

# The Orphan Disciplines

Higher Education and the  
Unraveling of Earth's Life Support  
Systems



# McGill

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## INVOICE / FACTURE

NO: S2340416

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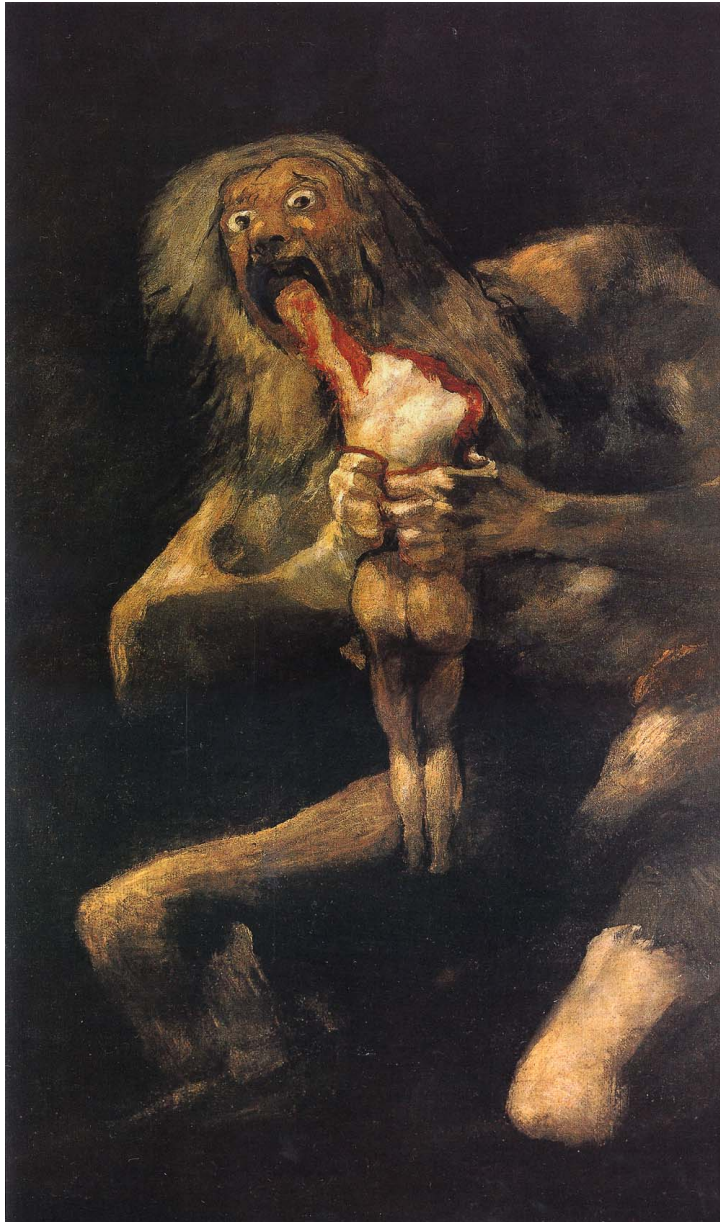
|                                 |             |
|---------------------------------|-------------|
| McGill ID<br>No. Matricule      |             |
| Bill Date<br>Date de la Facture | 06-DEC-2011 |
| Due Date<br>Date d'Échéance     | 05-JAN-2012 |

GST REGISTRATION NO. R119128981  
QST REGISTRATION NO. 1006385920

| Term<br>Terme | Date      | Description / Détails - <a href="http://www.mcgill.ca/student-accounts">www.mcgill.ca/student-accounts</a> | Charges/Reversals<br>Débits/Extournes | Credits/Payments<br>Crédits/Paiements |
|---------------|-----------|--|---------------------------------------|---------------------------------------|
| 201201        |           | * PREVIOUS BILLED BALANCE *  |                                       |                                       |
|               |           | - CURRENT CHARGES -  |                                       |                                       |
|               | 01-DEC-11 | General Administrative Charge  | -1.50                                 |                                       |
|               | 01-DEC-11 | Athletics and Recreation Fee   | 115.50                                |                                       |
|               | 01-DEC-11 | Copyright Fee  | 12.45                                 |                                       |
|               | 01-DEC-11 | MCSS Athletic Fund   | 15.00                                 |                                       |
|               | 01-DEC-11 | MCSS Building Maintenance Fund   | 21.00                                 |                                       |
|               | 01-DEC-11 | Centennial Centre  | 7.50                                  |                                       |
|               | 01-DEC-11 | Macd Campus Students' Society  | 23.25                                 |                                       |
|               | 01-DEC-11 | PGSS Education Fund  | 1.00                                  |                                       |
|               | 01-DEC-11 | PGSS Library Improvement Fund  | 5.00                                  |                                       |
|               | 01-DEC-11 | PGSS Employee Pension Trust  | 2.00                                  |                                       |
|               | 01-DEC-11 | PGSS Student Life Fund   | 10.00                                 |                                       |
|               | 01-DEC-11 | PGSS (Graduate Students' Soc)  | 31.70                                 |                                       |
|               | 01-DEC-11 | Registration Charge  | 107.70                                |                                       |
|               | 01-DEC-11 | Student Services Fees  | 133.00                                |                                       |
|               | 01-DEC-11 | Sustainable Projects Fund  | 7.50                                  |                                       |
|               | 01-DEC-11 | Information Technology Charge  | 105.15                                |                                       |
|               | 01-DEC-11 | Transcript and Diploma Charge  | 19.20                                 |                                       |
|               | 01-DEC-11 | Quebec Tuition - 3rd cycle   | 1,083.90                              |                                       |
|               | 01-DEC-11 | Int'l Supplement -3rd cycle  | 4,958.10                              |                                       |
|               | 01-DEC-11 | Phd Add Int'l Supplement (10%)   | 495.75                                |                                       |

# Saturn Devouring His Son

Goya 1819



# What it means to be an “orphan” discipline

- An orphan is a person whose parents have died; and would typically be immature and in need of care and guidance. Adoption often a remedy.
- A discipline is an orphan if its metaphysical and scientific assumptions have collapsed; but it still has substantial influence on pedagogy and practice.

# What are the orphan disciplines?

- The set is hard to bound; and disciplines have ragged edges and overlap with, and reinforce each other. There is a truce/common parentage.
- There is a subset of disciplines which are explicitly normative: economics, finance, law, governance, ethics and (religion.)
- Other implicitly normative disciplines such as health and animal sciences, engineering, etc also are in need of adoption. Not discussed here.



THE DECLARATION OF INDEPENDENCE, JULY 4, 1776.  
A DECLARATION  
BY THE REPRESENTATIVES OF THE  
UNITED STATES OF AMERICA,  
IN GENERAL CONGRESS ASSEMBLED.

WHEN in the Course of human Events, it becomes necessary for one People to dissolve the Political Bands which have connected them with another, and to assume among the Powers of the Earth, the separate and equal Station to which the Laws of Nature and of Nature's God entitle them, a decent Respect to the Opinions of Mankind requires that they should declare the causes which impel them to the Separation.

We hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness—That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed, that whenever any Form of Government becomes destructive of these Ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its Foundation on such Principles, and organizing its Powers in such Form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient Causes; and accordingly all Experience hath shewn, that Mankind are more disposed to suffer, while Evils are sufferable, than to right themselves by abolishing the Forms to which they are accustomed. But when a long Train of Abuses and Usurpations, pursuing invariably the same Object, evinces a Design to reduce them under absolute Despotism, it is their Right, it is their Duty, to throw off such Government, and to provide new Guards for their future Security. Such has been the patient Sufferance of these Colonies; and such is now the Necessity which constrains them to alter their former Systems of Government. The History of the present King of Great-Britain is a History of repeated Injuries and Usurpations, all having in direct Object the Establishment of an absolute Tyranny over these States. To prove this, let Facts be submitted to a candid World.

He has refused his Assent to Laws, the most wholesome and necessary for the public Good.

He has forbidden his Governors to pass Laws of immediate and pressing Importance, unless suspended in their Operation till his Assent should be obtained; and when so suspended, he has utterly neglected to attend to them.

He has refused to pass other Laws for the Accommodation of large Districts of People, unless those People would relinquish the Right of Representation in the Legislature, a Right inestimable to them, and formidable to Tyrants only.

He has called together legislative Bodies at Places unusual, uncomfortable, and distant from the Depository of their public Records, for the sole Purpose of fatiguing them into Compliance with his Measures.

He has dissolved Representative Houses repeatedly, for opposing with manly Firmness his Invasions on the Rights of the People.

He has refused for a long Time, after such Dissolutions, to cause others to be elected; whereby the Legislative Powers, incapable of Annihilation, have returned to the People at large for their exercise; the State remaining in the mean time exposed to all the Dangers of Invasion from without, and Convulsions within.

He has endeavoured to prevent the Population of these States; for that Purpose obstructing the Laws for Naturalization of Foreigners; refusing to pass others to encourage their Migrations hither, and raising the Conditions of new Appropriations of Lands.

He has obstructed the Administration of Justice, by refusing his Assent to Laws for establishing Judiciary Powers.

He has made Judges dependent on his Will alone, for the Tenure of their Offices, and the Amount and Payment of their Salaries.

He has erected a Multitude of new Offices, and sent hither Swarms of Officers to harass our People, and eat out their Substance.

He has kept among us, in Times of Peace, Standing Armies, without the Consent of our Legislatures.

He has affected to render the Military independent of and superior to the Civil Power.

He has combined with others to subject us to a Jurisdiction foreign to our Constitution, and unacknowledged by our Laws; giving his Assent to their Acts of pretended Legislation:

For quartering large Bodies of Armed Troops among us:

For protecting them, by a mock Trial, from Punishment for any Murders which they should commit on the Inhabitants of these States:

For cutting off our Trade with all Parts of the World:

For imposing Taxes on us without our Consent:

For depriving us, in many Cases, of the Benefits of Trial by Jury:

For transporting us beyond Seas to be tried for pretended Offences:

For abolishing the free System of English Laws in a neighbouring Province, establishing therein an arbitrary Government, and enlarging its Boundaries, so

as to render it at once an Example and fit Instrument for introducing the same absolute Rule into these Colonies:

For taking away our Charters, abolishing our most valuable Laws, and altering fundamentally the Forms of our Governments:

For suspending our own Legislatures, and declaring themselves invested with Power to legislate for us in all Cases whatsoever.

He has abdicated Government here, by declaring us out of his Protection and waging War against us.

Ring around the rosie  
A pocket full of posies  
Ashes, Ashes  
All Fall Down