

臺灣新竹「國立交通大學」之父
杭州扶輪社 1935-1936 年度社長 -- 趙曾珏博士
劉敬恒（中華扶輪史研究員）
2016 年 3 月 12 日



1931 年在中華民國浙江省省會杭州市，趙曾珏(T. C. Tsao)與 23 位社會領袖和跨界別精英，在上海扶輪社(Shanghai Rotary Club)的輔導下，組織了杭州扶輪社(Hangchow Rotary Club)。杭州扶輪社在 1932 年 6 月 23 日得到國際扶輪授予證書#3525，是中華扶輪的第五家扶輪社，也是中華扶輪史和國際扶輪史上「第一家華語扶輪社」。國際扶輪秘書處已經確認並記錄在案，英文扶輪雜誌《The Rotarian》的 1934 年 1 月號和 4 月號還有報導。

趙曾珏是杭州扶輪社的創社社員，當時他是浙江省電話管理局局長兼總工程師，職業分類是「電信業」；1935-1936 年度擔任社長(就職演說見第 8 頁)。任內 1935 年 10 月 1 日，杭州扶輪社接受國際扶輪編列新成立的第八十一地區（包括中華民國、英國殖民地香港、美國屬土菲律賓群島），為 15 個創始成員之一。1936 年 4 月 13-15 日第一次地區年會在上海召開，趙曾珏率領 20 人出席，是上海以外最大的代表團。在幾年的扶輪生涯中，趙曾珏感悟到扶輪的理念與中華哲學「修身、齊家、治國、平天下」有異曲同工之妙，因而在英文扶輪雜誌《The Rotarian》1937 年 4 月號發表文章《A Chinese View of Rotary》。（整篇文章見第 10 頁）

「修身、齊家、治國、平天下」原文出自《禮記·大學》——「古之欲明明德於天下者，先治其國；欲治其國者，先齊其家；欲齊其家者，先修其身；欲修其身者，先正其心；欲正其心者，先誠其意；欲誠其意者，先致其知，致知在格物。物格而後知至，知至而後意誠，意誠而後心正，心正而後身修，身修而後家齊，家齊而後國治，國治而後天下平。」

中華電信業的先驅

趙曾珏（1901-2001），字真覺，1901 年出生於大清國江蘇省上海縣。小時候，跟隨叔父在湖南省長沙市明德學堂讀書。1921 年，考入交通大學上海學校(交大)電機科學習。交大當時曾規定：「學生學業成績在 85 分以上者、操行列為甲等者，准予免交該學期學費。」趙曾珏因學習成績優秀，而成為免交學費的學生。

1924 年趙曾珏畢業於交通大學電機工程學系，赴英國曼徹斯特茂偉電機製造廠(Metropolitan-Vickers Electrical Export Co., Ltd., Manchester)實習。1927 年赴德國西門子股份有限公司(Siemens AG)實習，專注研習電話及電報設備；並於德律風根無線電公司(Telefunken)實習，遍訪柏林(Berlin)

附近電工製造廠。1928 年赴美國哈佛大學(Harvard University)深造，1929 年獲電信工程碩士學位。回國後任教浙江大學，講授電報學、電話傳輸學及無線電工程等課。

中華民國浙江省第一任電話局局長，是浙江大學工學院院長李熙謀博士(也是杭州、南京、滬西三扶輪社的創社社員)。1932 年，趙曾珪接任浙江省電話局局長兼總工程師，負責在短期內完成全省長途電話建設工程。他上任後，確立了建設浙江省長途電話以傳話清晰、通達全省各縣市為初步目標；而把將來能接通全國及與世界各都市通話作為長遠目標。建設標準參照國際長途電話諮詢會議所定標準，並將杭州作為全省的交換中心；嘉興、鄞縣、長興、慈溪、衢州、臨海、永嘉、麗水八處作為地區交換中心。杭州和 8 個地區交換中心，都敷設直達的話線。視話務的需要，敷設一對、兩對，或兩對以上的銅線；視距離的遠近，擬定銅線的粗細，務求傳話的清晰及經濟的節省。至於各區所轄的縣政府，以星形方式架線直接至各地區交換中心；鄉鎮的話線則分別接至縣政府所在地。如此一來，脈絡相通，就像身之運臂，臂之運指。

到 1934 年 4 月，完成了杭甬(杭州經紹興至寧波)、甬溫(寧波沿海至永嘉)、杭衢(由衢州複接江山，可西通江西，南通福建)、杭麗(杭州至麗水)、龍溫(龍泉至永嘉)、杭楓(杭州至楓涇，接上海)、杭昌(杭州至昌化，西通安徽)等八大電話幹線。對於政治、軍事、經濟、文化、商業都有很大的益處。

1937 年，日本帝國全面侵華，抗戰爆發。浙江省政府遷往山城麗水，趙曾珪也來到麗水，擔任浙江省手工業指導所所長，並兼任浙東電力廠廠長。抗日戰爭時期，兼任交通部第三戰區特派員，使戰區與大後方之通訊得以暢通無阻。中華民國政府特頒給一等一級電信勳章、勝利勳章、及五等景星勳章，以資表揚。

推進上海公用事業

1945 年，抗戰勝利。趙曾珪接受任命，為上海特別市政府公用局局長。上任後，針對當時法幣貶值、能源緊缺等困難，統一並提高了各公用事業的標準。那時，上海的租界已有 100 多年的歷史，外國人在租界內各自為政，不受中國政府的管理。就最重要的電力、電燈而論，由於各公司管理、技術和效率不同，成本高低不一，電費相差十分懸殊。趙曾珪規定，所有上海公用事業都受公用局的監督；所有資費價格亦由公用局統一規定，統一考核。這樣，不論外國人所經營的，還是中國人所經營的，在管理上、技術上、效率上、服務上容易比較，顯示優劣，有利於提高服務品質。

那時，上海公用事業所面臨的最大困難是動力的供應問題。因抗戰前期的主動搬離，戰爭期間的轟炸摧毀，至戰後接收時，全市發電量僅剩 14.9 萬千瓦。趙曾珪加強管理，努力督促各公司修復補充。到 1948 年，全市發電量已增至 18.7 萬千瓦，基本上解決了當時的電荒。接著，公用局牽線與各公司商量，決定組建新的聯合電力公司。合力購置現代大型發電設備，增加發電量。

但是，正當趙曾珪積極謀劃推進上海公用事業之時，國共內戰已分出勝負。1949 年 4 月，當中國共產黨解放軍橫渡長江之時，上海市市長吳國楨向中央提交了辭職報告。市政府各局長獲知此信息後，也都紛紛向吳市長提交辭呈。最後，吳市長只批准了兩份辭呈：一是公用局長趙曾珪，二是市政府秘書長沈宗濂。其餘的一概被吳國楨「挽留」，留任的局長都羨慕趙、沈兩人「好福氣」。

組織美洲中國工程師學會

辭去上海市公用局局長之職後，1949 年趙曾珪舉家移民美國，受聘任紐約愛迪生電燈公司(Edison Illuminating Company)電力系統工程師。嗣後應哥倫比亞大學(Columbia University)的邀請，從事雷達研究。

針對在美國的中國青年工程學者人數增多、但相互聯繫較少的情況，趙曾珏等人於 1953 年在紐約發起組織了美洲中國工程師學會(Chinese Institute of Engineers, USA) (CIE)，凡在紐約或鄰州的中國工程師都可參加。主要目的有三：一是使留美的中國工程師能精誠合作，互通聲氣；二是每年推選有傑出成就的中國工程師給予獎章，以資鼓勵；三是每年舉行年會，共同交換學識經驗。CIE 與美國本地的其他工程師學會不同，美國的工程師學會都以一種專門工程學者為會員，如土木工程學會都是土木工程學者為會員。CIE 則包羅各種不同技術的工程師，以彌補其他工程師學會的缺憾。

1953 年，恢復交通大學美國同學會。同年，恢復交通大學美洲校友會(Chiao Tung University Alumni Association in America)，1965-1968 年趙曾珏任執行委員兼會長。

交通大學的前世今生

交通大學是 1921 年由中華民國北洋政府交通部所屬散居三地的大學合併而成的，後分立為五所大學。繼承原交通大學的現今大學有：

[滬校]

西安交通大學（西安，1959 年改稱）

上海交通大學（上海，1959 年改稱）

國立交通大學（新竹，1958 年電子所在臺灣成立，1979 年復校）

[平校]

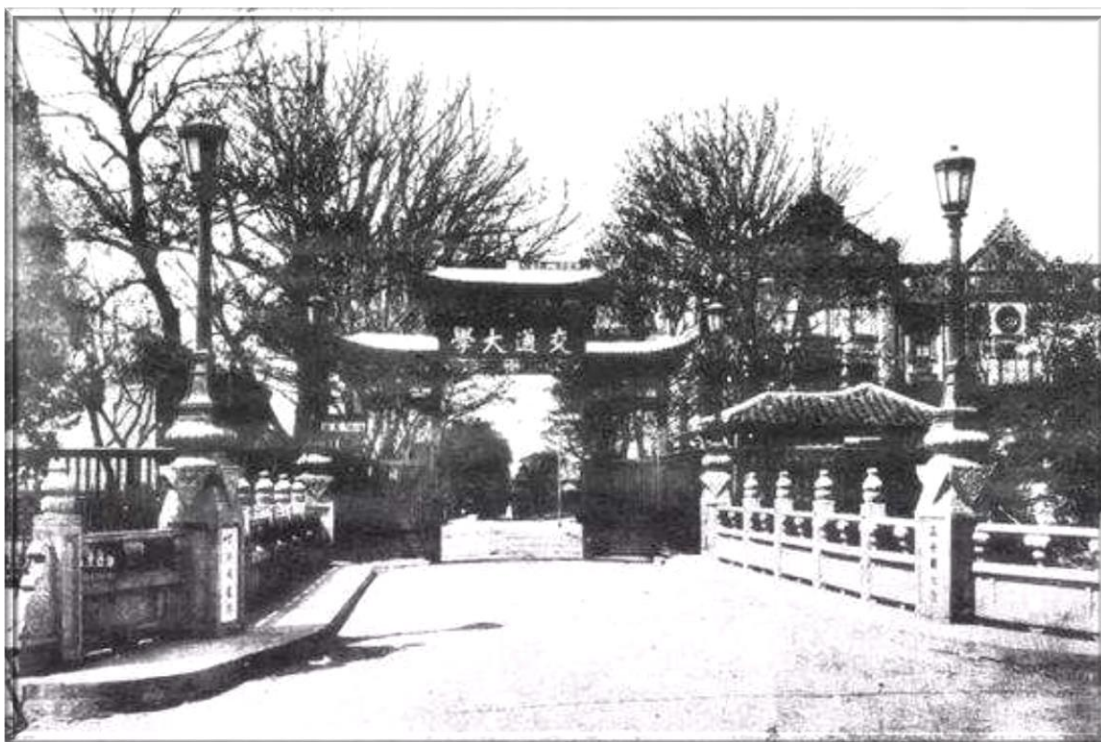
北京交通大學（北京，2003 年改稱）

[唐校]

西南交通大學（成都，1972 年改稱）

上海交通大學前身為「南洋公學」，由清朝末年政治家、洋務運動的代表人物盛宣懷在 1896 年（光緒二十二年）創建於上海，隸屬於輪船招商局和電報局。1905 年改隸商部，更名為「商部上海高等實業學堂」。1907 年改隸郵傳部，更名為「郵傳部上海高等實業學堂」。1911 年辛亥革命後更名為「南洋大學堂」。1912 年中華民國成立後劃歸繼承清政府郵傳部的中華民國交通部，更名為「交通部上海工業專門學校」，直至 1921 年與交通部下屬的另外兩校合組為「交通大學」。三個校園分別位於上海、北平、唐山。1928 年 9 月，滬、平、唐三校再次合併組成「交通大學」。本部設在上海，平校為鐵路管理學院，唐校為土木工程學院。對日抗戰八年時期，交通大學滬校內遷到重慶，唐校和平校內遷到貴州遵義。1959 年 7 月 31 日，經中華人民共和國國務院批准，交通大學開始獨立建制。上海部分更名為「上海交通大學」，西安部分更名為「西安交通大學」。





1928-1942 年的「國立交通大學」上海本部



國立交通大學
National Chiao Tung University

趙曾珏與臺灣「國立交通大學」復校之路

1956 年，正值交大歡慶六十週年紀念。有鑑於核子科學已由(新竹)國立清華大學成立的原子能研究所開始發展，但與核子研究相關之電子研究則尚付闕如，旅居美國的趙曾珏致電臺灣交通大學校友會及凌鴻勛老校長，倡議交通大學在臺灣復校；並建議先成立電子研究所，以培育高級人才。在凌鴻勛多方奔走及政府部會支持下，1958 年終於在新竹復(建)校——國立交通大學(National Chiao Tung University)。6 月 1 日國立交通大學電子研究所正式成立(現博愛校區)，由當時的中華民國教育部科學教育委員會主任委員李熙謀博士兼任第一任所長。

趙曾珏於「交大復校之經過及其時代之價值與展望」一文中，回憶當年在交大得到理想的大學教育，並能於歐美深造後返國服務數年，心中萌生了在臺灣恢復母校的想法。由於 1950 年代美國電晶體的發明，讓電子科學進入新的時代，趙曾珏遂於母校六十週年校慶時撰文《劃時代的母校與劃時代的工程科學》，提議政府應成立「交通大學電子研究所」，以培訓電子工程人才，為國所用。此文除抄送臺灣交通大學校友會外，並呈凌竹銘與李熙謀兩位先生。趙曾珏同時也去函人在紐約籌設清華大學原子科學研究所的梅貽琦校長，兩人均認為交大與清大兩個研究所如成立，雙方將有許多合作的可能。

文中並感性提到：「本人以校友一份子，忝為最早發起交大電子研究所之構想，以策動復校的工作。自始至今，已屆卅年。鋌而不捨，如保姆之與嬰兒，觀其成長。回憶交大同學在臺灣建校，是富有革命性與創造性…」趙曾珏並一一回顧復校時課程的設計與師資延聘、畢業校友愛國愛校捐獻校舍、錢公南先生為電子所爭取國際基金補助、王兆振與鄭鈞及潘文淵等多位旅美校友協助遴選電子科學專家來臺授課並建立實驗室…。綜觀交大的復校，在中華教育史上意義重大。不但將有形的科技與無形的精神發揚延續(指創辦人盛宣懷所提「體國經野」的崇高意旨與唐文治校長(1907-1920)所倡導「仁智雙運，崇實篤行」的精神)，亦加強了同學間的團結及與母校間的合作，此乃交大復校最大的力量。

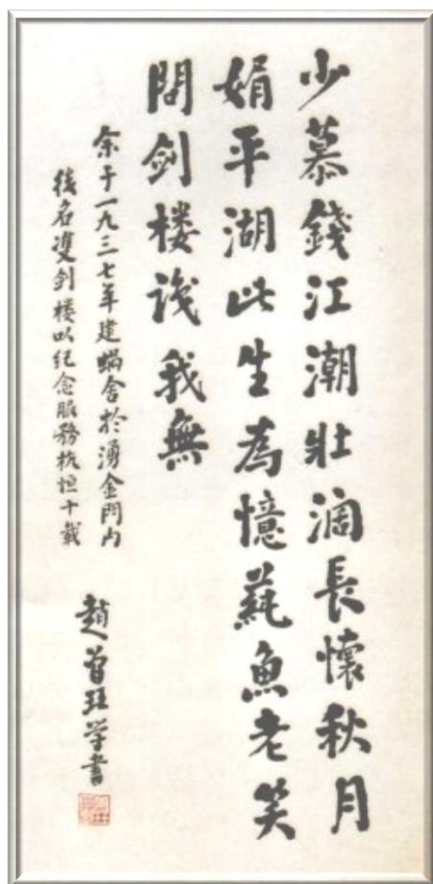
1957 年起，趙曾珏於美國哥倫比亞大學(Columbia University)任高級研究員至 1966 年退休。畢生從事工程科研工作，成就卓著。趙曾珏雖長年旅居美國，但心繫臺灣。常結合海外學人組織團體，返臺灣參加各項會議，為國獻策。尤其倡議交通大學在臺灣復校，更是影響深遠。1983 年 6 月 18 日位於臺灣新竹市的國立交通大學，授予趙曾珏名譽理學博士學位，表揚對國家社會的貢獻(1945-1949 年主持上海公用事業；1953 年在美國發起成立美洲中國工程師學會；持續返臺灣舉辦現代工程與技術研討會等)。

趙曾珏於典禮上致詞，除對母校頒贈名譽博士學位深表感謝外，並回憶與母校交大之關係已達六十九年，猶如慈母與小草…。若依張岳軍先生所言「人生自七十歲開始」，自己便只是母校訓練出來的一個青年工程師。因此願意提供對於「工程師」應有之認識的三點粗見：(一)明德的教育——大學之道在明明德，在親民，在止於至善。在母校求學，就是要使中華民族達到最優美的境界。(二)科技的教育——技術的改進仰賴科學，學工程的人必需學習基本的科學，近來因高科技的開發。對工程師更有如下之要求：訓練我們的心、要與電腦流利的對講、美國與日本的競爭(超高速率電腦的開發)。(三)弘毅的教育。最後期勉大學與工業界及政府通力合作，發揮團結之精神，並需培養愛國情操，及對過去常懷感恩。

趙曾珏的原配夫人張乃怡，係「民國奇人」張靜江的侄女。1963 年，張乃怡去世。經人撮合，他再得秦昭華，並於 1969 年結了婚。2001 年趙曾珏博士病逝美國紐約，享壽一百歲。

畢生從事工程科研工作，積極為華裔後輩開拓機會，成就卓著，德高望重。趙曾珏一生敬仰三個人，他說：「吾國歷史中，余所最欽仰者三人。一為王安石，其政治之見解與其實行之政策針對時弊，適合我國之需要，初不能以成敗論之；二為岳飛，余每讀其滿江紅詞，忠勇愛國之精神實足為吾人之楷模；三為文天祥，赴義成仁，守節不屈，忠烈之氣，浩然千古，實是愧死漢奸！」

趙曾珏的專業著作頗多，比較廣為傳誦的有：《中國之郵政事業》(1945)；《軍事通訊方法》(1945)；《中國之電信事業》(1946)；《戰後交通建設概論》(1947)；《科學與技術》(1948)；《上海之公用事業》(1949)；文學作品有和夫人秦昭華合著《雙劍樓詩稿》(1972)。



1976 年趙曾珏 75 歲生日--與夫人秦昭華女士合影於紐約寓所

Inaugural Address to the Hangchow Rotary Club

By President T. C. Tsao

11 April 1935

Dear fellow Rotarians:

As the retiring Chairman “Bean” has delivered his speech in Chinese, I would like to give mine in English just for a change. Prior to saying anything, I desire to thank you for the honor you have done to me in making me the President of this Club for the current year. It is a position I accept with great pride and I shall do my utmost to maintain the high standard which has been set up by my predecessors.

As you all know, the work of the Club is divided and subdivided into different committees and the duties are entrusted to various officials, therefore that of the President is a relatively simple one. I think he needs only to keep on smiling, and see that things move on smoothly. So there remains very little for me to say about the job of the President.

However, as you have given me this chance to speak, I like to stress a few points. This Club is only five years old since its formation, and it has now passed its teething age. We cannot deny the fact that it is far from perfect and we must work hard to develop our activities both within and without the Club, i.e. we must work hard internally among ourselves, and externally toward the community.

With the exception of a few missionary organizations, this Club is the only gathering of the international community in the city of Hangchow. It is a Club which is flourishing by its activities without national boundaries, and which works toward the goal of international unity and culture. Out of the motto of the Club, three things I may particularly mention, namely, “personality”, “fellowship” (which we have to cultivate within the Club) and “service” (which we have to develop and extend outside the Club.)

By joining this Club a member will have a chance to broaden his views and enlarge his personality, also he can develop a good fellowship among the members, which can be attained in many ways, and the most important way is to keep regular attendance to the meetings. As our new Chairman of the Fellowship Committee, “Okay” has pointed out to me that we need more social gathering so as to have more contact with each other in a club house if possible. Of course it is impossible for us to accomplish these things all of a sudden, but steps can be taken to attain the goal. I am sure that our vice-president “Stamp” will agree with me to keep this house as our temporary club house, and to keep it open for the members to carry out activities, provided his family does not return very soon.

Perhaps I can back in the same train with “Mac” last night, we had a talk on the practice of the Shanghai Rotary Club. In their Club the past and present presidents sit at a fixed table. “Mac” suggests in his capacity as a past president, he does not approve of this practice as he wants to change his seat with other members every week, so as to cultivate more fellowship. This is the spirit that we want!

The question of service is the most important one to every Rotary member. A Rotary Club should be a nucleus of service, with its members moving actively around as electrons as it were to offer various services to the outside community. The more serviceable the members are, the more progressive the Club will be. At present, the Club has a fair representation from the official organizations of Hangchow, but it still lacks members from the business organizations. It is my sincere hope that we will be able to

secure more business men to be our members to make our Club better represented, so that we will be in a better position to offer services to the community.

It is a special practice of the Club that every member should be on a committee, and some are even on more than one, so that every one of us has a chance to serve the Club. Therefore the success of the Club relies on the good team work among the committees. I sincerely hope that the Rotary wheel of this Club will not be pushed around by a limited number of officials, but by all the members as a whole, so that it will be a wheel of a modern high speed engine which will make swift and steady progress.

As I have talked too seriously, I am going to conclude my speech with a story. Once an election candidate was delivering a long and tedious speech, the audience was getting very impatient. As the speaker was winding up his speech with the remarks: "I want land reform, I want housing reform, I want educational reform, I want", "chloroform!" was the voice shouted from the impatient audience. I hope my speech has not been long enough for you to say that!



杭州西溪秋雪庵

A Chinese View of Rotary

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FELLOWSHIP is what Robinson Crusoe longed for immediately after he had found food and shelter. It is a universal need of men. Paul Harris must have realized it, back in 1905, when he organized the little group of business and professional men into the first of more than 4,000 Rotary Clubs that now exist.

Closely associated with the friendliness that has characterized Rotary throughout its history has been an increasing emphasis upon the ideal of service. Today, Rotary travellers in all parts of the world will find those two elements active in any Rotary Club they may visit.

The human tendency is to take the presence of our fellow men for granted. We are inclined to be friendly only in our homes and among our special circle of friends. But fellowship is not a thing to be given a label and pigeonholed for special occasions. Opportunities abound for being kindly. Have ever you asked a stranger for street directions? If he not only told you what you wanted but with a smile went out of his way to accompany you past a confusing crossroads, you know what friendliness is.

Being kind is an art we all can practice. A few steps out of our way to direct a newcomer to his destination is a small thing to us, but it means much to the bewildered stranger. It is not difficult to spend a moment enlightening some person who is at a wrong counter in a crowded postoffice or customhouse, but such friendly courtesies often save other people infinite trouble.

I do not mean, of course, that we should be offensively friendly to the point where we become "hail-fellows-well-met" and slap the backs of everyone we meet on the streets. But there is a happy medium between that and the attitude of him who retires into a shell of stand-offishness. Rotarians who within their Clubs practice *real* fellowship will carry that spirit into their everyday affairs.

The same is true of the ideal of Service, which often is so closely associated in practice with fellowship as to make it difficult to separate the two even in a theoretical analysis. "Do unto others as you would have them do unto you" is, I suppose, as fine an expression of the Service ideal of Rotary as could be given. As one's understanding of it grows, one cannot fail to see how it must issue in goodwill and in understanding.

To a Chinese, there is much in all this that exemplifies the wisdom of revered teachers of ages past. The writings of Confucius, the great philosopher who lived 551 to 478 B. C., are worth rereading at this point. He said that above all a man should *sheo shen*, 修身, that is, conduct himself to be above criticism; and *che chia* 齊家, to make his family a model for others; and *tze kuao*, 治國,

'Ping Tien Sha' sounds strange to Occidental ears, but it is a very ancient way of expressing the idea of 'peace among the nations.'

which is to serve one's country; and, finally, *ping tien sha*, 平天下, so that there will be peace among the nations.

A similar development of ideas is to be observed in the Rotary Aims and Objects Plan—Club, Vocational, Community, International Service. First comes exemplary life of the individual in relation to his groups—the Club and the community, his vocation, and his country. As the principles of Rotary are applied come the goodwill and understanding which make peace possible.

Prejudice and ignorance are the two great barriers to goodwill and understanding among peoples. The reason why Rotary Clubs have sprung up all over the world and new ones are being organized constantly, is that Rotary recognizes the importance of displacing prejudice and ignorance, which are negative, with goodwill and understanding, which are positive. The very basis for selecting members of a Club exemplifies this. A man is chosen to become a Rotarian because he is an outstanding representative of his particular vocation, regardless of his class, religion, race, or nationality.

Every large city of the world has a wide variety of clubs. There are political clubs, where only politics is talked about; literary clubs where both classical and modern literature are discussed; art clubs where artists exhibit their work; engineering clubs for engineers; medical clubs for doctors, and so on. Too, there are numerous welfare and religious organizations.

But Rotary Clubs are different from all of these. Principles of the professional groups apply exclusively to themselves, but the Rotary ideal of Service is applicable to all. Membership in vocational clubs is limited to those directly interested, but a Rotary Club takes in a cross-section of the business and professional life of its community. Through individual action of its members, or through committees or projects of the Club as a whole, it spreads the benefits of its organization throughout the community into the nation, and from nation to nation.

Today, there are more than 170,000 Rotarians in all quarters of the world. It is not a large number, compared to the population of even a small-sized country. But as men engaged in commerce and the professions, these 170,000 Rotarians can do much to promote fellowship and the ideal of Service, first within their groups, then among other persons with whom they come into contact. As this is done, the Movement will gather momentum and will make an increasingly important contribution to the eradication of prejudice and ignorance and thereby advance international peace and prosperity.