⁵ (1953), however, there is an interesting entry which throws some light on this. Dillon wrote:

Dinner was soon announced. . . . My friend the surgeon had a red collar to his coat, with two gold laced button holes thereon. I could not help inquiring what uniform it was. He replied that it related to some of his professional honours. However, he never wore it on board the *Ariadne*.

The editor of Dillon's *Narrative* tells us in a footnote:¹⁵

W.H.D.'s suspicions were well founded. The official uniform for a surgeon in 1796 was the ordinary warrant officer's, itself introduced only a few years before (1787). It was the plainest blue, unadorned. It was only in 1805, that the surgeon obtained a distinctive uniform of his own and distinctive buttons to go with it. There is evidence that some surgeons, even physicians had for some time been wearing a distinctive uniform, presumably of their own design since no Admiralty order in the subject has been discovered. The earliest example known to me of this unofficial uniform is that worn by Tobias Smollett in an Italian portrait of him, painted around 1770. This shows the gold laced buttonholes of Dillon's surgeon but not his red collar. Details and an illustration of other 'unofficial uniforms' almost identical with Smollett's and made for Dr. Thomas Trotter, Physician to the Fleet have been discovered. These date from 1796–1798. . . .

This then may be the explanation of the uniform which Trotter wears in the engraving in *Sea Weeds*. Trotter we know was certainly interested in uniform as the comment of Mr. Clement Noble, the Master of the *Brookes* tells us, viz. 'he thought him often very remiss in his duty, often spending a great deal too much time in dress'.

Although Trotter had a great interest in uniform I do not feel that this interest was merely in 'dressing up'. Lind in 1774 had suggested that the seamen of the Fleet should have some uniform sea dress. Trotter elaborated this idea very wisely⁹—he suggested that the uniform manufactured of a particular type of cloth should consist of a blue jacket with sleeve and cape of the same and lined with thin white flannel, a waistcoat of white cloth trimmed with blue tape; blue trousers or pantaloons of the same cloth as the jacket for winter; and a linen or cotton trousers either striped blue and white or all white for summer. A button of metal or horn less liable to tarnish, with the letters R.N. on it. A small round hat, waterproof, with a narrow belt on which should be printed the name of the ship, which could be shifted when a man turned over to another ship. Trotter's suggestions were adopted after about sixty years. His reasons for suggesting this uniform were that in addition to the sanitary advantages it would be considered an honourable distinction, engender *esprit de corps* and render desertion less easy.

The *Dictionary of National Biography*¹⁴ states that Trotter 'does not appear to

have been married' and other biographical articles with one exception make no mention of wife or children. Embleton of Newcastle upon Tyne,¹⁶ however, records that 'Elizabeth Julia Trotter, his wife, died in 1804 and was buried in St. Andrew's Churchyard. A long poetical description nearly effaced by decay is there on a headstone.' A recent search has failed to reveal this stone but the death of Mrs. Trotter and her burial in this Churchyard has been confirmed from the records of St. Andrew's Church, Newcastle upon Tyne.¹⁷ She died in childbed on 1 May 1804, a son John Everitt Howe Roddam Trotter having been born on 20 April that year.

Trotter, however, married for a second time. On 25 September 1810, he married Isabella Agnes Dixon in St. John the Baptist Church, Newcastle upon Tyne.¹⁸ The baptisms of two sons and a daughter, Alicia Alison, are recorded in the Parish Register of St. Andrew's, Newcastle upon Tyne.

In 1827 Trotter gave up his practice in Newcastle and went to live on a small estate which he had purchased in 1809, Easter Housebyres, near Melrose. He remained there until 1830 when he retired to Edinburgh. He returned to Newcastle in 1832 and died there on 5 September of that year.

It is of interest to read what Trotter's contemporaries thought of him. James Anthony Gardner, Commander, R.N., wrote of Trotter: 'Formerly Physician of the Fleet, a most excellent fellow with first-rate abilities, an able writer and poet.'¹⁹ Mackenzie in his *History of Newcastle* (1827)²⁰ says 'he was an able and useful physician' and mentions that a naval surgeon had remarked to him that more lives had been saved in the Navy during the last war, by the regulations and practices introduced by Dr. Trotter, than had been lost in battle. Mackenzie also quotes a story told in naval circles when the Earl St. Vincent was boasting of the many good things he had done for the Navy. Admiral Sir Edward Thornborough replied:

True my Lord, you did much; but there is one man still alive who did more for the navy of the country than you or any other person that ever existed and that man is Doctor Trotter who has been shamefully neglected.

It is not necessary, however, for us to rely on the opinions of his contemporaries when we come to make an assessment of Trotter's character and achievements; his own writings and actions speak clearly enough. Thomas Trotter was a well-educated physician, diligent and far-seeing, who tackled his life's work with energy and determination. He was one who recognized where the path of duty lay and along that way he travelled.

He realized and accepted the heavy responsibilities of the office of Physician to the Fleet. His prime consideration was the health and welfare of the seamen and to achieve this he undertook reforms in organization, in hygiene and in diet, and at every opportunity he pressed for improvement in the conditions of employment, pay and status of the naval medical staff. Thus, by ensuring that the seamen were kept as fit as possible and that their ills and injuries were treated efficiently, did Trotter play an important part in helping to keep the Navy ready for battle, at a time when Britain relied more strongly on her ships than at any other period since the Armada.

I. A. Porter,

Like most reformers, Trotter clashed with those who had not his vision. Many of his ideas were far in advance of his time and were rejected by those in authority but it is interesting to note that some of these suggestions were put into practice fifty years later.

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