

Tentative and alternative schemes have been studied for dealing with the Rideau Canal within and without the city and for distributing irrigation from the Rideau River throughout much of the district to increase fertility and insure crops, to render gardens and small holdings tenable and profitable adjacent to the city and its markets.

The Railway Terminal Scheme on the plan published in this issue is the one upon which the present Plan Commission of the city is basing its appeal.

The Rideau River has been determined as the median line of the future between residential areas on the west and industrial activity on the east of it. The prevailing winds are from the west and north-west insuring the drifting away from the residential and business section and towards the open country of all objectional smoke, dust and odors. A substantial section of the open country referred to is a peat bog and sparse in population.

A large industrial area entirely below the city on the Ottawa River and a corresponding industrial area on the Hull side will hold between them the Harbour of the Federal District. It is proposed that this Harbour and harbour area will be controlled by the State as in the case of the Harbour Commissions of Quebec, Montreal, Toronto and Hamilton.

The other industrial areas east of the Rideau River are also served by the "Union Terminals."

### Congestion vs. Fresh Air.

If every owner in a city should build his house over his entire lot, the result would be obviously unbearable. Sunlight and fresh air would be excluded, except in the narrow slits we call streets. Heretofore, this has been recognized, but only tentative or piecemeal regulations have been adopted, though tenement house laws have focused attention on this feature. A minimum of sunlight and fresh air is necessary; a maximum is desirable. Below the minimum disease lurks. As we reach the maximum personal efficiency reaches its acme. We are all used to seeing the heights of buildings, but their width and breadth, the amount of God's earth they cover, is not seen except by airmen. Garden cities in Europe have demonstrated that workingmen's children who live in houses twelve to the acre instead of in slums with forty houses to the acre actually are two to three inches taller and ten to twelve pounds heavier than their brothers and sisters of the slums. The new areas built under zoning regulations must head off slums.

American Civic Association.

### PLANNING FOR SUNLIGHT.

By Percy E. Nobbs, M.A., F.R.I.B.A.

#### The Misuse of Light.

I am sometimes impelled to think that nothing distinguishes us from the beasts that perish so much as our faculty for forgetting first principles, and we do it proudly—for the words 'trite', 'truism', 'platitude', 'obvious' and 'sophism' have become the worst bad words of criticism. Now, the beasts eat what is good for them, but do not overeat, or are so happily constituted that overeating is good for them. They drink when they are thirsty, and when they are not, all the King's men, who are not veterinary surgeons, cannot induce a gulp. They rest when they are weary, and they run, or fly, or swim, when they are rested, and above all they use the light to see by or the dark to conceal their activities. Now, quite apart from such political controversies as that of "Mr. Borden's time" in relation to "God's own time" or daylight saving, it is in the misuse of light that we have become past masters. So, I must hark back to first principles before enlarging on this theme, at the risk of achieving the obvious and perpetrating platitudes.

#### Windows.

Those arts which depend on vision as the avenue of approach between the spirits of men: painting, sculpture and the group of arts of design in which architecture plays the part of double bass, and dress that of high treble, are all as nothing to the blind. The phenomenon of susceptibility to light in all its myriad manifestations is after all at the root of the appreciation of things seen. That, presumably, is why, to be true to our type and not behave with the simple sanity of the beasts, we go to great expense to make windows, with all they imply in heat-losses, and draughts and repairs and replacements to sun blinds, double sashes and rollers, and then keep half of their area permanently shuttered or sunblinded, and to complete the idyll, dress them up in underclothes and overskirts. The object, if object there be is something so absurdly instinctive—a relic perhaps, of our cave life, not so very long ago—may, or may not, be to conceal our apparatus of life on account of its inherent ugliness, or its inherent dustiness. At least, the effect is to render invisible whatever we have that may be worth looking at.

On the other hand, there is a proper use of both

\*Address to the Women's Art Society of Montreal, illustrated by 30 slides showing seventeenth century Dutch interiors and modern ones by Messel, Hoffman, Norman Shaw and Sir Robert Lorimer.

curtains and blinds, so as to improve the aspects of visibility by diffusing, transfusing, reflecting, or otherwise mellowing the light of which I shall have something to say later, in a practical, cold-blooded sort of way, avoiding the obvious temptation to generalize on the fine art of living, for I have never met anyone who was not quite set in his or her ways in that respect, and I am too old to look well in camel's hair or to raise a voice in the wilderness, and there is more than enough of that being done in these days, to our general sorrow.

Therefore, at the risk of proving deadly dull (in which case I crave your forbearance) I will first deal with one very practical matter affecting our homes, and a matter which receives less attention than it deserves—Sunshine.

**Sunshine.**

Now the immediate world outside a proper home is a garden of some sort, and nobody can begin to think about laying out a garden except in relation to the sun and the winds. But it is just as important to lay out a home as to lay out a garden, with due consideration for the sun and the winds, for the things that grow in a home are every bit as susceptible as the things that grow in a herbaceous border to due sunshine and due shade. And when a house is rightly disposed as to the sunshine it lets in or keeps out, it is bound to be right also in relation to its garden, and then we have the home complete and unified as far as the wit of man can bring it about.

A room that doesn't harbour a sunbeam for at least an hour a day is not a really habitable room in this latitude, for without direct sunlight it will be a place where microbes are prone to multiply. A person who is sick and confined to such a room will make a slow recovery. A chronic invalid confined in such a room will die sooner than he would in one swept by the sun even for one brief hour a day.

When a house stands in a garden, it is quite easy so to plan it as to provide each room with at least an hour's sunshine, and the problem becomes one of selecting which hour of sun to apportion to each room.

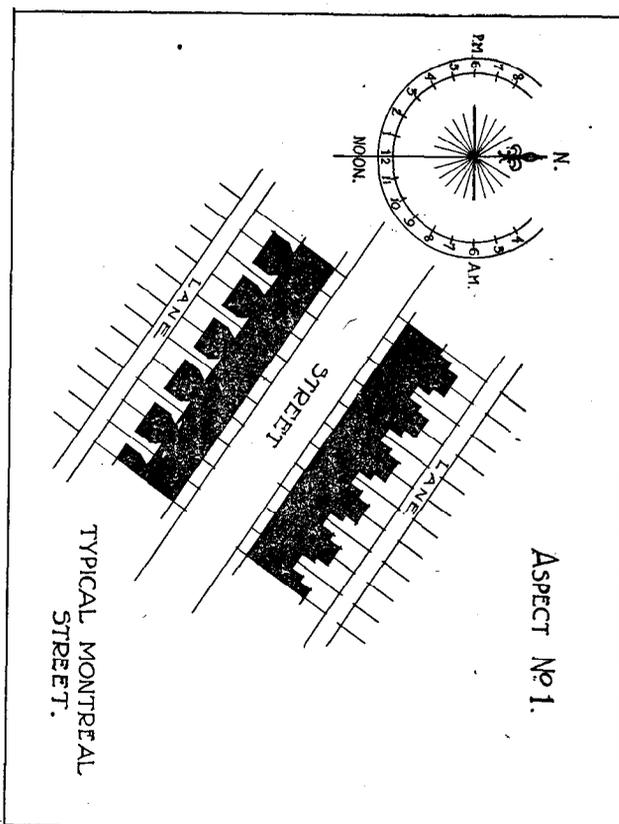
And it is possible, by taking thought, to so plan a pair of semi-detached houses that about three rooms out of four have some sunshine daily (provided always there is not a ten-storey apartment house casting a blighting shadow over the site).

But in the closer formations in which houses group themselves in terraces, in tenements and in apartment houses, the fair distribution of sunshine becomes increasingly difficult.

**Streets.**

It follows from the movement of the sun across the heavens in our latitude, that streets with houses on them should run due N. and S. so that every window may get some E. or W. sunlight, morning or afternoon, while the bleak N. and the blistering S. are avoided as exposures.

The compass bearing of all the residential **No. 1** raced streets of Montreal, and most of **M. St.** the similar streets of Westmount, is unfortunate in this respect for the houses on one side of these streets have the best of the bargain in the S.W. front exposure, while those on the other nope in the shade, and on both sides the individual houses have an over-sunned and an over-shaded side.

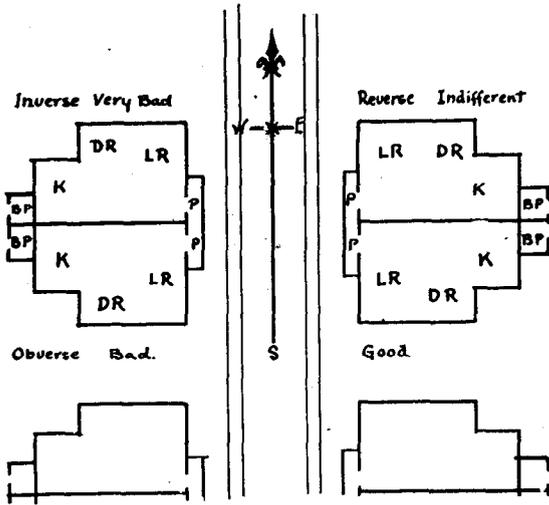


Let us consider the aspect diagram for this part **No. 2** of the world and note how far the sun goes **Aspect** round above the horizon in the winter and in the summer and at the equinoxes which are the average also for the whole year. We may also consider how deep the summer and winter suns will penetrate into a room through a window facing E. or W. and one facing S.E. and S.W. and one facing S. If the noon summer sun glows hot, at least he rides high and doesn't come very far in and can be kept out with a very moderate canopy.



**No 5 ASPECT**

Sacrifices for Street Prospect only Considered.

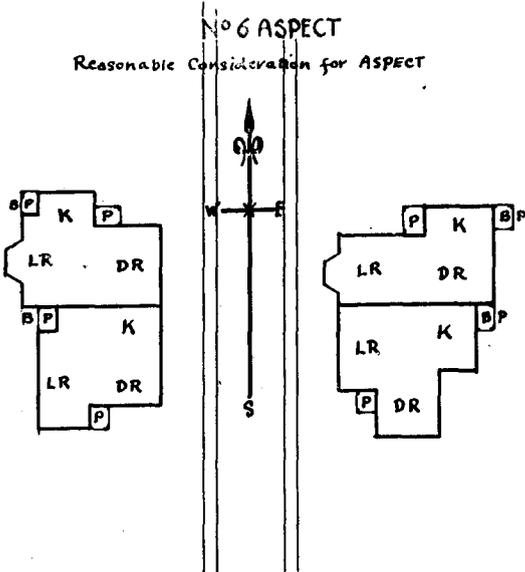


They build town houses in groups of pairs on both sides of a street, so that for any one plan which may be right, there is a reverse and an obverse and an inverse plan, all more or less wrong. So that about 75% of such houses are monuments to bad business and to bad citizenship.

**No. 6** Now, with less rubbish on the fronts of our houses and more decent buildings on their backs, and with yards, gardens and back lanes taken seriously as a part of the homes they surround, the temptation to plan the public rooms to the street, regardless of the sun's orbit would be removed. Then with the exercise of a little discretion in such a case as we have been considering, four different plans are arrived at, and an

**No 6 ASPECT**

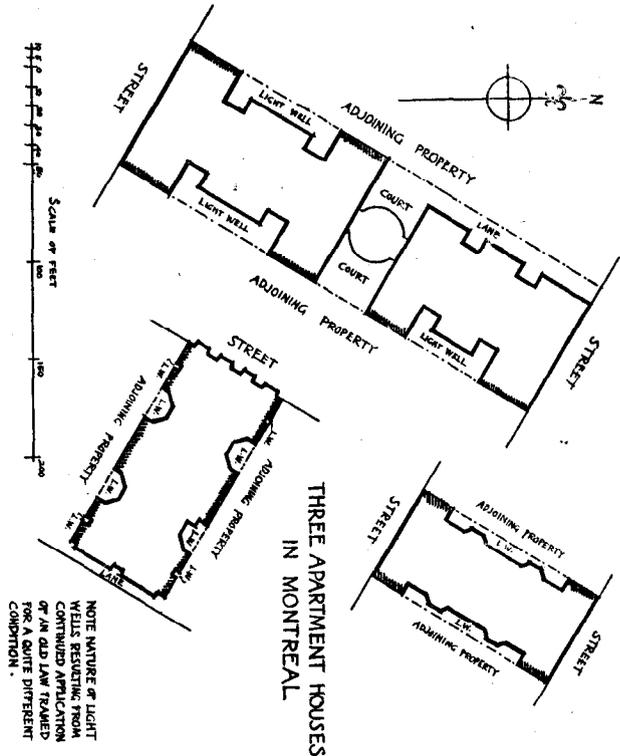
Reasonable Consideration for ASPECT



agreeable variety of external form may be the resulting expression.

**Montreal Apartments.**

**No. 7 three tenements.** I cannot forego this opportunity of saying a word in protest so far as the question of aspect is concerned at the most recent developments of Montreal apartment planning. The device employed to appropriate light for the rooms set back from the streets by means of re-entrant bays in the party walls is unfortunately strictly in accordance with an ancient by-law framed by persons who



never contemplated the achievement of ten and sixteen storey buildings and to whom it probably never occurred that anyone would build over every possible square inch of a site and hang out oriel windows into the bargain. Such a building at once ruins a number of homes in its neighbourhood by its shadow. It provides, as a rule, a few over-sunned and a number of under-sunned homes in exchange, and these are lighted only for such time as the re-entrant bays or wells remain unobstructed by future buildings. When these are built up, a first-class slum is inevitably created. Whether the fact that such structures depreciate the real estate in their neighbourhood is to be recorded to their credit I am not enough of an economist to say.

But, as we are dealing with homes, such abnormal

expedients for the housing of the unprolific need not detain us.

### Co-Partnership Building.

Co-partnership, when it at last gains acceptance here, may be expected to bring about a very much higher standard of planning generally and incidentally more sunshine in the home.

If the speculative builder can only afford one plan when he needs four to build houses by the dozen, the Co-partnership community cannot afford to place one house without a duly considered plan when build-ings by 50s or 100s.

Then again, such a community can only afford to use plans by the most expert designers. For the last thing that can be tolerated on a jointly owned piece of real estate, when the neighbours are the owners, is that any house should not hold its own with the rest in tenantability.

### Open Planning.

It has been a gradual, and, all things considered, a slow evolution from the closed planning of mid-No. 8 Victorian England, which was followed here **Plans** in virtue of a common culture, habit and tra-

dition, to the open planning now in vogue for the public or main floor of a house. I look to the principle of the open plan being carried very much further. The public rooms of a house, be it great or small, may be regarded as adjoining places rather than contiguous apartments. Among the many practical advantages of so ordering our lives (for planning can affect manners just as manners can affect planning) is the increased possibility of entertaining wandering sunbeams, heavenly visitants, who enter by a window, traverse two rooms and alight to wander across a wall opposite.

And if the elf accomplish this, what time the prosaic fashion of five o'clock tea is in progress, behold the scene invested with all the glamour and the loveliness which Watteau or Monticelli considered appropriate to gossip and confidences. Or again, by a little arrangement, an eight o'clock in the morning, first-worm sunbeam, and there is no better kind, may be inveigled to assist at the breakfast table twice or four days a week, and when he comes he will go far to mitigate the austerity of the proverbially difficult ritual of the breakfast of the Briton.

### The Open House.

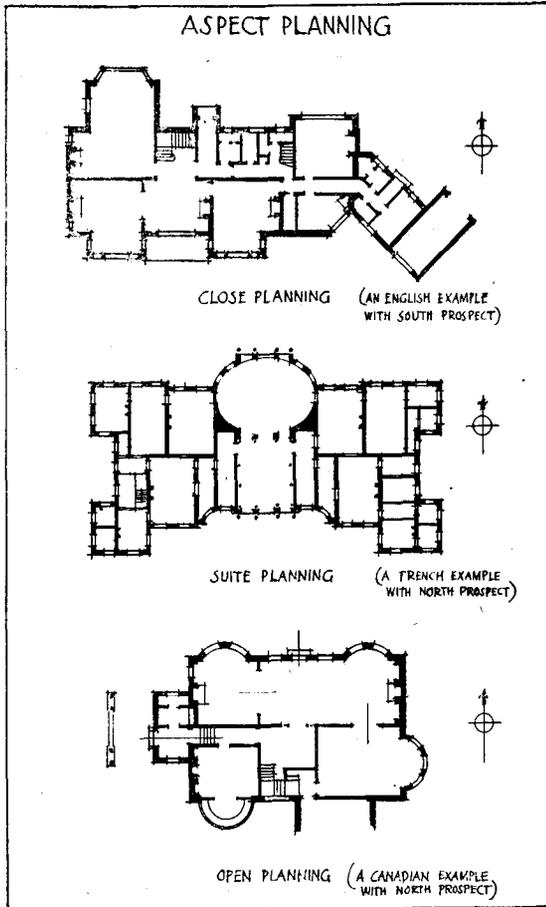
So, if you would keep an open house, which is the only kind worth keeping, let me recommend to you the employment of the mechanism of the open plan, and may you have a full view of open sky from every window and a garden clinging to all your sills. And if it befall you to have a view of a river, a city, or plain and mountains, or any of these things, you have all you need of the inanimate to make your home perfect, and the rest of your happiness is wholly a matter of good fortune and past mere contrivance.

So, we may consider that we have our house, and that its windows, for the most part, let in the sun for a part of each day. Now, what are we to do with these windows? Dressing them up indiscriminately in underclothes and overskirts because '*c'est le coutume*' will, as I said at the beginning only, neutralizes our windows.

I must again remind you that the interior of your house can only be worth looking at if there is enough light to see it by, that is to say, enough light to break into component colours and reflect and catch and exclude and generally play hide and seek in it.

### Interiors.

Now, there are two kinds of interiors—those in which the interior, be it a child's bedroom or a mag-nate's dining-room, a long gallery, or just a nice place



to sit in, is itself a work of art; and those in which the interior, as such, is of very secondary interest to the objects in the room, pictures, bric-a-brac and the like. Now, this second kind of place is really a museum, and I am confining my remarks to houses. The lighting of museums is a mere exact science. I said there were two kinds of interiors, and the first kind, which was itself a work of art, particularly interests us just now. Of course, there is the third kind, which the light only reveals in the hideousness of itself and its contents, but that kind is negligible from the point of view of lighting, and only the "gross darkness of the inner sepulchre" will improve it to its limit of perfection.

### The Thing Seen.

What, then, are our problems when the room itself is to be considered as a thing to be seen and apprehended. Ultimately the *thing* seen is just the cunningly devised way the light comes in, as in the case of the interior of Milan Cathedral, and that is all there is to be said about it. Well, let us consider the way the light may come in, and what happens to it after it has come.

The first point to be made clear, and never to be forgotten when arranging a place with the care one would bestow in composing a picture, is that one does not require a great deal of light to see by in comfort. And the second is that an unconscionable amount of light can be absorbed by a dirty ceiling or a dark wall-paper. How is it that so many otherwise harmless persons put deep blue papers on their walls. Really, there is no such colour in decoration, except in conjunction with lots of bright gold as in the ceilings of glittering mosaic lined churches in the torrid zone.

### Curtains.

And the third point is, that a very moderate sized source of light will illumine a lightly coloured interior.

If the opening is so big as to admit more glare than is agreeable, and a diffused soft light is desired that *cannot* be attained by leaving part of the window clear and draping three-fourths of the remainder with semi-transparent picabou stuff and hanging over the edges gorgeous curtains, whose colour of course cannot be seen against the light of the window. But a veil of India muslin over the whole window and hung some distance from it will do what is wanted as Mr. Lavery has shown in several of his portraits of ladies as seen in their natural surroundings.

### Light and Colour.

One of the most important things a modern musketeer has to learn is the effect of light on things

seen—again I lapse into truism. He learns that all colours are pretty much one faded grey colour looking towards the sun, and that a high sun reveals little of different distances as compared with a low one behind you. But windows often get placed in houses without much reference to what they are to illuminate, and after they are there, things are arranged as often as not without any consideration of what colour can be got out of them. There are hundreds of low-toned Dutch paintings, requiring a liberal supply of the purest daylight for their proper appreciation, which are hung on ill-illuminated dark-coloured walls in this city. Often a hideous lighting fixture attempts with a bright yellow light to redress the wrong so done to pearly greys, and attests our widespread inattention to this question of what windows can do for things meant to be seen.

Some of the most charming effects of lighting are to be got in connection with open planning, by playing with varied systems. For instance, one may look from a place of diffused moderate light, through a place of low light, to a place of brilliant illumination, or through a place of brilliant illumination towards a window situated in a place of sombre light. These are the effects that the mediaeval architects delighted in for church work. The bright diffused cross light of the transept often throws the choir back into a distant mystery so to speak. But no system of lighting, whether in church or house, is so thoroughly unpleasant as a main source of light at the end of a long room, passage or church nave, unmitigated by side or cross lighting. (It has been reserved for the modern builders of cheap churches to carry this abuse to its limit). This arrangement is only tolerable when the glass is pictured richly in the velvet tones, Keats had in mind when he describes an ancient window in 'St. Agnes' Eve' as "like to the tiger moth's deep damasked wing". With clear glass, or the thin high-keyed abomination which some modern glass stainers mistake for colour, that effect is intolerable. Of course, the more light you have 'in your eye' the less you can see, and a degree of light which, diffused out of doors, is quite comfortable, may become an actual deterrent to visibility when admitted all at one point to an interior. For internal effects the best results are obtained usually when one is so placed that the sources of light, that is to say the windows, do not come into the field of vision.

### The Outside View.

But where splendid or interesting views are obtained through windows the case is different and much internal interest must be readily sacrificed as a mere setting or frame for the view. Where such a very legitimate use is made of a window, it is well to get a good cross light in the immediate neighbour-

hood of the view window to modify its unscreened potency.

The commonest error is in the case of overwindowed rooms, where dark walls or hangings are relied on to absorb the superabundance of light. One sees little in such a room for the windows only tell more palpably owing to the mistaken remedy; a reduction or a veiling of the windows is what is called for in such a case.

I have said nothing of artificial lighting, diffused or concentrated, and little or nothing of the effect of lights of different quality on colour, or of colour as a qualifier of light, but I have said enough to show that by taking thought one can add many cubits to the potential visible size of an interior and infinite values to all one's daily surroundings.

### The Enchanting Light.

After all, the objects that constitute the apparatus of life, whether utilitarian or professedly decorative, are often ugly in a very limited sense, and usually capable of enchantment either by placing them in a proper light or by modifying their lighting. What we admire in a Velasquez or a Rembrandt picture, we can achieve in our own parlours. But, strangely enough, it is the people who are the first to appreciate this thing in a picture, who are the last to apply it in their daily lives.

Personally, I like to know that on a summer morning, whether I am there or not, the sunbeams will play a game of hide and seek among the legs of my dining room table and chairs on a golden yellow rug; and that, at five o'clock on an autumn afternoon the river and the hills beyond will become a fairyland of light seen through my windows, while the shadow of the mountain encompasses my dwelling-place in a rich shade, and that, just before this mystery begins, my last streak of sunlight will play on the tea table. One way of expressing my satisfaction in these things is to say that both phenomena are eminently paintable but some of us prefer the contrivance of fair realities to the painting of pictures of Nature's accidents of light.

The appointment of a civic town planning commission costs nothing, as a commission, but it is the first indispensable step toward town planning activity in the towns and cities. If this is disputed it is only necessary to point to the fact that town planning activity is greatest where a commission has been appointed. In Ontario commissions have been appointed in Ottawa, Oshawa, Hamilton, St. Catharines, Kitchener, Waterloo, Guelph, Brantford, Niagara Falls, London and Welland and these are the cities that are moving most rapidly to effective town planning.

## TOWN PLANNING AT THE UNIVERSITY.

By Professor Adrian Berrington  
Associate Professor of Architecture, University of  
Toronto\*.

A statement of the "academic" or detached scientific approach.

What have we as a university class, instructors and students all mixed up together, to do? What is our function?

I would define that function as four consecutive processes. First, to define, to ascertain what really we are studying, what, after all, is Civics and Town-planning. Secondly, to study it. Thirdly, to bring our studies to the point of definite knowledge and clear doctrine. And finally to declare that knowledge and that doctrine to whosoever wishes to hear.

Freely to declare it. But not, I think, to shout it from the housetops, or to force it by other means upon unwilling ears. A class at the University must never rend the academic atmosphere with that raucous violence to the soul, which in these days is called advertisement and propaganda. Let us leave all that to the world outside.

### What "Civics" Means.

Firstly, then, I have said, we must know what we are about; what exactly is meant by Civics and where are the boundaries of what is called Town Planning. I have already referred to the welter of analytical sciences, departments of knowledge, with their partial liaisons, perennial restatements and superceded conclusions, which makes the intellectual picture of our time. I have spoken of the tendency or impulse towards synthesis, towards co-ordination in thought and co-operation in action, which is indubitably there. I liken this impulse to an undercurrent, presaging, as it were, a rising tide—before that tide a great ship is nearing home. Her hold is filled with a cargo bearing many outlandish labels. With Ethnography, Demography, History, Economics, crowd-psychology, folk-lore and many other burdens, she sails in from all the scattered ports of knowledge. She flies the ensign of the commonweal, and her name, in the deplorable nomenclature of our time, is Sociology. And the process by which her cargo of the raw material of all the 'ologies is turned into the finished product of action upon life, is called civics. Civics is the content of sociology turning to human uses. History is trans-

\*Extract from address delivered to the students of the Extension Course in Civics and Town Planning at Toronto University.