ISSN: 1755-068
www.field-journal.org
vol.5 (1)

Survival of the Species: the Financial Habitat of, and Evolutionary Pressures on, English Architectural Education.

Alexander Wright

The paper outlines the known and possible effects on English architectural education of some of the recent changes in the funding of Higher Education. The paper examines the previous certainties contained within the framework of architectural education and how these might evolve to suit the new realities facing students and Higher Education Institutions. The paper was written in the summer of 2011 and in some instances the policy framework to which it refers may been revised in the period since.

field:
a free journal for architecture

www.field-journal.org
vol.5 (1)

Introduction

The period since the Browne Report[1] has been a tumultuous time for English Higher Education (HE). Previous certainties have been overthrown and the entire landscape and financial environment of HE has been rewritten. Some of the important factors are still unknown[2], however we now know enough to understand that the new HE habitat will create winners and losers. Some Higher Education Institutions (HEIs) may thrive, but some are likely to become increasingly vulnerable. Similarly some programmes appear secure, but for others it will be a battle for survival. This paper is concerned with a specific species: English architectural education. The situation in Northern Ireland, Wales and Scotland is particular to those countries, although many of the same concerns still arise. What the future holds for the architectural profession remains an open question and whilst it is related to the way in which the profession is educated it is the prospect for architectural education itself which is the focus of this paper.

Financial context

It appears that all English schools will be setting the fees for their architecture programmes between £8-9k per annum from 2012, with the majority at 9k[3]. This generally represents a 260% increase in fees from those which will apply to the 2011 intake.

Currently architectural students already face a considerable debt burden accumulated during their period of academic study. In a recent survey conducted by the students themselves their findings indicated that currently the full cost of an architectural education is £88,726 [4]. This may be a questionable figure but less questionable are the levels of debt students of architecture are already recording under the current, relatively benign, fee regime. In the spring of 2011, under the Freedom of Information Act, it was revealed that the highest recorded student debt was already £66,150 [5]. Speaking in response to this figure on Radio 4's Money Box programme, Universities Minister David Willetts said the amounts owed were "unusual". He added that if these people were training to become lawyers or doctors they were likely to have substantial earnings later on in life[6]. Architecture is one of those long vocational, professional qualifications to which David Willets was referring. It is often perceived as a relatively well paid job, but are architects actually likely to have substantial earnings later on in life to compensate for the length of their formal education?

In 2011 The Times newspaper published a comparison of the professions as a guide for sixteen and seventeen year olds contemplating their future careers[7]. The article provided figures suggesting Architects with 3-5 years of experience may expect to earn £34-42K, compared to £70k

1 The Browne Report referred to is Lord Browne of Madingley's report entitled, "Securing a Sustainable Future for Higher Education: An Independent Review into Higher Education Funding and Student Finance") Published October 2010 available at http://www.bis.gov.uk/assets/biscore/corporate/docs/s/10-1208-securing-sustainable-higher-education-browne-report.pdf

2 An example of the continuing uncertainty is that at the time of writing it was not known if any of the architecture programmes at Part 1 or Part 2 level would attract continued HEFCE funding as Strategically Important and Vulnerable (SIV) subjects. The paper assumes that this will not be case.

3. Of the twenty Schools of architecture represented at the SCHOSA (Standing Conference of Heads of Schools of Architecture) meeting on 22nd July 2011 none reported a proposed fee of less than £8000, or knowledge of any English School proposing a fee below this level. Various bursaries and fee waivers will apply in certain circumstances but the standard fees appear to be uniformly set at the top end of the available range.

4. The survey was carried out by two recent graduates and was the result of 1300 responses. It was report in the Architects' Journal on 26th May 2011 (page 6) available at http://www.architectsjournal.co.uk/news/daily-news/survey-cost-of-studying-architecture-to-hit-88k/8615263.article

5. This is the figure quoted as the highest UK student loan by the Student Loan Company in the article, "Student loans: 20 biggest debts revealed" by Julia Ross, BBC News website on 19th March 2011 at http://www.bbc.co.uk/news/business-your-money-12794863

6. The remarks by David Willets were also reported in the article, "Student loans: 20 biggest debts revealed" by Julia Ross, BBC News website on 19th March 2011 at http://www.bbc.co.uk/news/business-your-money-12794863

7. The information was presented in an article entitled "Mapping a path

for chartered accountants, £120k for independent GP's and £176k for consultant dentists. The article also provided typical entry requirements which stated those for architecture were higher than those required for any of these other professions. Media perceptions such as this highlight the difficulty architecture may face in competing with other five year courses in an era of far higher fees, but in the context of far lower potential earnings.

Whilst The Times article published what architects might earn in the future, The Office of National Statistics provides reliable data on what architects currently earn. Table (i) provides a summary of median earnings by profession for 2010 [8]. From these statistics it also appears that architects can expect to earn substantially lower sums than those professions which require a similar minimum period of academic study. Interestingly architects also earn less than other less celebrated job titles including: policemen (ranks of sergeant and below), train drivers and coal miners. Although the historical statistics for this relative ranking of the professions are more difficult to ascertain it appears that the comparative ranking of architecture is in long-term decline. The average time taken from the start of architectural education to registration as an architect is now 9.5 years[9]. It appears likely that the relative ranking of architects' earnings in 2021, when current entrants typically qualify, will be lower than the 2010 ranking of 44th.

to your chosen career" in The Times on 28th March 2011 available at http://www.thetimes.co.uk/tto/education/article2963658.ece

8. The summary is taken from the statistics provided by Office of National Statistics for median earnings in 2010 ranked by profession/job title.

9. The average period to registration was provided by Pam Cole during her presentation to the SCHOSA Conference in Cambridge, 14th April 2011. During this presentation she also reported that currently Part 2 students are facing high levels of unemployment, high levels of insecurity, a strong downward trend in salaries and an increasing expectation that they work for free.

10. The £23k starting salary for Part 2 graduates was taken from the lower range for London graduates as provided at http://www.ribaappointments.com/Salary-Guide.aspx

11. These statistics were the result of an Archaos survey of 500 students and architects as reported in Merlin Fulcher's article entitled "Reed warns of storm over student low pay" in the Architects Journal on 14 April, 2011 available at http://www.architectsjournal.co.uk/news/daily-news/reed-warns-of-storm-over-student-low-pay/8613848.article

12. Under current arrangements the student loan system also includes those EU students studying at UK HEI's. Those students from the former Eastern European countries appear even less likely to enjoy careers earnings which will enable their debt to be repaid. The fact that UK taxpayers are likely to be financing the education of European students each accruing debts well in excess of £100k is fact that may act to place additional pressure on Government at some future point.

13. The White Paper suggests HEIs make available information explaining how the fee income is spent. Department for Business Innovation and Skills "Higher Education: Students at the Heart of the System" 2011, page 29 para 2.12 available at http://c561635.r35.cf2.rackcdn.com/11-944-WP-students-at-heart.pdf

14. Prof Paul Blackmore in his presentation to the SCHOSA Conference in Cambridge on 14th April 2011 highlighted this issue commenting, “There would be plenty of money for teaching if the income from teaching in research intensive universities was spent on teaching...it’s a policy choice”.

15. London Metropolitan University has adopted this strategy and where subsidy of other programmes is prioritised this is made explicit by the Institution.

16. These are approximate projections based on UN population forecasts. Some insurance companies have been looking into the consequences of this decline including LV, which issued a press release on 20th April 2011 stating, “Next year's tuition fee increases, coupled with declining numbers of 18-24 year-olds in the general population over the next decade, will see a 14% decline in British higher education student numbers over the next ten years.” http://www.lv.com/media_centre/press_releases/press_release?urltitle=university-ghost-towns

17. In 1999 Tony Blair's 1999 announced, "So today I set a target of 50 per cent of young adults going into higher education.” The Coalition Government has made it clear that there is no longer any Government target for the percentage of young adults going into HE.

18. The 70% figure is approximate based on analysis of the available UCAS data and is supported by the analysis being carried out by James Brown at Queen’s University Belfast http://learningarchitecture.wordpress.com/2011/06/16/statistics-the-numbers-behind-uk-architectural-education/

19. These figures were supplied by the ARB. It is also worth noting that the two Edinburgh schools have merged in this period.

20. The UCAS statistics for accepted application in 2005 and 2006 for all subjects recorded a 3% drop following the last major rise in the home fee to £3k in 2006. The figures for architecture

Rank	Table (i): Office of National Statistics: Average salaries by profession 2010	Median Salary £
1	Directors and chief executives of major organisations	96,202
2	Corporate Managers and Senior Officials	70,000
3	Medical Practitioners	69,989
4	Police officers (inspectors and above)	55,077
5	Managers in mining and energy	53,403
6	Financial managers and chartered secretaries	51,905
7	Air traffic controllers	51,609
8	Health professionals	49,981
9	Brokers	48,981
10	Research and development managers	47,089
11	Public service and administrative professionals	45,933
12	Information and communication technology managers	45,398
13	Protective service officers	45,345
14	Functional managers	45,327
15	IT strategy and planning professionals	45,303
16	Electrical engineers	45,086
17	Marketing and sales managers	44,242
18	Solicitors and lawyers, judges and coroners	44,034
19	Legal professionals	42,863
20	Electrical engineers	42,570
21	Hospital and health service managers	42,358
22	Purchasing managers	42,217
23	Transport associate professionals	42,217
24	Train drivers	41,179
25	Higher education teaching professionals	41,136
26	Personnel, training and industrial relations managers	41,069
27	Managers in construction	40,920
28	Coal mine operatives	40,248
29	Production managers	40,016
30	Financial institution managers	40,000
31	Production, works and maintenance managers	39,517
32	Physicists, geologists and meteorologists	39,399
33	Senior officers in fire, ambulance, prison and related services	39,052
34	Police officers (sergeant and below)	38,570
35	Management consultants, actuaries, economists, statisticians	38,569
36	Broadcasting associate professionals	38,401
37	Mechanical engineers	37,840
38	Corporate managers	37,700
39	Pharmacy managers	37,613
40	Information and communication technology professionals	37,450
41	Social services managers	37,527
42	Advertising and public relations managers	37,415

actually showed a marginal increase in the number of accepted applications for the same period, contrary to the overall trend.
http://www.ucas.com/about_us/stat_services/stats_online/data_tables/datasummary

21. UCAS statistics
http://www.ucas.com/about_us/stat_services/stats_online/annual_datasets_to_download/

22. The situation in Germany was presented in Steven Spier's presentation to the SCHOSA conference in Cambridge on 14th April 2011

23. The European Union provides extensive information to EU students wishing to study across Europe
http://ec.europa.eu/youreurope/citizens/education/university/fees/index_en.htm?profile=0

24. This information was compelling presented in Elizabeth Hopkirk's article entitled, "Students ditch UK schools to go abroad" which appeared in Building Design Magazine on 22 July 2011 available at
http://www.bdonline.co.uk/news/analysis/students-ditch-uk-schools-to-go-abroad/5021920.article

25. This scenario was outlined by A.Wright during discussions at the third sessions of the 14th meeting of the EAAE/ENHSA in Chania on 3-6 September 2011.

26. One of the first presentations of the advantages of studio learning was offered by Donald Schon The Design Studio: an Exploration of its traditions and Potential (London: RIBA Publications Ltd, 1985)

27. HEFCE currently provides approximately 30% additional teaching grant to those subjects with a studio element (Band C) compared to those subjects which are solely lecture based (Band D). HEFCE, Guide to funding: How HEFCE allocates its funds, (HEFCE: 2010) p.23

28. "Architecture tends to fall outside the norms of modern, research-based universities…its status tends to be low and its standards of accomplishment tend not to be understood…In times of retrenchment in higher education, departments of architecture are

Rank	Table (i): Office of National Statistics: Average salaries by profession 2010	Median Salary £
43	Quantity surveyors	37,059
44	Architects	36,866
45	Engineering professionals n.e.c.	36,846
46	Business and statistical professionals	36,712
47	Paramedics	36,542
48	Quality assurance managers	36,485
49	Science and technology professionals	36,313
50	Software professionals	36,298
51	Architects, town planners, surveyors	36,181
52	Engineering professionals	35,753

At the beginning of 2011, in the knowledge of the proposed fee changes I prepared a series of very simply earnings and debt profiles for an architecture student under various conditions. Some of these are included as tables (ii)-(v). In all of the examples shown the accumulated debt has been based on five years of fees paid at £9k per annum. The figures are based on students utilising the available £5.5k maintenance loan for each year of study and I adopted a common figure for the interest accrued during the course of study of £4,468 (interest is accrued at the rate of RPI plus 3% during the period of study). Using these assumptions the total debt on graduation indicated on the tables is £76,968. For students based in London, where the maintenance loan provision is higher, this figure is likely to be an underestimate.

Table (ii) illustrates the debt profile during the 30 year period of the loan assuming an RPI of 2% and a salary level which starts at the 2010 median earnings level and simply increases with the RPI. These assumptions result in a profile of debt which increases for every year worked until it is written-off after the 30th year. In other words the interest on the debt always exceeds the debt repaid in each year of work.

vulnerable." Donald Schon The Design Studio: an Exploration of its traditions and Potential (London: RIBA Publications Ltd, 1985) p.4

29. The European Commission published its Green Paper entitled "Modernising the Professional Qualifications Directive" in 2011 (available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0367:FIN:en:PDF). Having floated the idea of a move to a five year minimum of academic study as a pre-requisite to registration as an Architect in the EU section 4.6 of the green paper abandoned this change, removing it from the list of possible outcomes.

30. For example the University of Bath is currently seeking approval for an accredited and prescribed one year MArch.

31. At the July 22nd meeting of SCHOSA a policy was unanimously agreed the following:
"SCHOSA will seek the formal recognition by the RIBA and ARB that a student who is awarded a prescribed and accredited Part Two qualification has also demonstrated compliance with the Part 1 criteria. Any student in possession of a prescribed Part 2 qualification should therefore be exempt from the requirement to obtain a Part 1 qualification prior to registration."

32. This may be seen first with the Part 2 programmes as under Annex C of the recent HEFCE consultation document "Teaching funding and student number controls : Consultation on changes to be implemented in 2012-13" all students with a first degree will be deemed to be equivalent to AAB (a qualification which encompasses all Part 2 entrants).

Table (ii): Median salary throughout career (RPI=2%)

Year	Bf debt	Salary	Debt interest	Repayment	Cf debt
1	£76,968	£36,886	£3,373	£1,430	£78,912
2	£78,912	£37,624	£3,546	£1,496	£80,961
3	£80,961	£38,376	£3,729	£1,564	£83,127
4	£83,127	£39,144	£3,925	£1,633	£85,419
5	£85,419	£39,927	£4,133	£1,703	£87,849
6	£87,849	£40,725	£4,356	£1,775	£90,430
7	£90,430	£41,540	£4,522	£1,849	£93,103
8	£93,103	£42,370	£4,655	£1,923	£95,835
9	£95,835	£43,218	£4,792	£2,000	£98,627
10	£98,627	£44,082	£4,931	£2,077	£101,481
11	£101,481	£44,964	£5,074	£2,157	£104,398
12	£104,398	£45,863	£5,220	£2,238	£107,380
13	£107,380	£46,780	£5,369	£2,320	£110,429
14	£110,429	£47,716	£5,521	£2,404	£113,546
15	£113,546	£48,670	£5,677	£2,490	£116,733
16	£116,733	£49,644	£5,837	£2,578	£119,992
17	£119,992	£50,637	£6,000	£2,667	£123,324
18	£123,324	£51,649	£6,166	£2,758	£126,732
19	£126,732	£52,682	£6,337	£2,851	£130,217
20	£130,217	£53,736	£6,511	£2,946	£133,782
21	£133,782	£54,811	£6,689	£3,043	£137,428
22	£137,428	£55,907	£6,871	£3,142	£141,158
23	£141,158	£57,025	£7,058	£3,242	£144,973
24	£144,973	£58,166	£7,249	£3,345	£148,877
25	£148,877	£59,329	£7,444	£3,450	£152,871
26	£152,871	£60,515	£7,644	£3,556	£156,959
27	£156,959	£61,726	£7,848	£3,665	£161,141
28	£161,141	£62,960	£8,057	£3,776	£165,422
29	£165,422	£64,219	£8,271	£3,890	£169,803
30	£169,803	£65,504	£8,490	£4,005	£174,288

The first earning profile is obviously unlikely in as much as students will rarely start their professional lives earning the average salary. Table (iii) assumes the average starting salary for a Part 2 graduate[10] and an annual increase of 5% for every year of work. Even under this rate of annual pay increase the debt repayment never exceeds the interest accrued.

Table (iii): Starting salary £23k rising 5% per year (RPI=2%)					
Year	**Bf debt**	**Salary**	**Debt interest**	**Repayment**	**Cf debt**
1	£76,968	£23,000	£1,770	£180	£78,558
2	£78,558	£24,150	£1,942	£284	£80,217
3	£80,217	£25,358	£3,729	£392	£81,953
4	£81,953	£26,625	£4,156	£506	£83,778
5	£83,778	£27,957	£4,283	£626	£85,701
6	£85,701	£29,354	£4,411	£752	£87,737
7	£87,737	£30,822	£4,543	£884	£89,901
8	£89,901	£32,363	£4,678	£1.023	£92,901
9	£92,901	£33,981	£4,816	£1,168	£94,209
10	£94,209	£35,681	£4,957	£1,321	£97,337
11	£97,337	£37,465	£5,101	£1,482	£100,206
12	£100,206	£39,338	£5,248	£1,650	£103,316
13	£103,316	£41,305	£5,398	£1,827	£106,654
14	£106,654	£43,370	£5,552	£2,013	£109,974
15	£109,974	£45,538	£5,710	£2,208	£113,264
16	£113,264	£47,815	£5,870	£2,413	£116,514
17	£116,514	£50,206	£6,035	£2,629	£119,711
18	£119,711	£52,716	£6,203	£2,854	£122,842
19	£122,842	£55,352	£6,376	£3,092	£125,893
20	£125,893	£58,120	£6,552	£3,341	£128,846
21	£128,846	£61,026	£6,732	£3,602	£131,686
22	£131,686	£64,077	£6,917	£3,877	£134,394
23	£134,394	£67,281	£7,105	£4,165	£136,948
24	£136,948	£70,645	£7,299	£4,468	£139,327
25	£139,327	£74,177	£7,496	£4,786	£141,508
26	£141,508	£77,886	£7,699	£5,120	£143,464
27	£143,464	£81,780	£7,906	£5,470	£145,166
28	£145,166	£85,869	£8,118	£5,838	£146,587
29	£146,587	£90,163	£8,335	£6,225	£147,691
30	£147,691	£94,671	£8,557	£6,630	£148,445

These first two profiles are unlikely as they assume an RPI at the Government target rate of 2%. The past forty years suggest that a sustained 2% RPI for thirty years is unprecedented and that an RPI of 3.5% is a more realistic projection. Table (iv) repeats the scenario of table (iii) but with this revised RPI assumption. It thus illustrates the impact of the RPI, which in table (iv) leads to a debt after 30 years of £274k.

Table (iv): Starting salary £23k rising 5% per year (RPI=3.5%)					
Year	Bf debt	Salary	Debt interest	Repayment	Cf debt
1	£76,968	£23,000	£2,925	£180	£79,713
2	£79,713	£24,150	£3,167	£284	£82,596
3	£82,596	£25,358	£3,431	£392	£85,634
4	£85,634	£26,625	£3,720	£506	£88,848
5	£88,848	£27,957	£4,037	£626	£92,259
6	£92,259	£29,354	£4,385	£752	£95,892
7	£95,892	£30,822	£4,769	£884	£99,777
8	£99,777	£32,363	£5,193	£1.023	£103,947
9	£103,947	£33,981	£5,662	£1,168	£108,441
10	£108,441	£35,681	£6,183	£1,321	£113,303
11	£113,303	£37,465	£6,764	£1,482	£118,585
12	£118,585	£39,338	£7,412	£1,650	£124,347
13	£124,347	£41,305	£8,083	£1,827	£130,078
14	£130,078	£43,370	£8,489	£2,013	£137,078
15	£137,078	£45,538	£8,910	£2,208	£143,780
16	£143,780	£47,815	£9,346	£2,413	£150,712
17	£150,712	£50,206	£9,796	£2,629	£157,880
18	£157,880	£52,716	£10,262	£2,854	£165,288
19	£165,288	£55,352	£10,744	£3,092	£172,940
20	£172,940	£58,120	£11,241	£3,341	£180,840
21	£180,840	£61,026	£11,755	£3,602	£188,992
22	£188,992	£64,077	£12,284	£3,877	£197,400
23	£197,400	£67,281	£12,831	£4,165	£206,065
24	£206,065	£70,645	£13,394	£4,468	£214,992
25	£214,992	£74,177	£13,974	£4,786	£224,180
26	£224,180	£77,886	£14,572	£5,120	£233,632
27	£233,632	£81,780	£15,186	£5,470	£243,348
28	£243,348	£85,869	£15,818	£5,838	£253,327
29	£253,327	£90,163	£16,466	£6,225	£263,569
30	£263,569	£94,671	£17,132	£6,630	£274,070

The question arises as to what earnings would be required in order to pay off the debt associated with a five year architectural education under the new fee regime? Table (v) illustrates an answer to this and reveals that an annual pay increase of 10% would be required every year for thirty years. Even in this scenario the debt would only begin to decrease after 21 years of employment and the repayments would total £268,286 for a £76,968 debt at graduation.

The relative poverty of architectural pay is even more pronounced prior to registration. The RIBA President Ruth Reed expressed her concern about an impending "perfect storm" effecting architecture students in 2011 following a survey that found that a third of Part 1 graduates earned below minimum wage[11].

Table (v): Average starting salary and rising 10% per year (RPI=3.5%)					
Year	**Bf debt**	**Salary**	**Debt interest**	**Repayment**	**Cf debt**
1	£76,968	£23,000	£2,925	£180	£79,713
2	£79,713	£25,300	£3,304	£387	£82,630
3	£82,630	£27,830	£3,739	£615	£85,754
4	£85,754	£30,613	£4,238	£865	£89,127
5	£89,127	£33,674	£4,814	£1,141	£92,800
6	£92,800	£37,042	£5,481	£1,444	£96,837
7	£96,837	£40,746	£6,257	£1,777	£101,317
8	£101,317	£44,820	£6,586	£2,144	£105,759
9	£105,759	£49,303	£6,874	£2,547	£110,086
10	£110,086	£54,233	£7,156	£2,991	£114,251
11	£114,251	£59,656	£7,426	£3,479	£118,198
12	£118,198	£65,622	£7,683	£4,016	£121,865
13	£121,865	£72,184	£7,921	£4,607	£125,180
14	£125,180	£79,402	£8,137	£5,256	£128,060
15	£128,060	£87,342	£8,324	£5,971	£130,413
16	£130,413	£96,077	£8,477	£6,757	£132.133
17	£132.133	£105,684	£8,589	£7,622	£133,100
18	£133,100	£116,253	£8,652	£8,573	£133,179
19	£133,179	£127,878	£8,657	£9,619	£132,217
20	£132,217	£140,666	£8.594	£10,770	£130,041
21	£130,041	£154,732	£8,543	£12,036	£126,457
22	£126,457	£170,206	£8,220	£13,429	£121,249
23	£121,249	£187,226	£7,881	£14,960	£114,169
24	£114,169	£205,949	£7,421	£16,645	£104,945
25	£104,945	£226,544	£6,821	£18,499	£93,268
26	£93,268	£249,198	£6,062	£20,538	£78,792
27	£78,792	£274,118	£5,121	£22,781	£61,133
28	£61,133	£301,530	£3,974	£25,248	£39,859
29	£39,859	£331,683	£2,591	£27,961	£14,488
30	£14,488	£364,851	£942	£15,430	£0

Certain consequences of this arithmetic are clear. In reality the loan system is, for architecture students, more realistically thought of as a graduate tax. Given the potential write off value after 30 years, how secure should an 18 year old feel that the marginal tax rate of 9% on all earnings above 21k might not be increased future years? Given the high proportion of debt accrued in the course of an architectural education, which it would appear the tax payer will never recoup, the question also arises as to what additional steps a future Government may take in order to minimise the cost of this written off debt? [12]

Given the increase in student fees HEIs will increasingly be expected to account for how their income is spent[13]. For a fairly typical Part 1 programme with 75 home/EU students and 25 overseas students this

income would be c £3 million per year. The financial statements produced by HEIs already make certain expenditure patterns publicly available. From these it can be seen that typically half of the undergraduate income is spent on institution-wide student services, premises and central administration. The details of the expenditure of the other half is more difficult to ascertain. Within HEIs the adoption of detailed workload models make it relatively simply for the direct costs associated with any programme to be identified within departments. HEIs are understandably reluctant to make these figures available. Nevertheless the popularity of the main architectural undergraduate programmes in architecture within HEIs in recent years is in some part due to the fact that they generate a surplus which an institution is able to use to cross-subsidise other programmes or activities.

Within research intensive universities the main beneficiaries of this cross-subsidy are typically research activities. The accepted culture within research intensive universities is that teaching income is appropriately used to help support the research base. Under the existing fee regime the HEFCE Block Teaching Grant has largely obscured this subsidy from the viewpoint of the students. With the removal of this grant the nature and extent of the subsidy is likely to become more transparent. Although the figures for individual programmes are very varied, in general at the most prestigious institutions the pressure on teaching resources is partly a consequence of this subsidy. The pressure on teaching resources would be greatly relieved if the income raised by teaching was spent on teaching[14]. In the future students may expect to see a closer correlation between their tuition fees and the direct cost of the education they receive. For programmes which generate an effective subsidy which is equal to or greater than their directly attributable teaching costs, some rebalancing of resource allocation may become inevitable.

The extent to which students will accept their fees being used to subsidise other activities is not known. However, some HEIs have already adopted a programme pricing strategy so that the fee for each programme more accurately reflects the cost of providing that programme[15]. One consequence of the fee changes could be even greater pressure on members of staff to generate research income, which may compound the likely pressures arising from the need to increase teaching and contact time.

Student numbers

Whilst it might seem as though there is an endless supply of high quality students wishing to study architecture, is this the case?

The numbers applying to architecture as a percentage of total applicants are not high. According to the UCAS data in 2010, architecture accounted

Table (vi): UCAS Applications and Accepted Applicants statistics by JACS code 2010			
Applicants	**Applicants**	**Accepts**	**%age acc**
Subject group (JACS)	**2010**	**2010**	
A Medicine and dentistry	24,354	9,246	1.9%
B Subjects allied to medicine	91,569	49,963	10.3%
C Biological sciences	46,473	28,892	8.0%
D Veterinary sciences, agriculture and related subjects	7,550	5,869	1.2%
F Physical sciences	19,361	18,041	3.7%
G Mathematical and computer sciences	32,234	28,948	5.9%
H Engineering	30,581	26,070	5.3%
J Technologies	2,475	3,244	0.7%
K Building and planning (excl. Architecture)	6,640	5,034	1.0%
K1 Architecture	6,640	4,379	0.7%
L Social Studies	56,119	38,841	8.0%
M Law	26,217	21,913	4.5%
N Business and administrative studies	72,067	59,388	12.2%
P Mass communications and documentation	12,907	11,234	2.3%
Q Linguistics, Classics and related studies	15,762	12,703	2.6%
R European languages, literature and related studies	5,360	4,678	1.0%
T Non-European languages and related studies	1,453	1,485	0.3%
V Historical and philosophical studies	18,133	15,002	3.1%
W Creative arts and design	74,993	51,702	10.6%
X Education	23,081	16,455	3.4%
Combined sciences	3,738	8,097	1.7%
Combined social sciences	3,754	5,754	1.2%
Combined arts	11,299	13,172	2.7%
Sciences combined with social sciences or arts	14,959	20,872	4.3%
Social sciences combined with arts	9,563	12,136	2.5%
General, other combined and unknown	2,150	4,211	0.9%
Total	697,351	487,329	

for 0.95% of all HE applicants and 0.90% of all accepted applicants. Architecture routinely attracts fewer applicants than music or drama and less than a quarter of the number of students who apply for design (see table vi).

According to current demographic forecasts the number of 18-24 year olds in the UK in the next 20 years is set to fall between 10 and 12%[16]. This will obviously shrink the pool of potential applicants. It also appears likely that the growth in the proportion of 18-24 year olds in HE, which has been

	Table (vii): Institutions that have sought and successfully gained prescription for qualifications at Part 1 and Part 2 level since 1998 (source: Architects' Registration Board)
1	Arts College University, Bournemouth (Part 1)
2	Central St Martins College of Art and Design / University of the Arts (Part 1)
3	Centre for Alternative Technology/ University of East London (Part 2)
4	Hull School of Art and Design/ Leeds Metropolitan University (Pat 1)
5	Northumbria University (Part 1; Part 2)
6	Nottingham Trent University (Part 1)
7	Sheffield Hallam University (Part 1; Part 2)
8	University of Central Lancashire (Part 1)
9	University of Kent (Part 1; Part 2)
10	University of the West of England (Part 1; Part 2)
11	University of Ulster (Part 1; Part 2)

seen over the last ten years, is unlikely to be sustained and may actually fall. This growth was in part a result of the general expansion in the sector which corresponded with the Labour Government's aim that half of all young people in the UK should enter HE [17].

In the past twenty years and especially in the last ten years there has been a dramatic increase in the number of students entering architecture programmes in the UK. This increase is in the order of 70% from 2000 to 2010[18]. Architecture may have benefitted in the general expansion in HE but its recent expansion has been far in excess of this trend. It appears likely that architecture has also benefited from a relatively high media profile in the last decade which has helped bolster the number of applicants. One result of this rapid increase in high quality architectural applicants was that many HEIs were keen to include architecture within their portfolio of courses. Since 1998 eleven new schools of architecture have successfully applied for the prescription of new architecture programmes and several more are in the pipeline[19] (see table (vii)). This represents an increase of approximately one third in the number of UK architecture schools in thirteen years.

The HE sector can now look forward to a period where the pool of home applicants in the target age range will fall and the percentage of those wishing to apply to University may also fall. The big unknown for architecture is how the subject will fare in competition with other disciplines. Will the misalignment of the cost of study compared to potential earnings result in a loss of top students to financially more attractive subjects, or will the vocational nature of the subject enable it to maintain or increase its relative share of a shrinking pool? [20].

The intake to any programme consists of three student groups which all are affected differently under the new fee regime. Table (viii) illustrates the relative number of each of these groups for architecture in the UK in 2010.

Table (viii): UCAS 2010 data for applicants and acceptances K100 Architecture			
Applicants	**Applicants**	**Accepts**	**%age acc**
UK	4391	3046	71%
EU	1211	661	15%
OS	1038	583	14%
Total	6640	4290	

Home students

The majority of the intake into UK architecture programmes is made up of home students. In 2010 this figure was 71% (see table (viii).

The future picture for recruitment is complicated by the 'topping and tailing' of the application pool which is proposed in the White Paper. It appears as though two separate markets will be created: one for the uncapped applicants with AAB+ qualifications and another for the 20,000 students available to those HEIs charging less than £7500. The cost of providing a traditional studio-based architectural education means that few HEIs are unlikely to see a benefit in attracting architect students paying less than £7500 a year. Presently I am not aware of any English HEI which is proposing a fee for an accredited architecture programme which would be low enough to meet the £7500 threshold.

The competition for architecture students is therefore likely to be focused on the AAB+ home students. In 2010 47% of successful applicants achieved AAB or above [21]. Students with such grades, who wish to undertake a programme in architecture, can therefore already be assumed to find places available to them. In other words the removal of the cap will, in itself, not increase the number of students available. The consequence of the removal of the cap is more likely to be the creation of winners and losers in the existing spectrum of providers. Some schools secure in their ability to attract additional AAB students are already making plans for expansion. The success of these schools will inevitably put additional pressure on those HEIs unable to retain their existing proportion of AAB students. For these programmes the average UCAS tariff point entry will have to drop, or the number of their home students will be likely to decrease. In either event this change in circumstances could potentially threaten the viability of the affected programmes.

In a competitive environment architecture may find that as a subject its best strategy in order to maintain its current number of students is to increase its proportion of the overall home intake. As a vocational profession, despite its relatively low earnings potential, it may be seen as a more attractive proposition than many other subject areas. If architecture were able to become a more accepted general undergraduate degree, suitable as a broad skills training for any number of future professions it could easily be envisaged that architecture may significantly increase

from its current share of less than 1% of the overall home entrants into HE. This transition would be significantly aided by a change in the stance of the Architects' Registration Board (ARB) and Royal Institute of British Architects (RIBA) to allow more varied, flexible and less professionally bound Part 1 programmes. Unfortunately this seems unlikely to be the case and as such the professional and regulatory bodies may actually be contributing to the potential fall in home student numbers and the potential loss of some programmes in architecture.

Given the value HEIs are likely to place on attracting AAB+ students it appears likely that those institutions best placed to attract them will do so in increasing numbers. The question for many schools will then be how to protect their home intake levels given a loss of AAB+ students to the higher prestige schools and a fee level above the £7500 limit for the additional student places. Fundamentally the question is whether Architecture can grow its proportion of the home student market sufficiently fast to maintain the viability of its programmes? Even if this growth occurs will the new funding regime simply result in the strong becoming stronger and bigger, whilst the weak increasingly struggle to survive?

European Union (EU) students

Students from within the EU (excluding the UK) accounted for 15% of the overall number of accepted applicants for (see table (viii)). The increase in tuition fees will obviously make the UK offer less attractive to the portion of this cohort for whom tuition costs are a concern.

The argument is often made that in the long term continental Europe will have to follow the UK in the way it finances HE. This may or may not prove to be the case, as the social value placed on HE in each of the member states is particular to that state. What is known is that at present the situation in continental Europe appears to be very different from the UK. Certain German Länder are reducing their tuition fees from their current low rates to zero (Hamburg) and other states seem likely to follow (Bavaria)[22]. Many architecture courses in northern Europe are already taught in English and this trend seems likely to increase.

Within the EU each member state is obliged to allow access to its HE programmes to all EU students on the same basis as the access for its own students. As an EU student you cannot be required to pay higher course fees and you are entitled to the same grants to cover course fees as nationals of the host country[23]. The potential fee savings available to students studying in continental Europe are therefore substantial. Table (ix) provides a summary of the fee savings possible in a number of countries based on currently published fee levels.

Table (ix): Comparative tuition fees for five year architecture programmes in Europe			
	Annual Fee (£)	**Total Fee (£)**	**Saving (£)**
Typical UK School of Architecture	9,000	45,000	
TU Munich	960	4,800	40,200
Delft University of Technology	1,440	7,200	37,800
University of Bologna	600	3,000	42,000
University College Dublin	6,285	31,425	13,575
IE Madrid	1,513	7,565	37,435
Krakow Institute of Tech	3,363	16,815	28,185
ETH Zurich	900	4,500	40,500

As entry to the best European Schools is based largely on prior educational achievement the competition for the best English students in future is unlikely to be solely among UK HEIs, but is likely to be among all the high prestige schools in the EU which teach in English.

High achieving English students may not simply be attracted across the Channel by the low fees as the competition faced by UK HEIs is not solely financial. The overall educational offer made by some European schools increasingly makes the offer to students made by UK HEIs look poor in comparison. For example the ETH has fees of £900 per year and offers students a guaranteed desk space, "fantastic facilities" and access to some of the UK's most high profile tutors (who are paid four times the rate typically paid to them in the UK)[24]. In short, how can an unsubsidised English provider of architectural education hope to compete over the long-term with its heavily subsidised European equivalent?

This question leads to two associated questions, the answers to which may help to determine the survival of the species. Firstly, will the UK continue to attract the large numbers of EU students that currently chose to be educated here? Secondly, will the vanishingly small number of home students who currently undertake all of their academic education in Europe increase, shrinking the pool of applicants for UK HEIs?

The UK government was presumably not oblivious of the change in destination patterns which would result from the new fee regime. The vast majority of EU students return to their home country after qualification. In the recent past the UK taxpayer has arguably subsidised the education of a large number of EU students. If that number of visiting EU students dwindles and the number of English students studying in the EU increases that subsidy burden would transfer onto other EU governments[25].

field:
a free journal for architecture

www.field-journal.org
vol.5 (1)

Overseas students

An area where the population demographics appear favourable is overseas recruitment. The changes to undergraduate funding do not include the fees applicable to overseas students and therefore the recruitment of overseas students should be relatively unaffected. The overall demographics indicate that the number of students eligible and able to afford a UK education is likely to increase in all of the countries which have historically provided substantial numbers of overseas students. This likelihood assumes that the various exchange rates remain reasonably favourable.

In 2010 the 583 accepted overseas applicants represented 14% of the total intake for that year (see table (viii)). A key question for many HEIs will be whether the recruitment of overseas students can increase sufficiently to compensate for any drop in home and EU entrants?

Studio based learning and other vulnerable areas for UK Architectural Education

It seems clear that with the removal of HEFCE funding studio-based pedagogies are under threat. Many metropolitan schools have already had to move away from the traditional offer of a studio workplace for all students. The price of land and buildings, particularly in city areas, mean that traditional studios are simply too expensive. Students increasingly hot desk, or simply attend studio for tutorials and reviews.

Even though the recently approved QAA benchmark statement for architecture enshrined within it the requirement for studio teaching, it by necessity fell short of stating that studios should be available as permanent workstations for students. Whilst students in a previous generation took this provision as the norm, it is increasingly becoming the exception. There will doubtless be a pressure on HEIs to cut the cost of its delivery and find methods of teaching which are more efficient, preferably ones which might even improve the student experience. The future of traditional studio teaching appears particularly vulnerable in this context. Despite the well documented advantages of studio teaching[26], in many HEIs it is only extensively employed in architecture and viewed as an expensive anachronism by some other disciplines. The notion that students might receive one-to-one weekly tutorials from skilled professionals in a purpose-designed space available to the students 24 hours a day, 7 days a week, sounds extraordinary to academics from some other disciplines.

Architects know the value of studio culture. They know the benefits of it and they fear the cost of losing it. Quantifying these costs and benefits is something which is extremely difficult to do and to the best of my

knowledge has never been convincingly carried out. Even where it could be attempted the costs associated with the space in an area such as central London makes it almost impossible to sustain traditional studio teaching in the context of a maximum £9k fee.

The question therefore emerges as to whether a two tier system will develop with traditional studio-based programmes and programmes which are delivered in a less costly way? Could a “chalk & talk” (more accurately “marker & white board”) based design education ever replace the studio pedagogy? Given that the future funding basis is likely to be the same for Architecture as a band C subject as it is for all band D subjects (i.e. the complete removal of HFCE Block Teaching Grant for these subjects) how long will HEIs continue to support studio teaching with its significant additional costs? [27] Will the cost of running a studio-based architecture programme for some HEIs simply look like poor business compared to a band D subject with a comparable intake?

In the recent past the ability of architecture to attract increasing numbers of high quality applicants has, to some extent, amour-plated the subject in the context of University internal politics. For many it has been a subject generating a net surplus to the HEI and securing students with entry qualifications above the HEI's average, thereby improving its admissions metrics. If the stream of high quality applicants begins to dwindle, will the other vulnerabilities of architecture as an academic subject once again come to the fore[28]. Bluntly, in many HEIs the performance of architecture with respect to grant income and even research output is not strong when measured by the usual metrics.

Separate schools of architecture which stand alone within their institutions may appear increasingly vulnerable. Many already only exist within larger administrative units. This arrangement may seem to offer architecture more security, but this may be illusory if recruitment becomes challenging, research performance is below average and the costs of delivery are relatively high. In this context how will HEIs view architecture within their portfolio?

Alternatives to the UK’s 3+2+2 model

In the UK the ARB and RIBA have consistently held a common line requiring all accredited courses to comply with the requirement for a three year minimum Part 1, a two year minimum Part 2, and 2 years in practice as a minimum prior to Part 3. This framework is looking increasingly inflexible, costly and unattractive by many of the schools of architecture which are facing competition from other disciplines.

The UK’s position establishes a higher threshold to qualification as an architect in the UK than in other parts of the EU. This is despite the fact

field:
a free journal for architecture

www.field-journal.org
vol.5 (1)

that an EU student who has completed only four years of academic study, but who is registered in their home state, is automatically recognised as fully qualified to practice in the UK. The same 'short-cut' also applies to a UK student who chooses to undertake all their training in an EU country and then return to the UK to practice.

In 2011 the European Commission abandoned a possible revision to the Professional Qualifications Directive (PQD) which would have required a minimum of five years academic study together with 2 years of professional experience as a prerequisite to qualification as an Architect within the EU[29]. The UK's position in requiring a higher standard with respect to time spent in academic study is coming under increasing scrutiny by schools wishing to develop innovative new programmes which might help address the problems associated with student indebtedness[30].

The stipulation of minimum time requirements to qualification can be seen as arbitrary and problematic within the framework of contemporary HE. The essential judgement with respect to any award should be the demonstration of the requisite competencies for that award (typically the programme learning outcomes). Time of study alone is not an indicator of competency. Some within the profession appear to wish to maintain a five year minimum as an indicator of quality, whilst failing to recognise the financial consequences for those students more than capable of reaching a Part 2 standard in less time, or by other modes of study. If the professional bodies are sincere in their stated aim to improve access to the profession then the question arises as to whether they are prepared to support initiatives which create more flexible pathways to registration for talented but financially challenged students?

Increasingly Part 1 can be seen as an anachronism. It has no equivalent within the EU, prevents flexibility and leads to various anomalies for students who have completed Part 2 programmes in the UK, but have undergraduate architectural degrees from elsewhere. The recently adopted QAA benchmark statement for architecture and the revised joint criteria of the ARB and RIBA all state identical criteria for Part 1 and Part 2 qualifications. The only differentiation is through a handful of attributes, with the Part 2 attributes always representing a higher level of competency than the Part 1 equivalent. A student who has demonstrated Part 2 competency in the UK is however prevented from completing an RIBA Part 3 course until they have undertaken an additional and costly exam for an award with a lower standard of competency than the award they already hold.

In order to allow schools to develop competitive and attractive pathways to Part 2 it has been convincingly argued that a Part 2 award should provide exemption from Part 1[31]. In opposing this position the RIBA is increasingly being seen as protecting its own institutional self-interest rather than

promoting wider access to the profession. It raises the question as to whether the agenda of the RIBA is misaligned with the agenda of UK architectural education with adherence to the former being to the detriment of the latter?

Of the professions which share a similar earnings profile to architecture Civil Engineering provides perhaps the most informative alternative model. Civil Engineers also require a minimum of seven years training prior to obtaining chartered status but interestingly this is divided between 4 years of academic study and 3 years in practice. This model is fully compliant with the current EU requirements for architecture and the possible revisions to the PQD currently under consultation. The question arises as to whether this provides one of several alternative models for UK architectural education which might be more advantageous than the model which currently persists?

Conclusion: the future

It is always a particularly vain activity to postulate on the future when data is sparse and the extent of the unknowns is great. Any prediction is almost certainly destined to be proved wayward or comical by actuality. Nevertheless predicting the future in the context of the subject of this paper is too tempting an opportunity to resist. As a means to conclude, I therefore offer the following hostages to fortune, should the existing framework of UK architectural education remain unchanged.

There will be fewer entrants into English Part 1 architecture programmes in the next decade compared to the last.

The 2012 repayment terms will be made less favourable to the students before the write-off time limit is reached.

There will be an increase in the number of home students of architecture choosing to study in northern continental Europe in the next decade.

Recruitment of overseas students will become increasingly vital to maintain the numerical and financial viability of architecture programmes.

Architecture has been seen as an attractive discipline in the recent past by many HEIs on the basis to attracting high numbers of applicants with high entry requirements. As this ability fades for some schools the reality of relatively poor grant capture and research metrics will cause their continued existence to be questioned.

There will be a number of schools able to attract additional students at AAB+ who will expand and be seen increasingly as the upper tier of a two-tier system.

Schools competing below AAB will increasingly find it difficult to maintain their intake at 2011 levels as higher prestige institutions expand to take advantage of the removal of the cap on intake[32].

Some undergraduate architecture courses will increasingly seek to market themselves as applicable to a number of future career paths other than architecture.

Metropolitan schools, those with high buildings costs or those under financial pressure will have to increasingly move away from traditional studio teaching with individually allocated work space.

The three plus two model of architectural education in the UK will fragment with more varied pathways to qualification arising.

The division between academic-based and practice-based learning will 'blur' with the universal requirement for five years of full-time academic-based learning coming under increasing challenge.

Standalone schools of architecture will become increasingly vulnerable with the recent trend of schools becoming an element within a larger organisational unit likely to continue.

Part 2 will become the academic threshold to the profession with the possession of a Part 2 prescribed qualification (i.e. a qualification which also satisfies a four/five year period of architectural study) providing exemption from the lower Part 1 requirement.

Some projections on the future of architectural education will be proved entirely wrong.