audited and submitted to the council at such time, or times, as the council may require.

34. It shall be the duty of the registrar to keep the register in accordance with the provisions of this Act, and the by-laws, orders and regulations of the council.

SCHEDULE A.

(Section 26.)

A. D. 1889.

Date of Registration.	Name.	Title or Distinction (if any).	Residence.
1890. July 1st.	A. B.	Toronto University.....	Toronto.
1891. Aug. 1st.	C. D.	.....	London.
	E. F.	.....	Ottawa.
	G. H.	.....	Toronto.
	I. J.	.....	Hamilton.

NOTES ON THE CONNECTION BETWEEN THE DIFFERENT STYLES OF "GOTHIC."*

BY R. W. GAMBIER-BOUSFIELD.

Our Secretary told me that he thought this would be a very useful subject for to-night's discussion because there is always a difficulty in ascertaining from books a reason for the "change of style," as it is called. The fact is, that the books usually at the command of students do not give any concise reasons. They give full particulars of the details and characteristics of each date, but they leave it to the ingenuity of the reader to connect the styles. The reasons are there, if sufficient care is taken to decipher them, but in order to do this accurately, the study of a great many books is necessary, otherwise the reader is apt to get hold of some one author's ingenious theory, and to believe that theory to be fact, not having the means of ascertaining the truth.

I hope you have all been looking up the subject during the past fortnight, and are come prepared to lecture me as well as I can lecture you. I am not going to give you a formal lecture, but rather I shall string together a few notes to form a basis for a discussion.

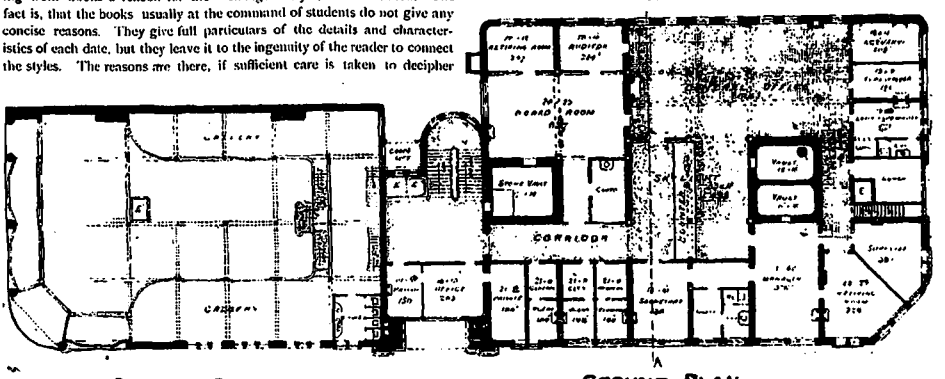
The question before us then is, "What was the reason of the change from one style to another in architecture?" Why has not the architecture that was so fully developed eight centuries ago remained the same,—heavy, magnificent and glorious style that we call "Norman"—to this day? Or why, when the Early English was so characteristic of English art and feeling, was any change found necessary? But in order to answer this question, we must first find out in what architecture consists. What is architecture? And strange to say, you may ask a great many men this question, and not receive the same answer from two of them. But it is a very simple answer when once any one has found it out. The most comprehensive definition that I know is, "Architecture is ornamented or ornamental construction." So far, so good, but what is "ornament?" That word requires some further explanation. Everybody now-a-days answers this question for himself according to his own ideas, which ideas are formed upon or based upon, his knowledge of the art. What one man thinks ornamental, another thinks vile or at least barbarous; and when one architect believes he has ornamented his building in a very satisfactory manner, and feels very "cocky" about it, another architect thinks that the man who designed such a piece of work ought to be taken into a ten acre field and shot.

Medieval architects, however, answered this question for themselves and for us, and have left their answer for those who choose to read it, graved in imperishable stone. Our Mediæval cathedrals are their answer. From them we learn what is true ornament. Thus is solved the problem; and they shew us what relation ornament bears to construction.

There is one other question to answer before we proceed with our subject. It is, "What is 'Gothic?'" For apparently there are two distinct forms of architecture called by the same name. The round arched and the pointed are both called "Gothic." However, "Gothic" simply means that style of architecture that was developed by the French or "Goths"—not the semi-barbarian Visigoths and Ostrogoths—but their civilized descendants, whom we now call French. Classic architecture was developed by the Classic nations, the Greeks and the Romans. The French developed the Gothic, and the terms French Gothic, German Gothic and English Gothic, are used to designate the peculiar characteristics of the style, as it is found in either of these countries.

The first introduction of the round arch into Europe was by the Romans some 250 years B. C., but it was not until a thousand years later that the pointed arch was used. The French were the first to make use of it about A. D. 850. Some three hundred years later, however, the pointed arch fell into disuse because its characteristics were not fully appreciated. During that time it had been used in conjunction with the round arch, but it was the round arch that best suited the requirements of that period, and is the principal feature of the "Latin" or "Norman" style.

It is customary to speak of the "Norman" "Early English" "Decorated" and "Perpendicular" periods as of separate styles, and this has given rise to the difficulty—whereas in reality they are by no means so, but are rather *progressive steps in the working out of a great problem.* That problem was not one of design, but it was the question of construction, and there you have a reason for the so-called "change of style,"—the working out of a problem of construction. The problem was, how to roof in their buildings with their heavy stone vaults, and yet admit the greatest amount of light. It was easy enough to build walls solid enough and strong enough to support the great roofing, but the question was, how they could support the vault when it was necessary to convert the solid walls into windows. This problem resolved itself into another, which was, how to arrange their building materials so as to obtain the greatest result with the smallest amount of material, or in other words, to discover a perfect method of construction, giving to every particle of material its work to do, and having no more in use than was necessary.



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You remember how, in the earliest days of architecture, when the pyramids were built, they were constructed of solid masonry several hundred feet thick, with only some narrow passages and small chambers in the interior quite out of all proportion to the amount of the material used in their construction. They had of course their reasons for building in this way, but anyone building a tomb now, containing a room say 12 feet square, the walls of which were 200 feet thick would be considered a fool. But it took more than four thousand years to find out how to construct properly, and between the time of the pyramids and the period we are considering, the science of building with walls and roof was developed; and we need not go back further than the Romanesque—that intermediate style between Classic and Gothic—for our purposes to-night.

The Romanesque was admirably suited to the brilliant climate of the sunny south. Its small windows admitted just enough light, and not too much hot air; and their small proportions did not endanger the stability of the walls supporting the heavy roofing. The Roman method of roofing was to make one covering answer for ceiling and roof—a method satisfactory neither inside nor out—for a dome high enough for the external appearance was too high for the interior, and *vice versa.* So in the south of France and north of Italy this was not attempted, but instead, they formed their ceiling of stone vaults and covered these externally with wooden roofs.

The earliest roofs consist of a series of domes along the naves—a simple

* Paper read before the Toronto Architectural Sketch Club, illustrated by diagrams.