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Thesis
Influence of Clothing upon Health.
30th March 1850.

1.
It is a common observation, that students, for the most part, select for their theses subjects which are not only difficult in themselves, but which are of such a nature as to preclude the author from illustrating his subject, if not from his own acquired resources, at least from his own personal observations. Such theses are for the most part mere computations, and are neither useful to the student, nor interesting to others.

Perisons of avoiding this error, we have chosen a subject somewhat less professional perhaps than usual; but one which we could elucidate more successfully, both from the results of previous study, and practical observation, than we could have done, had we followed the usual course. Other reasons besides have influenced us in its selection.

The importance of the subject, or rather of the class of such subjects to which it belongs, has had some



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share in doing so. That the great ma-
-jority of diseases, which afflict humanity,
are due to their own folly and ignorance
cannot be doubted. The extent, to which
the simplest and most obvious laws of
health are daily and hourly violated,
by all classes of the people, in this, the
most civilized, the most enlightened,
and the most ^{Christian} civilized country,
in the world, is truly appalling. The
results in, all their extent are known
only to the Medical man, but he alone
^{also} is possessed of the remedy. The fact of
such possession involves at once a
duty, and a responsibility. The duty is
solemn, as the responsibility is great.
With this we fear the one has been too early
omitted, while the other has been too
lightly felt. The Medical man, in the
thousand demands made upon his ac-
tivities, in every day life, is induced
to forget that he is, not only the pre-
server of private life, but also the guard-
ian, of the public health. - that he is

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not only a Curer of Disease, but a pre-
-venter of it. Hence, in too many instances,
he has been satisfied with the assumption
of the former of these Characters, and
the performer of its Duties; while the latter,
he has left unassumed, and its Duties
unperformed. In doing so, he has treated
Disease, but neglected its Cause. The
Public and the Profession have equally
suffered.

The chief source of the evils alluded
to is doubtless ignorance. The fearful ex-
-tent, of which may be known by its re-
-sults. But who is to remove it. The Medical
Profession is alone in possession, of a lever
sufficiently powerful to remove a mass so
weighty, of light sufficient to dispel
darkness so Egyptian. Whose Duty, then, is
it to use the lever: to handle the torch, at
which is at once to reveal and remove
this darkness, but those into whose hands
the torch has been placed, and who pos-
-sess also the fire at which, to light it?
Subjects of this kind are now beginning to

attract attention and will ere long secure for itself that share of it which its importance demands. The disease is at once extensive complicated and serious though not hopeless. ^{A surgical issue is dreaded} Professional aid is now sought. It must be tendered to effect a satisfactory and permanent cure will require the combined skill and energy of the whole profession. It is a great work; Happy he who performs it well. The bearing of these remarks will appear in the following pages. Participating in the general interest which the subject of the public health has awakened has led us to select a subject which is at least equal in importance to any other that might have been chosen.

The principal sources of information on such a subject are books and personal observation. Books are essential from which alone can be obtained the history of the subject and the opinion of authors upon it. We deem it due to ourselves to state that the only two books known to

us as of real worth on the subject viz "Pau-
-chan, on the Influence of Modern Clothing
on Health". "Femmering on Stays" we have
not seen, as they are not to be found in
the College Library. We have been therefore
limited to a few popular periodicals which
could add but little to our previous in-
formations.

Personal observation the only other source
of information, open for us we have pur-
-sued with as much faithfulness as pos-
-sible and as often as opportunity presented
itself. More time however and larger op-
-portunities ~~are~~ ^{were} necessary to gather data suf-
-ficient to warrant definite justifiable and
-trustworthy conclusions on a subject so
-extensive than we were possessed of. For the
-use of stays we had proposed a more practi-
-cal and satisfactory mode of enquiry. We
-had proposed first to make a series of measure-
-ments on a given plan on the bodies of females
-then in the second place to make a co-
-extensive series on the same plan on statu-
-ary ancient and modern, and thus as-

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certain, by actual comparison whether and how far the assertion is true that this piece of dress has produced permanent change in the female form, in this and in other countries where they are used, In making this attempt however we soon found insuperable difficulties in the way. First there was want of time and second there was want of opportunity of the former we had to complain of in common with all students in the last year of their curriculum, the latter we found impossible in private ^{practice} life. Such an examination, as that we proposed could only have been made within the walls of a Hospital or in some other peculiar circumstances which we had not the good fortune to be placed in. Our fine plan therefore like many others before it has banished into thin air and left us to thread our way amidst a few indefinite and general observations which we must just make the best we can of. This is the introduction to the Thesis the nature of which is sufficiently indicated by the title, but not pro

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Merely an introduction to what follows which is only a portion of the original paper. We found it swelling to such an extent in our hands that we despaired of rewriting it as well as of others reading it. We have therefore only sent about half of it viz that portion which relates to the use of Corsets. leaving out all that relates to other parts of dress both of male and female and their influence on health.

We come now to speak of stays as an article of dress tending to injure by compression the healthy functions of the body.

The great motive to the wearing of stays seems to be the supposition that they tend to preserve or improve the form. The fair sex have a strong and unobscured sense of beauty. A principle of action which has been conferred upon them for the wisest purposes of universal extent and powerful influence. Manifestations of it may therefore be expected at an

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early period of their history. We are told in the second chapter of Genesis that the first pair after their transgression, sewed fig leaves together and made themselves aprons. This act was dictated by a sense of shame and the nature of the climate seems to have made no farther demand upon them for the protection of the body from atmospheric changes. They seem not as yet to have dreamed that the model form which God had given them could be improved by dress. Farther on in their history we find the prophet Isaiah, in the third chapter of that book thus inveighing against the numerous and useless decorations of the fair Israelites. "The bravery of their tinkling ornaments about their feet, and their caults, and their round tires like the moon, the chains, and the bracelets, and the mufflers, the bonnets and the ornaments of the legs, and the head bands, and the tabrets, and the ear-rings, the rings and non-jewels, the changeable suits of apparel

-el, and the muffs, and the wimples, and
 the crimping-pins, the glasses, and the
 fine linen, and the hoods, and the
 "ails" of multiplicity, complexity, and
 profusion of dress and ornament are to
 be taken as indications of civilization,
 this strange catalogue shows that certainly
 the ladies of Israel were not far behind
 those of our own times. There is no men-
 tion made of Corsets yet it is more than
 probable that in some form or other they
 constituted a part of this complex toilet.
 A writer on the use of Corsets says "The earliest
 record we have of a contrivance like the cor-
 set, among Ethnic writers is Homer's
 account of the girdle or Cestus, of Venus,
 Mother of the Loves, and Graces, which even
 the haughty Juno is fabled to have bor-
 rowed, in order to make a more profound
 impression upon her rather unmanageable
 husband Jupiter. This girdle was invest-
 -ed by the Poet with magical qualities, which
 rendered the wearer irresistibly fascinating".
 "In this was every art and every charm

To win the wisest and the coldest warm-
 Goud love, the gentle sigh, the gay desire,
 The kind deceit, the still rearing fire,
 Persuasive speech, and more persuasive signs,
 Silence that spoke, and eloquence of eyes."

Poet, *Alid*, book XXIV, line 247 &c.

This the writer goes on to say, after all we are
 persuaded was nothing but such a court
 as we have described in the beginning,
 worn by an elegant form, to which it
 was accurately adapted. Even herself could
 not look otherwise than awkward and
 repulsive in one of the armadillo shell-like
 machines which are sold as fashionable in
 the present day without regard to their
 inelegance.

The costume of the ancient Greek ladies
 was, in every particular, opposed to stiff-
 -ness or personal restraint; and we find
 that the cinctus, or girdle, to gather the flow-
 -ing redundancy of their robes around the
 waist, was considered sufficient for the dis-
 -play of their enchanting forms. The Roman
 ladies were great attempts in the mystery

-ies of the toilet, though not possessed of the grace and elegance of the Grecian beauties. We find among them rudiments of the corset in the bandages which they wore around the chest, for the purpose of preserving the shape of the bosom, and displaying it to advantage. They were commonly made of wollen or linen cloth, and are alluded to in several instances by the Poets. Thus in Terence, we find Chaerea saying to his servant, concerning an unknown beauty who had attracted his attention "This girl has nothing in common with ours whom their Mothers force to stoop, and make them bind their bosoms with bandages, in order to appear more slender. *"Maad similes virgo est virginum nostrarum, quas matres student demissis humeris, vincto pectore, ut graciles sient. Ter. Eun.*"

As described by the Roman writers, the dress of both sexes of the ancient Germans was similar, consisting of a sagum or cloak clasped at the throat, and a

vest or tunic which fitted tightly, and
 showed all the form. "Ergumen fuit sajum,
 fibula si defuisset spina confertum; loca
 splētissimi distinguebantur, veste, non flava
 sed stricte ac pene singula membra ex
 sperimenti: idem, feminis habitus qui et
 viris". B. Arabanus, De Morib. etc. omn. Gentium.
 Dr. Traill in his work, on Medical Jurisprudence
 says "Spigelius strongly condemns this prac-
 tice of compressing the chest, and lauds
 the Genetives among whom an ample
 chest, in either sex is esteemed a beauty."
 In his day it appears that the British a-
 -bove all nations were addicted to this
 absurd practice.

About the middle of the seventeenth cen-
 tury we find a celebrated author Ambrose
 Parey thus alluding to their use "In
 the mean while that I may not om-
 -mit the occasion, of crookedness, that
 happens seldom to the Country people,
 but is much incident to the inhabitants
 of great towns and cities, which is
 by reason of the straightness and nar-

-rowers of their garments that are worn
 -by them, which is occasioned by the
 folly of Mothers, who, while they Court to
 have their young daughters bodie
 so small in the middle as may
 be possible, pluck and draw their
 bones awry, and make them crooked.
 For the ligaments of the backbone being
 very tender, soft, and moist at that
 age, cannot stay it straight and
 strongly but being pliant, easily permits
 the Spindels to slip away forwards, out-
 wards, or sidewise, as they are thrust, or
 forced. Ambrose Parey lib. 20 Cap. VIII
 Page 529 London 1678.

In reviewing this imperfect sketch
 of the history of Corsets it appears suf-
 ficiently evident that the ancient
 Cestus or girdle was used for a very
 different ^{purpose} than that of the modern corset.
 The former the cestus was used merely
 to display the form beautiful and
 perfect as it came from the hands
 of its Creator. The latter the corset.

is employed not to display but to con-
 -spire that form thereby rendering ^{it} an
 object of deformity instead of beauty.
 If we are to credit Terence, ^{already quoted} it would
 appear that this latter mode of its ap-
 -plication, made its appearance at a
 considerable early period and may
 have continued so down to the present
 time, in some nations or tribes at least
 for the description given by Roman authors
 of the dress of the Ancient Germans al-
 -ready alluded to shews that no such
 practice existed amongst them. Whence
 its origin in our own Country it is not
 easy to say whether it has been handed
 down through successive generations as
 a relic of the times of Terence, or
 whether we are to give British females the
 credit of having originated it themselves.

The source of such a practice is
 of equal interest and difficulty as the
 time of its appearance. A writer in
 the French Dictionary of Medical Sciences
 says in an article on Corns "That the whole

Bone Corset, dividing the female form into two parts, is a relic of the Ancient German Costume, which is still to be seen in some pictures of celebrated Masters. This is contradicted by the quotation already given on Roman Authority.

Some have ascribed it to the influence which the mailed Knights, during the ages of chivalry, had upon female dress leading to the display of the entire figure as far as possible, in imitation of the males in their closely fitting Armour. That this custom had its influence we do not doubt: and it is natural enough to suppose that a practice so barbarous should have taken its rise in an age so dark and in imitation of a custom so ridiculous. We cannot however admit this to be its sole origin. We would rather agree with those who consider them to have been first used by the diseased, and deformed. In the words of another. Such hurtful appliances were first resorted to by

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the ugly, deformed, or diseased, who having no natural pretensions to figure, pleased themselves with the hope of being able, by main strength, exerted, upon steel-ribbed, whale-boned, and padded Corsets to squeeze themselves into delicate proportions." That such is the true origin, of stays, we think, is strongly confirmed by the meaning of the terms by which they are designated. The meaning of the term, stay is support which, obviously, indicates that this term, was originally conferred upon them from their being applied, to a weak, or deformed body that is a body needing support, a healthy body not needing such support. The term, Corset is equally expressive. It seems of French origin and is compounded of the words Corps and serrer the meaning of which words ^{is} to girdle, or compress the body. The one term thus appropriately indicating their origin the other their use.

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If we now glance at the history of changes
and origin of corsets we may next notice
the mode of their application.

Almost the first duty which the nurse
performs for the child on its introduction
into life is to wrap it in a roll
of flannel or linen. For what reason
such a practice is prevalent it is dif-
ficult to conceive except it be on
the principle "that those who learn
young learn fast". It being intend-
ed should the child prove a female
to continue the pressing and compressive
process which has now been begun du-
ring its future existence; Should the
little captive escape the evils of this im-
prisonment, during its infancy and
childhood and safely reach the peri-
od of youth, if a male it is well for
it is then permitted to escape from
its prison-house and like other animals
enjoy unrestrained that freedom which
is essential not only to health, but
to life. Should it be a female, alas for it!

A darker cell - a deeper dungeon - stronger bonds and heavier irons await it. At first these are light and easily borne. The swaddling-band is exchanged for the laced waist^{coat}. The pressure is at first applied gently, but gradually increased, with increasing years. As yet the stays are used more as an agent of support to other parts of the dress than as an agent of compression, and consequently there is as yet little to find fault with in appearance at least. There may be much in reality. The child has now become a girl and must go to school to learn those ~~which~~ accomplishments ^{whose} possession fashion, render's imperative many of which are more elegant than useful. In the attainment of these much sitting in the erect posture is required. This is further necessitated by the desire to obtain what is called a 'gentle carriage'. The muscles already somewhat weakened by the interference of their

action with swaddling bands and laced waistcoats are still further debilitated by the excessive efforts they are now called upon to put forth in order to maintain the erect posture and fixed position, which are deemed so essential to the attainment of the object already alluded to. The muscles unable to perform a task, which nature never intended them for especially in such unfavorable circumstances, begin to show indications of weakness and fatigue. The stay is now appealed to and as the least is tightened day by day it becometh its name support is really given and felt. Fatigue is less complained of. The erect posture is more successfully and easily maintained; The mother is pleased. The daughter is pleased. Henceforth stays are indispensable; Why they are so is to them sufficiently obvious. They give as their name implies support. The physiologist would admit the fact but give it another, and a very dif-

ferent Reason, Gold may be bought too dear. Support is purchased at a fearful price which must yet be paid Nature will neither Cancel the debt, nor admit of a substitute.

We may now shortly enquire what are the objects sought for in the use of Corsets

There must surely be of some importance to render such a tedious process of training necessary to warrant the suffering of so much pain, the enduring of so much labour, the involving of so many risks. The chief objects sought for in the modern fashionable education of a young lady seem to be three 1.st The acquirement of a great number of accomplishments 2.^o A genteel Carriage 3.^o A fine shape.

Another question presents itself and demands an answer, viz Are these objects really attained after so much risk and trouble.

1.st As to the accomplishments. With

then we have not much to do except in so far as they may render the use of stays necessary to their ^{attainment} accomplishment.

That they do so in some measure we have already seen. We may observe en passant that they are seldom attained to the extent expected, and granting that they are so what has the possessor gained by them? They are useless in the real earnest business of life. No doubt they are worthy possessing if obtained cheaply but too often they are purchased at the expense of time and health, properties more precious than Rubies of Ind or Gold of Ophir.

2. As to a gentled Carriage we may observe that a proper a natural carriage, ought to consist of two essentials at least Freedom of motion, and uprightnes of posture. A beneficent Creator has made abundant provision for these two in the bony framework, and muscular apparatus with which the body is endowed. We cannot shut our eyes to facts. In the modern Boarding school

where the "gentle-carriage-system" is carried 32.
to perfection, what we do see! Look at
the specimens they produce. Any one
of them will suffice. Observe the artificial
creature walking in the street, or sitting
in a drawing room, and you can have
little difficulty in concluding that the essen-
tials of a 'gentle carriage' so far at least
as that is obtained by the application
of crutches or other artificial appliances
are the very opposite of those we have men-
tioned, in fact they are constraint of motion
and a bent posture. The latter statement
might be questioned, but we mean a
bent posture in reality, not in appearance.
If appearance is to decide we readily
yield for there is not only a straightness of
posture but rigidity which is readily ac-
counted for when we remember that
for bone, ligament, and muscle there have
been substituted, whalebone, stut wood
and cloth. In support of our bent
position we quote from a high au-
-thority Dr Forbes one of the Editors of

The Cyclopaedia of Practical Medicine
and Physician to the Chester Infirmary
- says in a note appended to Dr. Berlon's
Article on Physical Education:

"We lately visited" says he, "in a large
town, a boarding school containing
forty girls; and we learnt, on close and
accurate inquiry that there was
not one of the girls who had been
at the school two years (and the ma-
jority had been as long) that was not
more or less crooked!" He might, and
highly quotations and add facts without
number but to no purpose for these
things are too notorious to escape even
the notice of the nonprofessional. We
may just add on the authority of
one of the best Anatomists in Europe
that in the middle and upper
ranks of society, not one female
in a hundred has a straight spine
3 As to the fine shape. If by
that is meant the shape which is
worn by modern females in fashion

able circles consisting in narrow waist 24.
broad shoulders, and broader haunches
we certainly must admit that it
has been gained and gained most
effectually, though the dress must
have its share of credit in its pro-
duction. We somewhat demur how-
ever, to calling this a fine shape.
and for several reasons.

The distinguishing feature of the living
world as contrasted, with the dead is that
the former in all its outlines of form is
defined by curves and not by lines or angles
which characterize the latter. The fe-
-male form in its natural state is form-
-ed in accordance with this general
law and so long as it is unaltered by
art or fashion, is undoubtedly the most
beautiful living form in the whole range
of Creation. The fine shape of modern
fashion has violated that law for the out-
-line of the female form is no longer de-
-fined by curves but by straight lines and
angles thus allying itself to dead matter

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or at least to the lowest tribes of crea-
-tion, the wasp or the spider. Again one
would suppose that the standard of per-
-fection of female beauty would be sought
for in that which is adopted by na-
-ture. This is always the standard adop-
-ted in other departments of art and
-science and adopted because the
-only perfect one. Fashion however
-has adopted another standard and
-if a perfect one we must admit that
-corsets have really attained perfection.
-That such is indeed the case we
-have only to appeal to the forms of
-Ancient or Modern Statuary which
-are confessedly admitted to embody
-the perfections of human beauty. No
-two things can be supposed more un-
-like each other than the waist or bust
-of a fashionable young lady and that
-of the Venus de Medicis. This is cor-
-roborated also by an appeal to those
-nations which have not submitted to
-the curse of Corsets. Compare the

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forms of our British females with the
Turks who wear no stays and are in
consequence among the most beautiful
females in the world. It appears then
that those who wear stays gain nothing
by them, or if they have gained any thing,
at all they have gained a loss. The loss
of all that is most dear to them, beauty
and health, and if the absurd system
is much longer pursued we are afraid
we must add character too. for how can
the intelligent portion of mankind admire
long or highly the ^{character} of those who thus re-
lessly sacrifice at the shrine of fashion and
vanity the dearest interests of humanity.
We will now close this part of the subject
with a few quotations confirmatory of
these statements.

Not Dr. Coombe a well known and
justly admired writer on physical educa-
tion thus appeals to Mothers on the sub-
ject. Let those mothers who are afraid
to trust to Nature for strengthening and
developing the limbs and organs of

their offspring attend to Facts and
 these ~~facts~~ ^{fears} will vanish. It is notorious
 that a majority of those girls who, in
 opposition, to the laws of nature, are en-
 -caged in stays, and get insufficient ex-
 -ercise, become deformed, an occurrence
 which is on the other hand, compara-
 -tively rare in boys, who are left, in
 conformity with the designs of Nature
 to acquire strength and symmetry,
 from free and unrestricted Muscular
 Motion. In a Seminary for young
 ladies, for example, containing forty
 pupils, it was discovered, by examination,
 by Dr. Forbes, that only two out of those
 who had been resident in it for two
 years had straight spines, while out
 of an equal number of boys, imperfect as
 their exercise often is, it would be dif-
 ficult to discover as many whose spines
 were not straight. Here then, is ample
 proof, that stays and absence of exercise
 so far from contributing to an elegant
 carriage, are directly opposed to its ac-

-quations; and thus the absence of stays and indulgence in exercise, even when not carried so far as the wants of the system require, instead of being hurtful to the spine contribute powerfully to its strength and security." Yet such is the dominion of prejudice and habit, that, with these results meeting our observation in every quarter, we continue to make as great a distinction in the physical education of ladies as

Dr Forbes, already quoted from, says "Our patient was in this predicament, (had crooked spine) and we could perceive (what all may perceive who meet this most melancholy of all processions - a boarding school of young ladies in their walk) that all her companions were pallid, sallow, and listless. We can assert, on the same authority, of personal observation, and on an extensive scale, that scarcely a single girl, (more especially of the middle classes) that has been at a boarding school for two or three years;

Returns home with unimpaired health; and, for the truth of this assertion, we may appeal to every candid father, whose daughters have been placed in this situation. No further proof is needed of the enormous evil produced by the present system of school discipline.

Contrast with them an opposite system of treatment and its results. Mr Henry Marshall says "That lateral curvature of the spine is intimately connected with civilized life. That the agricultural peasant is seldom affected with it; and the tribes of people commonly denominated savage perhaps never." Further "I have had good opportunities of examining the forms of the natives of India, and of the Malay Islands, and do not recollect having seen a single case of this deformity among them." An intelligent old author speaking of the Coribs 140 years ago says "They do not swaddle their infants, but leave them to tumble about at liberty in their little ham-

-mooks, or on beds of leaves spread on the earth, in a corner of their huts, and never theless their limbs do not become crooked, and their whole body is perfectly well made. And again "Although the little creatures are left to roll on the ground in a state of nudity, they nevertheless grow marvellously well, and most of them become so robust as to be able to walk with support at six months old."

In Mr Stevenson's narrative of Twenty Years residence in South America it is mentioned that of the Araucanian Indians "The children are never swaddled, nor their bodies confined by any tight lacing" "They are allowed to crawl about nearly naked until they can walk" "In the loose clothing," adds Mr Stevenson "which the children wear from their infancy may doubtless be attributed the total absence of deformity among the Indians. Vol. I. P. 9. 10.

Dr Traill says. "The female dress should keep the body comfortably warm. Compression of the chest and abdomen of females is far too general: the ribs of most of our modern belles are deformed by tight lacing". Again "Tight lacing and whale bone have done their worst to pervert the true form of woman".

These quotations, from the highest medical authority, and more might be added, are surely sufficient to satisfy any rational enquirer that the use of corsets has not only failed to secure the objects contemplated by ^{them} it but that on the contrary ^{they} have in many if not in most cases it has been productive of results entirely opposite.

We will now shortly enquire into the causes of this failure.

The soil commences as we have seen with the swaddling band.

During the first few weeks of the infant's existence the cutaneous system is remarkably delicate and active while the internal organs which are only beginning to exercise their proper functions are as yet comparatively inert. The application therefore of such bands must be injurious unless great care be taken. More care than is usually exercised by nurses or even mothers who are wholly ignorant of such things. Such pressure will act injuriously in two ways producing either irritation of the nervous system or excitement of the circulation. While the former may be injurious from the excitement it may induce ⁱⁿ the system the latter is likely to be still more so. The internal organs, the lungs, the liver &c are yet in a state of functional inactivity and the circulation in them, not yet fully established. Any sudden or permanently increased flow of blood to or through

They must be highly luxurious -
 Soon however these organs assume
 their proper functions and ere long
 perform them with great vigor and
 activity being in consequence all the
 more liable to injury and disturbance
 in accordance with a well known
 Physiological law that liability to
 injury in an organ is proportional to
 its functional activity. Should
 pressure now be applied to the cutane-
 ous circulation, the contents of the cap-
 illaries will be driven back upon
 these organs thus producing con-
 -gestion with all its attendant evils.
 Pressure upon the walls of the chest
 and abdomen will add to the evil
 by impeding the functions of those
 organs thus producing an amount
 of injury proportional to its force
 and their activity.

Another stage on in life's path, and
 the nervous and muscular systems
 become predominant. The activity

of the former is evidenced by the great liability of children at an early age to nervous affections of various kinds; of the latter, by the irrefrangible activity and incessant motions of children. These nervous affections are either grave in themselves as convulsions &c or grave in their results as by Apoplexy &c and as they are often excited by slight causes as the irritation of the teeth upon the gums or undigested matters worms &c in the intestines it is ^{easy} to see how an article of dress irritating from its texture or tightness an apparatus so extensive and delicate and so intimately connected by function, and sympathy with every other part of the system, it must be injurious. The constant motions of the child at this age are the results of a law as benevolent as will be impressed on it by its creator and are absolutely ^{necessary} to the maintenance of healthy existence. Such

demonstrated propriety of manners, genteel carriage, and fine form, are the passports to admiration and esteem; by the ignorant, the thoughtless and the vain no doubt they are. The system of training she has been pursuing constrained to pursue from birth upwards has chiefly been directed to the attainment of these ends. It must now be completed, and that done 'She has finished her education'. Alas! in how many instances has the first lesson not yet been learned *уводі оєавров*. The mother, now as the parting time approaches becomes more and more anxious for the fate of her daughters which is supposed to depend very much upon the possession of the qualifications alluded to. The means for their accomplishment are more and more sedulous-ly employed. None more among these is the application of the corset whose power of moulding the form to the desired degree of perfection is undoubt-

ed. Long training has rendered its renew- 38.
-ed application, easy. As has been already
explained, the muscles ^{have been} weakened from
previous pressure, from want of exercise
and from long sitting in constrained
postures hence each renewed applica-
tion of the least is followed by relief
which by the deluded parties is con-
-strued into a proof of success rather
than viewed as it ought to be a warn-
-ning of danger. Nature is so exhausted
by years of struggling with her mortal
foe that she has not now left strength
even to complain. Another agent now
comes into action. Hitherto the victim of
tyranny unable to comprehend the de-
-signs unable to of her oppressors had sub-
-mitted with reluctance. Now aware
of this she maniac-like fastened her
chains with her own hands. The feeling
of emulation too is roused. Taught to
believe that narrowness of waist is the
standard of beauty she marks amid
her competitors the one who has made

The nearest approach to this standard need we ask, whether the standard is reached? The known determination of woman acting under such motives is a sufficient answer. Need we ask what are the results. The world may guess. They are known only to the medicine man, and to him, only, who makes them a special study. With him the responsibility of their exposure rests.

The purchase of this dearly prized object now made let us see at what cost.

Compression we will endeavour to show acts injuriously upon every organ and system in the body directly or indirectly. It impedes motion - diminishes space - alters relative position - changes texture - deranges function. No one of them can be endured for any length of time without injury to the whole system.

Perhaps the best way of elucidating this part of the subject will be to in-

-quire into the mode of its action upon 40
each separate system.

1.st It acts injuriously upon the
Muscular system. This is one of its
most obvious effects.

In the proper development and
healthy activity of a muscle alternate
periods of action and rest are essen-
tially necessary. This is but a part
of a universal law from which no organ
or function of the body is exempt. Within
certain limits development is proportion-
ed to exercise and vice versa. The
arm of the blacksmith, and the limb
of the dancing master contrasted with
the shrunken member of paralysis
are sufficient attestations of its truth.
Pressure preventing exercise produces
the latter. Well does the begging sailor
know this. Applying a bandage to
his limb, at first gently then gradu-
ally increasing its pressure in a few
weeks he obtains the wished for object
securely yet painlessly a shrunken and

weakened member which is to excite the sympathies of the passing crowd and secure for him, an immunity from honest labour. We recommend him, specially to the sympathies of the ladies. He teaches them the secret of a 'fine form'.

The erect posture of the body is maintained by a complicated mass of muscle lying on either side of the spine and binding together in a firm yet moveable column the various vertebrae - the ribs - the cranium, and pelvis thus effectually securing firmness of support with freedom of motion. To secure the full development of these muscles, we repeat, freedom of motion is essentially necessary. The restraints of corsets most effectually prevent this just as effectually though it may not be to the same extent as the Bejouis bandage. The corset acts injuriously not only by preventing motion but also by direct pressure they repress

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The circulation in the Capillaries^d thus preventing the flow of blood to and through them they effectually cut off their supply of nourishment. Further this pressure acts upon the absorbents exciting them to increased action under which excitement they greedily take up and carry off the Muscular substance. Thus under the combined influence of these three agents deficiency of exercise, imperfect nutrition and removal of substance the emaciation and debility of these muscles is as certain, as would be that of a child in the same circumstances. This debility accounts for the prevalence of spinal complaints among the fair sex, and shows at the same time the reason why women cannot do without stays. The support provided them by nature being thus feloniously removed art must necessarily supply a substitute. The evil does not cease here. The

Muscles of the thorax and abdomen are affected in a similar way and when it is remembered how essentially the proper performance of the respiratory function depends upon the healthy action of these muscles can it be doubted that here is another source of evil the extent of which is commensurate with the importance of that function.

D. The pressure of stays acts injuriously upon the cutaneous system.

The functions of this system have a powerful influence for good or evil over the whole body. This arises from several causes - from its being the medium through which most external agents act on the internal parts - from its intimate ^{or} connexion with these parts by means of its continuity with mucous membrane - from its being the principal organ of sensation and from the extensive ramification of the blood vessels through

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its substance and from the im-
portant functions it has to perform
as a secreting and excreting organ
Its complexity of texture and multiple-
city of functions evidently render its
healthy or morbid functions of great im-
portance in the economy. On some
organs and these the most important
in the system it exercises a special
influence. These are the lungs liver kid-
neys and intestines. The importance
of maintaining ⁱⁿ the functions of the
stomach cannot therefore be questioned
But with stays this ^{is} impossible. The
gentle friction exercised by a piece of loose
dress acts as a healthy stimulus to all
its functions. It gently excites the nervous
system keeps the capillary circulation
in healthy activity and secures the most
perfect performance of its functions
as a secreting organ. The free and
often renewed application of air
also is doubtless of equal importance.
The pressure exerted by stays utterly

prevents the possibility of either. It mor-
bidly excites the nervous sensibility and
thus may be no unimportant agent in
the production of hysterical and other ner-
vous affections. It repels the blood from
the capillaries and drives it back upon
internal organs thus depriving the skin
of its due supply of nourishment and
producing tendency to congestion in other
organs. As to the secretions it may either
suppress it altogether or render it morbid
or allow it to accumulate on the sur-
face producing irritation or reabsorp-
tion. The injurious effects of one or all
of these combined upon the internal
organs already mentioned, which are
to a great extent bearers with it
or upon the system in general need not
be pointed out they are self evident.
We do not affirm that these results will
happen in every case or that all of them
will happen in any; but we do affirm
that in all there is a tendency thereto
and that in most some injury is sustained.

3. In the third place we will examine the effects of pressure upon the respiratory system

"The general form of a well made female" says Dr Trail "lies between the limits of two cones joined together by their bases about the hips. This is different from the male of the human subject whose greatest breadth is across the shoulders. This difference of the general forms of the sex is finely illustrated by contrasting the Venus de Medicis with the Belvidere Apollo; or by a glance at the exquisite figures of Adam and Eve by Raphael. In these unadorned forms the widest part of the female chest is at its bottom." The natural form of the female chest is thus an oval with the larger end downwards as may be at once seen on an appeal to the figures mentioned by Dr Trail. That stays have exactly reversed this form may be demonstrated at once by looking at the bust of any modern beauty

when it will at once be seen that the larger end of the oval is upwards and the smaller downwards. By this means the capacity of the chest has been considerably diminished, the amount of ^{it} being equivalent to the difference which exists between the two objects contrasted viz the bust of the Venus de Medicis and that of a Modern Beauty. Any one who has made such an examination will be prepared to admit that it is something more than imagination.

The Cavity of the chest contains the two most important organs in the body the heart and lungs. These organs differ from all others in the incessant motion they are necessitated to perform, during their functional activity: the lungs contracting and expanding at the rate of fifteen times in a minute the heart at the rate of seventy. The diminished capacity in the chest will of necessity in the first place alter the relative position of these organs, and then of itself

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May, often does seriously derange func-
tion. In the second place it brings these
organs into nearer proximity to each other
and with the parietes of the chest thus
interfering with the motions of each.
Lungs thus unable fully to expand
receives a smaller amount of air and
consequently a less supply of oxygen
than the wants of the system de-
mand, the blood thus imperfectly
aerated is unable to supply a sufficien-
cy of healthy pabulum to the system the
result is the imperfect performance of
every function in the body ending at
the very least in general debility a
low state of health. Should the
lungs make up for their lost capa-
city by increased activity, the result
is still evil. With the increased activity
of the lung there must of necessity be a
corresponding increase in the heart's ac-
tion. This increased rapidity of circula-
tion will no doubt tend to the most
serious disorders, ^{not only} in the lungs than

-selves but in every other part of the body.
 But this is not all. We have already
 seen that the effects of the pressure upon
 the muscles of the thorax and abdomen
 viz the respiratory muscles is to debili-
 -tate and unfit them for their func-
 -tion. So that were the capacity of the chest
 to retain its natural extent and the
 effects of pressure to extend no farther
 than these its external walls still it
 would interfere with the process of
 respiration which so much de-
 -pends upon the proper action of
 these muscles. Their action weak
 and imperfect as it is is still further
 impeded by the persistence of the
 compressing agent which prevents
 even the little strength they ^{muscles} have left
 from being exerted. The diaphragm
 the most important of all the respira-
 -tory muscles escapes not with impu-
 -nity from this engine of torture. Its
 functions are interfered with partly from
 the pressure exerted upon the walls of the

Chest preventing its due expansion partly from 50.
its altered form and change of place and
partly from the pressure exerted upon it
by the various viscera thoracic and abdomi-
nal. Dr Hodgkin says "I have repeated-
ly seen the liver greatly misshapened by
the unnatural pressure to which it had
been subjected, and the diaphragm
very much displaced". That such
results must in the great majority of
cases more or less impair general health
and in many cases induce positive dis-
-ease cannot be doubted.

4th The Circulatory system comes next
in order.

~~As~~ We have already seen the heart as
well as the lungs to be more or less dis-
-placed in the compression of the chest
and consequent lessening of its cavity.
The malpositioning of any organ in the body
tends more or less to the disturbance
of its functions. Such a cause however
will act more injuriously upon ^{the heart} ~~it~~ than
perhaps upon any other ^{organ} partly from the

lead to imperfect or malnutrition thro-
 -phy &c. The rapidity and partiality of
 the circulation with their tendency
 to congestion may lead to hypertrophy
 or organic disease or with the assist-
 -ance of exciting causes to acute or
 subacute inflammations. Add to these
 functional disorders which are still
 more likely to happen and the ca-
 -tologue is complete.

5th In the next place we have to exam-
 -ine the effects of pressure upon the osseous
 system

That the pressure exerted by the use of
 stays upon the body leads to numerous evils
^{connected with the skeleton}
 there can be little reason to doubt. Few of
 the bones of the skeleton are perfectly ossifi-
 -ed at birth. Complete ossification in dif-
 ferent bones takes place at very different
 periods. Many of them have undergone perfect
 ossification at different times during child-
 hood and youth. At puberty many of them
 still remain in a cartilaginous state and
 some of them are not completely ossified for

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Some years after. During the earlier periods
of life while they are still soft and cartilaginous
they easily ^{yield} to any force which may be ap-
plied to them, as easily however regaining
their normal position should that force
be removed. But should on the other
hand the application of the force be by
any means rendered continuous the
result is a very different one a perma-
nent displacement, curve or angle is the
consequence. Should a single bone
be acted on and bending take place the
curve will gradually and slowly increase till
the acting force becomes counteracted and
balanced by other forces. The deposit of
osseous matter going on meanwhile the
bone gradually becomes rigid and re-
tains permanently its new form. That
such effects are capable of being produced
in such circumstances is abundantly
testified in the case of rickets only in an
extravagant degree and hence in the
treatment of that disease the importance
of reducing to their normal form, and

And position, the softened bones before re-
 -position of the osseous matter has taken
 place. These general considerations will ren-
 -der it evident not only that the pressure
 of stays will exert an baneful influence
 upon the skeleton, but how and to what
 extent that may take place. This is not
 however the chief source of the evil. It is
 the indirect effects of pressure acting through
 the muscles which is chiefly to be re-
 -sented. Muscles may be considered as
 performing three functions. They may
 act as agents of motion, as organs of sup-
 -port or as preservers of position. Each
 muscle performs more or less all the three.
 In some muscles or sets of muscles one or
 more of these predominate. As the muscles
 of the extremities for example have chiefly
 motion to perform while those of the neck
 are more concerned in the support of the
 head. The motions of the trunk being con-
 -siderably limited, the muscles of that re-
 -gion have to act chiefly as organs of sup-
 -port and preservers of ^{posture} ~~position~~.

In examining the results of pressure on the Muscular System we found that in consequence of the combined effects of wants of exercise and pressure the Spinal Muscles were reduced to a state of debility utterly inconsistent with the due performance of their functions. We have seen that the two principal functions they have to perform as regards the spine is to support the whole column, and at the same time to preserve its various parts in their proper relative position. The direct results of the non performance of these two functions are obviously the bending of the column forwards, backwards, or laterally, or the displacement of one or more of the vertebrae. The direction and degree of the curvature as well as the extent of displacement will of course depend on other causes separate or concomitant. The remarkable and lamentable prevalence of spinal complaints among females is no longer a mystery but a known effect flowing from an evident cause.

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The ligamentous apparatus from its deep position and the nature of its tissue is probably little liable to suffer from the causes under consideration primarily at least. They must suffer secondarily however from the derangements they undergo in the displacements of the bones to which they are attached. Such derangement of itself can have little effect upon health and may be left out of consideration altogether.

We will now examine the effects of pressure upon the secretory and excretory functions.

Viewing the lungs as a secreting or rather as an excretory organ let us see how far its function as such is interfered with. We have seen that under the influence of pressure the lung is liable to two functional lesions diminution of its capacity and morbid activity of action. The general result is to diminish the amount of oxygen received in a

given time and as the amount of carbonic acid excreted depends upon this there is a constant tendency to its increase in the system in consequence of which there must be a departure from the standard of general health. It will lower the vitality of the blood and through it affect the system at large changing the healthy condition of other secretions, or it may rouse some other organ as the liver into unhealthy activity in order to its elimination from the system. The secretions of the lungs proper may also be rendered morbid and thus react not injuriously upon the organ itself.

"In examining" says Dr. Woodstein, whose connection with Guy's Hospital, gives him extensive opportunities of observation, "the bodies of the dead I have frequently found the lower ribs of females greatly compressed and deformed. I have repeatedly seen the liver greatly misshapened, by the unnatural pressure to which it had been subjected, and

The diaphragm or midrib very much displaced. This quotation from so high an authority is sufficient to show the injurious extent of pressure upon the liver. It must also suffer much by displacements by which its relative positions to arteries veins and nerves is altered. It cannot be doubted that by these causes its healthy functions are interfered with. And when the importance of these to the functions of digestion and assimilation are considered can we fail to recognise at least one source of dyspepsia, or females among which it is certainly more prevalent than among men. The kidney by its smallness and proximity to the spine by which it is protected, escapes the direct influence of pressure. That it is largely implicated indirectly we shall see immediately.

We may next advert to the stomach

and intestines which are rendered important by the complexity of their functions being assimilative, excretory and secretory. The stomach being nearly under the direct seat of pressure must undoubtedly ^{suffer} to a considerable extent. It is a common observation that the stomach of females is elongated from the use of stays. We think we have confirmed this observation in the dissecting room. The stomach when in a state of activity during the process of digestion is remarkable for the variety and extent of its motions and upon which its healthy functions very much depend. How these motions can take place within a cavity which is reduced in many instances to one third its natural diameter it is difficult to see and still more difficult is it to believe that such a state of things can exist without serious injury to health. Need

we point to this as another cause of female indigestion. The intestines too are displaced and thrust into the lower part of the abdomen, in consequence of which their peristaltic movement is more or less interrupted - adding one to many causes of female constipation another common female disorder.

We have next to consider the lesions of the skin produced by pressure.

The skin is an extensive and important glandular apparatus its chief secretions are the fatty and perspiratory. The due elimination and discharge of these is a matter of the last consequence to general health. This is demonstrated in the effects produced by the application of heat or cold through the agency of water or air as in bathing exposure &c. It is on this principle that diaphoretics or sudorifics act with so much effect in cases of disease. Nature herself has

indicated its importance in the changes it undergoes in many cases of disease as its suppression in febrile states its copious elimination in the resolution of these or clearing great debility &c; whilst the suppression or establishment of these extraneous discharges exercises a powerful influence over organ and function in the body. That influence over the lung the kidney and even the intestines is special and potent. especially in reference to the three first so much is this the case that they may be looked upon as vicarious in function. The pressure of stays will act in various ways upon these secretions. Their effects are due partly to the check given to the capillary circulation diminishing the functional activity of the glands themselves partly by removing the healthy stimulus of the air and free motions of the dress effecting the same result as the checking of the circulation, and

partly, by preventing the escape of the perspired matter. Here surely is another element of evil from the effects of pressure.

The Nervous system we have already investigated sufficiently in connection with the Cutaneous system.

Having thus endeavoured to investigate the effects of pressure as exerted by stays upon the the various systems of organs and having found reason for believing that they act injuriously - by in various ways both on structure and function it becomes us now in further pursuing the subject to notice the more obvious of the diseases which may fairly be traced to the lesions alluded to.

Those to whom the subject is new will no doubt convict us of exaggeration and probably truth demands that we should plead guilty in some instances at least. We cannot help stating it as our belief that when the subject is viewed in all its ex-

text that it can scarcely be exaggerated 54
And we do think that it has not been treat-
-ed of by the profession with a seriousness
and attention at all commensurate
with its importance. There is a ten-
-dency far too common especially in the
practical part of the profession to treat
such subjects with comparative neglect
a tendency the existence of which certainly
adds nothing to the dignity of the Profes-
sion, and as little to the Philosophy of
Disease.

In entering upon this part of the
subject we may be permitted to make
the following preliminary observations
1st We observe that the prevalence of
disease in general is not due to the es-
-tablished laws of nature but to the
violation of these laws. That mortality
is the inevitable fate of man none can
doubt. but that the awful prevalence of
disease and death as its result is due
to ourselves we most unhesitatingly
affirm. A gracious Creator has ex

tended the limits of man's existence
 to a very protracted period, Ninety
 years and ten seems to be the average
^{term} period of life as determined by Revel-
 ation. Nature Confirms this testimony
 as the investigations of Anatomy and
 Physiology abundantly prove. That
 man reaches not the end of his jour-
 ney or but seldom is because he will
 walk in ways of his own choosing.
 That something is due to accidents is
 readily granted as well as to other
 causes almost as unavoidable, but
 that even then by sufficient care and
 regulation could to a great extent be
 avoided, is sufficiently plain. Thus
 excepted an overwhelming majority yet
 remains to be accounted for which we
 believe to be due to no other causes
 than to our own folly vice and ig-
 norance

P. We observe that females in civiliz-
 ed life although far less exposed to ac-
 -cidents and the exciting causes of dis-

cases in general than males are yet far less healthy. This is a fact which cannot be accounted for from the difference of sex alone. The disproportion seems to increase with the advancement of civilization and the influence of polished society. We have no hesitation in ascribing it to the artificial customs and foolish practices which are not the essential parts of but the accidental accompaniments of civilization. We are now endeavouring to show that the practice of wearing the corsets is one of these. In confirmation of these observations we quote again from Dr Forbes. "No farther proof" says he "is needed of the enormous evil produced by the present system of school discipline, than the fact, well known to all medical men, that the greater proportion of women in the middle and upper ranks of life do not enjoy even a moderate share of health; and persons not of

The Medical Profession, may have sufficient evidence of the truth, by comparing the relative powers of the young men and young women of any family in taking bodily exercise, more particularly in walking."

1.st The first disease we shall notice as connected with the use of corsets is spinal deformity.

That this disease is a fearfully prevalent one we have already proved from higher authority than our own. That it is almost entirely confined to females we have also demonstrated. Besides we have endeavoured to ascertain the way or way in which it is produced under the influence of the corset. It only ^{remains} for us therefore to make a few observations on the disease itself.

Medical Treatises on this disease are very numerous. We have examined a number of them, but have found none but one which does not specify Corsets as a principal cause of it.

A thousand quotations might be given in proof. one or two will suffice. The quot

The quotations we have already given from Ambrose Parey so far back as the middle of the seven-teenth century shews that the opinion that the use of stays contributes to the production of these diseases is not a modern one. We refer also to the quotations from Dr Combe and Dr Forbes as well as Dr Traill given in a former part of the paper all proving the origin of this disease to be in a great measure due to this barbarous practice. In addition to these we quote from Dr Robertson on Venereal Disease P. 33 "certain parts" says he, "of the ordinary dress of females are liable to special objections, on account of their acting as exciting causes of disease and weak back. The corsets or stays are most to be objected to."

We begin by binding up the muscles to prevent their free action, and then, at a future period declare that the want of power in the muscles demands for their assistance the very means that disabled them. Is it to be wondered at, therefore, if our females accustomed from infancy to bandage their chests - first, interrupting and then superseding the muscular parts in their functions, - are unable in after years to do without those admirable contrivances for rendering those naturally powerful muscles of as little service to them as possible? The most pernicious consequences result from the long continued use of tight stays, even of the best modern construction".

Guzon an author on the same subject says to the same purpose. "If then this process goes on so well in youth, under the circumstances above detailed, why should we obstruct her pro-

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-gress by any interference with her laws, by binding the body with rollers, or confining it by stays, preventing the action of the lungs, the exercise of the muscles, the motion of the spine, the free action of its several bones, and other parts entering into its composition, under the delusive notion of producing a good, or what is called a fashionable figure? whereas such improper practice too often ends in deformity, ill health, and disease.

"The poor have this advantage over the rich, that they are allowed to use the muscles freely, uncontrolled by pressure; and the spine thereby acquires strength. In the lower grades of life, those parents only who follow the example of their superiors, have the misery of seeing their children subject to lateral curvatures."

The fine form so earnestly coveted is now hopelessly lost no doubt a just punishment of heaven for a gross violation of its wise laws

But the evil ends not here. The symmetry and balance of the parts once destroyed, there is a constant and increasing tendency to further displacement often fearfully aggravated not only by the persistence but the still lighter application of the engine of mischief. The evils resulting from pressure and displacement of the internal organs already alluded to as the consequence of direct pressure are now greatly enhanced by the changes produced in the walls of their respective cavities. The secondary diseases resulting from them will probably soon terminate in death, if not a more or less lingering and wretched existence is all that is left to the poor victim, in lieu of her fine form and genteel carriage.

2^d. Consumption is another disease aggravated if not in some cases induced by tight lacing. We have not had an opportunity of consulting authors

upon this disease and must therefore
 be thrown upon our own resources
 It does not require any profound know-
 ledge in either Physiology or Path-
 ology to see how diseases of this nature
 may be excited by the practices
 under consideration. That other and
 very different causes may operate
 either with or without these in the
 production of it may be granted;
 Suppose the patient to be hereditarily
 predisposed, - to possess a scrofulous con-
 stitution, it is evident that any one
 of the numerous evils resulting from
 the use of corsets would be sufficient
 more than sufficient to rouse the
 latent disease into deadly activity.
 Take for example the lungs. That
 organ we have seen is excited into
 morbid activity in consequence of
 which the blood is circulated with
 increased rapidity thereby producing
 more or less exuberance, which as
 is well known only wants the slightest

exciting Cause to ensure the deposit of tubercle. Take again the mesenteric glands in which the deposit of tubercle is nearly as common as in the lungs and as fatal too. These are liable to irritation from the direct effects of pressure and displacements and this of itself may be an adequate ^{cause} to its appearance where in Cases where there is strong Predisposition. But should this fail we have Dyspepsia and its thousand evils among which irritation of the bowels is a prominent one and undoubtedly may act as an exciting Agent. We might thus examine every organ and show that wherever there is strong Predisposition the ordinary and direct effects of the use of staps are quite enough with the slightest ^{exciting} Causes to produce tubercle.

The tendency however to scrophulous disease is undoubtedly more dependant upon the secondary Causes or Conste

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nutritional changes which originate in this practice. Whatever differences of opinion there may ^{be} about the proximate causes of scrofula all are at least agreed upon this that whatever tends to debilitate the constitution has a tendency to produce or aggravate the the scrofulous diathesis. Now we have already seen that the general result of stay wearing more especially when associated with its usual concomitant causes is a low state of health thus affording the great general condition upon which the development of scrofula depends. In constitutions where ^{there} is no predisposition this debility aggravated by other causes as bad food bad air imperfect clothing want of exercise the three last of which are often found associated with such a condition may very probably produce primary scrofula. At all events we have present all the conditions which authors have summed

ated, as necessary to such a state of system. In a Constitution already predisposed, an exciting cause is slow wanting to ensure its perfect development. The probability of Consumption occurring in these circumstances is further enhanced by the consideration that ^{it} is often, some say always preceded by more or less of Dyspepsia which we have seen to be not an infrequent attendant on staying wearing. The prevalence of Consumption among the class under consideration and the presence in the same class of those states of the system which indicate its existence or precede its approach give them at least the character of Cause and effect and warrant a closer examination than we are able to afford in a paper such as this.

The next disease we would mention as having some connection with the use of stays is hernia.

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The essential Causes of hernia are
weakening of the protecting parietes and
the application of forces to the parts
protected forcing them against the
weakened walls. The most obvious
way in which stays will act in
producing hernial protrusions arises
from their direct pressure. This
will act partly by forcing the abdo-
minal viscera into the lower part
of the cavity and partly from its
repressing the actions of the abdomi-
nal Muscles. When any strong
effort is made inducing tension
of these Muscles that tension will
be greatest at the lower part of the
abdomen in consequence of the force
being ^{concentrated there} ~~instead~~ of being diffused over
the whole abdominal wall as it would
be but for the pressure of the stays
The force exerted upon the internal
parts will be proportioned to the
diminution of space covered by them
The same pressure which produces

This result - also forces the contained parts into that space where the force ^{is acting} thus supplying the two essential conditions on which hernia depends. Females of this class are liable to dyspepsia, and of its many results there are two which give tendency to hernia - tympanitis and constipation. Tympanitis may act as a distending agent weakening the parietes of the chest. It is on this principle that the epiphora form of hernia is more frequent during the distension, which occurs in pregnancy. Accumulation of faeces may act in the same way but more injuriously by the straining efforts necessary to evacuate the bowels.

Lawrence on Hernia makes the following observations.

"When the lower part of the cavity is subjected to ^{force} external pressure, as by the application of tight-laced stays, the viscera

are driven downwards, and the formation of an inguinal or crural rupture is much facilitated. That the consequences of this practice are not imaginary may be proved by dissection, which shows us an actual change of figure, in the lower ribs, and sometimes the obvious marks of external pressure on the surface of the liver.

In the natural play of the respiratory organs, the front of the belly rises and falls in alternation with the descent, and ascent of the diaphragm; when the abdominal muscles are put into strong action, the pressure is distributed over a large space, and cannot have any local injurious effect upon the viscera. The injudicious application of tight clothing to the trunk of the body interferes with this process: by preventing the natural swell of the belly in the part which it embraces, it increases the effort in other quarters, and thus has a most direct tendency to cause protuberances

Such must be the operation, of the
 naval bandage, often applied to new-
 -ly-born infants, but completely un-
 -necessary; of high breeches, and of
 petticoats, when they encircle the body
 tightly, and are not supported by braces;
 and more particularly of stays, when
 partly or wholly composed of unyielding
 materials, and tightly laced".

A few words may be added in re-
 -ference to the connection of pelvic dis-
 -eases with the use of corsets.

That such a connection exists
 authors on such subjects mostly ad-
 -mit but we have met with none who
 has done more than cursorily notice
 the fact leaving the reason unexplai-
 -ed. Dr Graill says "This practice di-
 -minishes the cavity of the chest it con-
 -fines the lungs, the liver, the stomach,
 excessively, and has also a tendency to
 contract the width of the pelvis.
 By the first Consumptive Diseases are
 induced; by the second the functions

of Digestion is impaired. and by the last the spirals of childhood ^{birth} are increased.

That the spirals of childhood ^{birth} are ^{greater} but by in civilized than in savage life is well known; That they are greater in those classes of society where tight-lacing and its associate vices are common will also be readily be granted. This connection would of itself excite suspicion although it might be difficult to trace it to the practice alluded to. Whilst it may readily be admitted that the morbidity of the functions of reproduction and parturition are due to other even a variety of causes, it must at the same time be plain, that tight lacing from the pressure it exerts upon the abdomen lessening that cavity and forcing its contents toward the pelvic viscera must have an injurious effect upon the function alluded to. as for example by interfering with the proper expansion of the uterus during pregnancy, and

by interfering with the expulsion of its contents during parturition.

Again the cavity of the pelvis itself is altered in size or changed in form by the practice under consideration. This is admitted by most authors we have already seen. When pressure has gone so far as to alter the normal form of the spine it must at once be admitted that the pelvis must suffer to some extent along with it. And when it is considered how very commonly this result happens then we think it will be granted that the pelvis suffers to a greater extent than is supposed. When it is further remembered how very small a disproportion between the head of the child and the passages it has to pass through affect parturition even fatally, can it for a moment be doubted that such changes in the pelvis even tho' unappreciable to the eye may yet be of the last consequence to the mother. The structural and functional diseases of the uterus are among the most

frequent and the most distressing diseases
The female is called upon to suffer.
Though none of them, or few may be trace-
-able to the direct effects of the pressure
of stays yet are we thoroughly convinced
that very many of them are a secondary
result. We repeat the observation alrea-
-dy made, that these diseases are by far
the most prevalent in the class and
rank of society where the obnoxious prac-
-tice is carried to its greatest extent, as in
females brought up in towns compared
with those brought up in the country as
in the middle and higher ranks compared
with the lower. No doubt the principal
source of this class of diseases is to be
found in the low state of health in
which so large a proportion of females
are who submit to this pernicious cus-
-tom. Something also may be due to
irregularities of circulation. This we
have already seen to be one of the most
common results of corset-wearing and
will doubtless be a powerful exciting

Cause of these Diseases in an organ which is probably more liable to suffer from a cause of this kind than perhaps any other in the body owing to the Periodical Congestions to which it is liable during Menstrual life.

It may also be a legitimate question to enquire, whether the irritations to which ^{the mammae} are subjected by the pressure of the stay may not be to some extent an exciting cause of such Diseases. At all events there must be present irritation to a greater or less extent and that the uterus largely sympathizes with such irritations is well known. The conclusion therefore does not seem at all unwarrantable that such are in reality another source of the prevalence of uterine affections.

In conclusion we have to submit whether the use of corsets may not be to some extent the ^{exciting} cause of Cancer in the mammae.

We have not seen this suggested as a probable cause by any one. But on the one hand the prevalence of ^{the disease in} this situation and on the other the constant application of an irritating cause seem at least to warrant the inquiry if not to render the conclusion even probable. We have other and stronger reasons than these in support of its probability. For example we know that wherever there is a predisposition to this terrible disease or irritation of any sort is often enough to establish its existence or determine its locality. We know further in reference to this special form of it that such a cause is adequate to its appearance. When Cancer has been removed from the female breast it is well ^{known} that in many cases the mere tightness of the cicatrix is sufficient to ensure a speedy return of the disease. From these considerations then it seems

No unwarrantable inference that the prevalence of Cancer in this locality may be due in some instances at least to the cause assigned.

When the prevalence of this disease so distressing so hopeless is taken into account we think the bare possibility of its being produced by such a cause is of itself a sufficient warrant for the disease of Hoops.

In conclusion we observe that should even a tithe of the evils enumerated result from the practice of wearing Corsets - females ought to pause before helplessly embracing an apparatus so obnoxious to nature, - so hurtful to beauty, - so full injurious to health. To the Medical Profession belongs the duty and the responsibility of making this known.

James Gilchrist
30th March 1857