

Children of the Sea

A high potential orphanage



Photo, Arvind Balaraman

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Pitch

I'm holding out for a hero, till the end of the night...—Bony Tyler

Humanity has progressed over thousands of years in incremental steps towards the modern world. While history generally paints of progress in large, broad strokes, there are also instances of technological and social improvement that can be directly attributed to certain individuals working to their greatest capacity. The accomplishments of heroes like Alan Turing, Albert Einstein, Marie Curie,

Norman Borlaug, Georges Lucas, the Beatles, Steven Spielberg, Warrant Buffet, Sergey Brin and Larry Page, and Steve Jobs have transformed the world forging contributions that have benefitted for all of humanity, as well as themselves. Had any of the exceptional individuals we mentioned been born as an orphan in a third-world country, a war torn region or in abject poverty, the world would be a distinctly different place.

There are about eleven million orphans, and even more abandoned children, growing up in developing countries. None of them deserve to grow without the love and support of a family. Equally tragically, thousands with the potential to bring tremendous change to the world will not get the opportunity to do so. Our project is to identify fifty gifted orphans, adopt them at an early age, and allow them to live to their potential by raising them on a seastead. Hopefully, these children will grow up to accomplish incredible projects that will better humanity, perhaps even in the regions we save them from. Their exceptional intelligence increases the likelihood that they will be able to contribute a significant amount of money back to the orphanage, making it a profitable humanitarian venture.

Project

11 million orphans, 50 candidates, one seastead

This is a brief overview of the project; it is not intended as a detailed analysis which will follow.

11,000,000 orphans

In 2010, there are about eleven millions double orphans in the world,¹ that is children under the age of fifteen with two deceased parents. The vast majority of these orphans live in the developing world, about 80% in Africa and 20% in Asia. This estimate does not include abandoned children, so the number of adoptable children is even larger.

The fate of these children is gloom, and one wishes they all had families. Many charities exist to help these orphans: a list can be found here.² No organization has the power to adopt and save all orphans, ours focuses on children with the potential to develop radical new ideas in the course of their life, and improve the lot of humanity. A high potential orphanage is highly specialized and starts with the realization that among orphans may be the top thinkers, scientists, artists or business men of the future. This criterion is by no mean less fair than geographical discrimination, which is commonplace among charities that focus on particular regions. Such an endeavor requires devising cheap tests whose result will best correlate to outcomes in life.

¹ *Children on the brink*. (2002). Retrieved from usaid.gov:
http://www.usaid.gov/our_work/global_health/aids/Publications/docs/childrenbrink.pdf

² *Charity Navigator*. (n.d.). Retrieved from Charity Navigator:
http://www.charitynavigator.org/index.cfm?keyword_list=orphan&bay=search.results&sortby=rtg

Selection Criteria

Our approach is based on the idea that some children *naturally* have a very high potential and are thus likely to accomplish great things given a supportive environment. In order to find these children, we need a way to assess this potential. There are different ways to go about this.

IQ Tests

There is a high, but not perfect, correlation between adult IQ test results and their childhood IQ. Deary et al., 2000 estimate the correlation between age 11 and 77 to be .63, see also example Mortensen et al.³ or Mariam Sigman et al.⁴. These studies tend to indicate that the correlation rises dramatically after the age of 10. Controversial as they may be, IQ test are one of the most predictive indications of future success and are also particularly cheap to administer. IQ correlates significantly to income⁵, job performance, health, non-violence, and other positive traits. It is therefore particularly suitable for our purposes. See "IQ Potential".

Emotional Quotient

EQ has been popularized as being as important - if not more important - than IQ. While, the research does not seem to back that claim⁶, it still seems intuitively possible to improve on the predictivity of IQ by testing for more aptitudes. A simple culture-fair test might present pictures of facial emotions where two have to be matched. Ideally, this would assess the development of a theory of mind and the ability to empathize.

Interviews

Personal interviews with psychometricians are costly and will thus be used only in the final stages of selection. A full psychological evaluation can be performed, including personality tests such as the Big Five test, the Myer-Briggs type indicator test. A survey of the literature is likely to reveal interesting predictions made from these indicators.

Selection procedure

The key to efficient selection is to proceed through multiple rounds. The first filters are very noisy but very cheap, while the last filters are much costlier but also more precise. The first round of selection would start with mass printed, postage-paid IQ tests, distributed throughout the world, with the help of humanitarian missions such as the Red Cross. The second round, targeting about a million people consists of unique IQ tests. The third round, targeting about ten thousand people consists of more comprehensive tests which would entail the active follow up of the participants. The last round would evaluate a couple hundred candidates and narrow down to fifty applicants. See "Selection process".

³ <http://www.ncbi.nlm.nih.gov/pubmed/12887561>

⁴ [http://dx.doi.org/10.1016/0885-2014\(91\)90005-X](http://dx.doi.org/10.1016/0885-2014(91)90005-X)

⁵ http://www.mega.nu:8080/ampp/murray_income_iq.pdf

⁶ Landy, F. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior*, 26, 411-424.

An orphanage at sea

Once selected, the fifty children will be relocated on a seastead with their adoptive families. We are targeting a ratio of two adults for twelve children; eight full-time employees will fill in parental roles. The facilities consist in simple rooms and communal space. In addition to the parents, two employees will be providing education and classes.

Profits

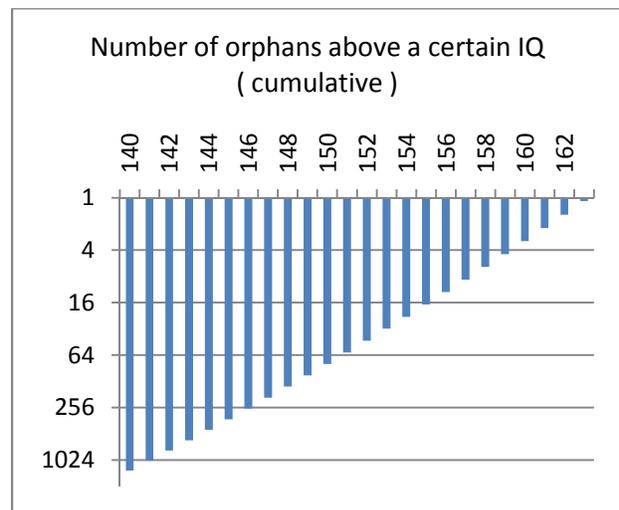
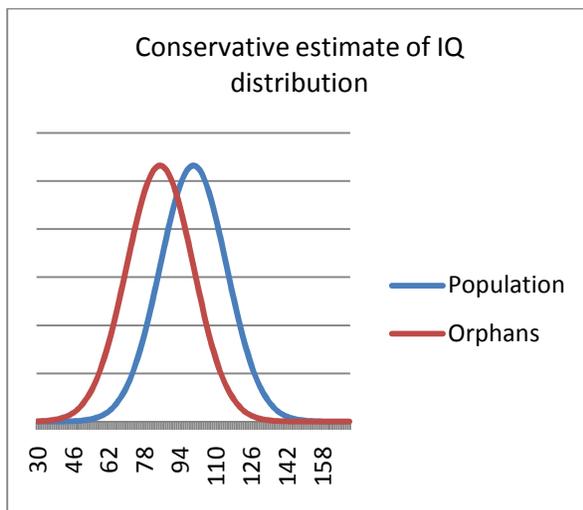
There is no reasonable way to contractually enforce payment for the service provided to these children. This is not a very big concern. Donations to Alma Matters are common place for example, even though they do far less to students. Such donations are often made out of a feeling of group membership. Given that the children will be raised from a young age, it will take almost no effort to foster a sense of tribalism and encourage donations later in life.

IQ Potential

People who boast about their IQ are losers. – Stephen Hawking

This is a short statistical analysis of the kind of IQ we can hope to select for.

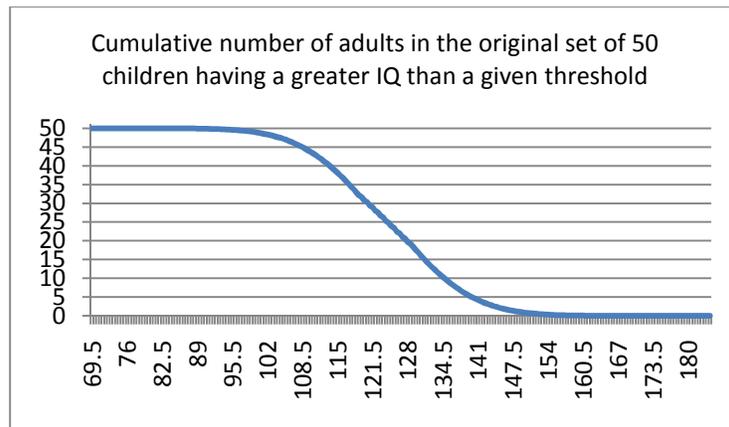
Focusing on IQ, we can obtain estimates of the potential of the children we're trying to select for. The distribution of IQ conditional on being born a double orphan in the developing world may not reflect the world distribution; malnutrition in general and iodine deficiency in particular can take a toll on brain development. We will make the very conservative assumption that the average orphan IQ is one standard deviation lower than the world average, but has the same variance. This isn't our best estimate of this distribution, but it is a *safe* estimate.



With these assumptions, about 250 double orphans in the world have a childhood IQ over 146, 100 over 149, 10 over 156 and 3 over 160. Again, these are very conservative estimates; they do not count abandoned children and very likely severely underestimate the average IQ of orphans.

We need to take into account the reversion to the mean that will happen during adulthood since the correlation between childhood and adulthood IQ isn't perfect. Assume that we only manage to select among 10% of the world orphans (1.1 million). Given a correlation of 63% between childhood and adult IQ the 50 top scorers among 1.1 million orphans would exhibit an IQ distribution close to a normal law with mean 124 and standard deviation 12.

Among the fifty children, we would expect one child to grow up to an IQ above 148, 5 above 139, 10 above 134, 20 above 127, 30 above 121 and 40 above 114, with the lowest IQ of the group expected to be around 100.⁷ As a point of comparison, the 25% percentile of doctors in the US, the occupation class with the highest average IQ is about 125, while our *conservative* 25% percentile is around 133⁸.



Why seasteading?

I'm on a boat... – The Lonely Island

This section details why a seastead is the ideal environment to operate this orphanage.

Being at sea is a constraint, it means living quarters will be more expensive, it makes the regulatory framework more risky for outside investors, yet there are compelling reasons to choose a seastead for our endeavor.

Adoption and red tape

There is a considerable amount of red tape involved in adopting children, especially when doing it over national borders. Governments are reluctant to let foreigners adopt their children⁹ or reluctant to let their citizens adopt foreigners. Such a controversial project faces even more hurdles in getting approval

⁷ Technical point, the distribution isn't purely normal since a normal kernel is applied to the tail of a normal law; however, with the tail so heavily skewed the result is very close to normal, the numbers are approximations based on numerical simulations.

⁸ <http://www.ssc.wisc.edu/cde/cdewp/98-07.pdf>

⁹ <http://www.nytimes.com/2010/11/24/world/europe/24adopt.html>

in most existing jurisdictions Seasteading alleviates the second problem by providing a friendly legal environment to operate in. It does not require adoption papers or require complex procedures to obtain citizenship. Where one could foresee serious issues, though, is the plausibility of a third-world country “giving up” of their best and brightest. Perhaps, then, a more complicated structure of compliance would have to be forged so that the children would not explicitly give up their birth citizenship. This would probably entail much diplomacy, though it does not seem like an impossible barrier.

Protection against governments

A seastead shields the operation from invasions by governments eager to appeal to a potentially hostile public opinion. If such a venture were set up in an old, democratic jurisdiction, it would seriously run the risk of being invaded, “for the sake of the children”, see for example the YFZ ranch raid of 2008¹⁰.

Culture and belonging

The physical separation with the rest of society can facilitate instilling certain cultural values. There is nothing naïve about the idea of shaping children’s culture, culture by definition is transmitted through the environment. . The values we are looking to instill – seeking financial success, taking risks, lowering one’s time preference are fairly mainstream and part of many existing cultures. This is in stark contrast with the naïve idea of molding human nature, such as the “new men” conceived by totalitarian regimes. Rather, we seek to *use human nature* to further our goals. Evolutionary psychology teaches us that one of the most powerful shaping forces in culture is the feeling of tribal membership. Living on a small island, unlike almost any place in the world will form strong bonds between the children, and a tribal feeling of group membership that can ultimately be tapped to ensure the profitability of the venture.

Importance of PR

Well it's true! It's true! You're semi-evil. You're quasi-evil. You're the margarine of evil. You're the Diet Coke of evil. Just one calorie, not evil enough. – Dr. Evil

This is a preliminary analysis outlining our PR strategy

This project involves saving children from a miserable life in a dangerous, hostile environment by offering them a healthy, happy lifestyle. It involves protecting and cultivating talent for the betterment of humanity. If done properly, the public image of the project can be reflective of the morality behind it: saving lives and improving the world. If not it is likely to be disastrous (“eugenics on the ocean!”). There is little room for a middle ground (“it’s only sort of evil!”). The project might raise many red flags for many people. First of all, it seems that popular opinion is both fascinated and repulsed by IQ. We seem attached to a romantic vision of intelligence, as a product of virtuous determination rather than as an attribute like height or hair color. There is an “ugh” field¹¹ surrounding IQ. Second, popular opinion tends to be egalitarian, creating the paradox that saving no one seems more acceptable than saving according to a specific criterion. Third, the idea of raising children with the specific value of giving back

¹⁰ http://en.wikipedia.org/wiki/YFZ_Ranch

¹¹ http://lesswrong.com/lw/21b/ugh_fields/

to their community may be characterized as brain washing, even though it is an extremely common practice in most established religions.

Marketing, in the context of this project, should focus on PR. While it may be much better to fly under the radar and be a discreet organization, there will be some unavoidable public exposure and the orphanage must be ready to show its best face. A PR firm will to be contracted to handle contact with the public and the press. It should be stressed that the main goal is to raise the children for the good of mankind while downplaying the profit-making opportunity.

Education

We don't need no education... – Pink Floyd

A short survey of the educational technique we plan to use.

Studies tend to show that, on the margin, education has little effect on life outcomes. To be sure, it's possible to provide a terrible education with catastrophic consequences, but anything reasonable is likely to give as good results as a more intensive approach plagued with high costs and marginally negligible benefits. See for example Jacob et al.¹². Our approach focuses on autodidacticism, which seems common among high IQ children in the first place. We plan to enroll two full time educators. Their role will mostly be to offer the children sources of information they may find of interest. Information is mostly free, papers are easily accessible online, and universities like MIT and Stanford publish their lectures online.¹³ The high potential orphans could easily become skilled autodidacts once pointed to the appropriate material.

Education is more than academic material; cultural values are passed through education. We plan to rely on the idea that mimetism is more powerful in forming values and preferences than explicit education.

Logistics

Amateurs talk tactics, professionals talk logistics.

We analyze the logistics of finding 50 children out of eleven million, and the logistics of running an orphanage on a seastead.

Selection process

The first and most delicate part of this project is to identify high potential orphans. This can be daunting as they are scattered over a large geographical area. The most straightforward way to proceed is to narrow down the selection through a series of tests.

¹² <http://jhr.uwpress.org/cgi/reprint/45/4/915>

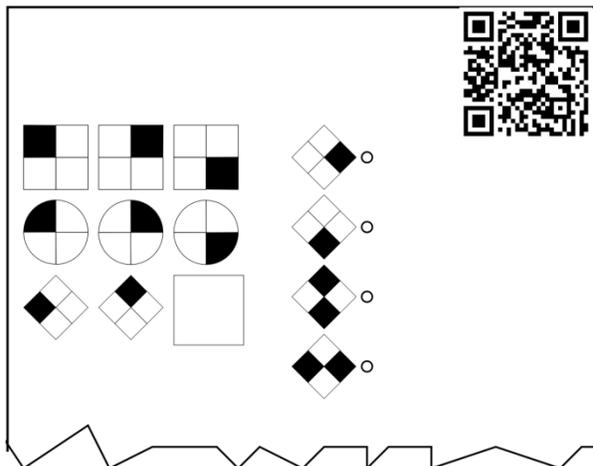
¹³ <http://www.openculture.com/freeonlinecourses>

First pass

At first, we will devise a simple IQ test. The test questions will be the same on every page, making it extremely cheap to massively print, but also susceptible to cheating. This test is mostly designed to survey interest rather than to perform a strong selection and aims to collect about one million responses. The tests will be kept culture free and will not really on the ability to read and write. They will be distributed with postage paid to orphanages throughout the world and via humanitarian organizations like the Red Cross. In order to lower postage costs, multiple sorting centers will be set up on different continents for the sole purpose of submitting the forms online. A return address will need to be provided on each form, which means that younger or non reading children will essentially be relying on an adult willingness to help them out. We do not foresee a solution to this problem that isn't prohibitively costly, but we've shown that targeting even 10% of the orphans in the world would be sufficient to build a dream team.

Second pass

The second pass is made of prepaid answer cards mailed with an IQ test, however - this time- the IQ tests will be unique to avoid answers being disseminated. There are computer programs that can generate a quasi infinite amount of Raven progressive matrix problems¹⁴. The answers to the questions would be printed on the card itself, but encrypted. This makes grading trivial given the secret key but cheating impossible.



Example of a test sheet showing one exercise. The 2d barcode in the top right corner represents an encrypted string containing the answers to every question on the page.

Third pass

Once a set of about 10,000 high scoring orphans are identified, a more active follow up will be set up, and we will actively try to contact participants if they fail to reply to the third test. The tests will be similar to the tests in the second pass but lengthier and may involve non IQ related tasks, such as matching faces displaying the same emotion. The goal of this pass is to narrow down our selection to a set of a couple hundred people.

¹⁴ http://findarticles.com/p/articles/mi_7469/is_201005/ai_n53933157/?tag=content;col1

Last pass

At this point, it becomes affordable to send representatives hired locally to confirm the assessments, administer additional psychological tests, and start adoption procedures. The target is to successfully adopt fifty children.

Orphanage on the seastead

The orphanage on the seastead does not require extensive material logistics besides living quarters and common living areas appropriate for learning. Families of twelve are fairly common in certain parts of the world, so eight adoptive parents might be enough to rear and take care of the children.

Legal structure

Understand that legal and illegal are political, and often arbitrary, categorizations; use and abuse are medical, or clinical, distinctions. – Abbie Hoffman.

A quick overview of the potential hurdles to the legal structure of the orphanage.

The business is designed to operate on a seastead providing an optimal legal and regulatory framework, this doesn't preclude incorporating sibling entities in existing and more established jurisdictions. Legally the business will be a multinational corporation that happens to manage an orphanage residing outside of any state's jurisdiction. In most countries the corporation will register as a not for profit charity to benefit from widespread tax provision allowing the deductibility of charitable contributions. Defining the exact legal structure will be performed initially by consulting with attorneys experienced in international law. For the sake of an example, we can describe a potential structure in the US as a 501(c)(3).

US 501(c)(3)

A US citizen wishing to invest in the business makes a tax deductible donation to a charitable organization that works as a funding vehicle for the orphanage. In return, they would be given symbolic shares in the form of a physical certificate. As far as U.S. law is concerned, these shares are purely symbolic; they do not represent any enforceable contract. Indeed, any dividend would come from the future donations of children raised in the orphanage. While it is only up to them to honor these symbolic shares, they can simply be taught that this is the moral thing to do. A sense of kin and tribal membership is deeply ingrained in human nature and can be tapped for this purpose.

This structure, like any seasteading venture seeking outside investments presents various challenges; there are ways to tackle them.

Stockholder trust in management

Such a setup presupposes substantial trust between the stockholders and the management of the orphanage. This is not just the typical principal agent problem. It is not enough for the management to hold a large equity stake; the management must be trusted to *teach the children that they should make donations to shareholders*, not just management, that is to enforce the corporation bylaws! This is a general problem of any seastead business which isn't fully owned by its management and does not have

existing capital or goodwill to lose. Royal Caribbean may get away selling unenforceable bond contracts, but they are an established business¹⁵.

Fortunately, we can expect the seastead to provide some credible enforcement of contracts; existing and reputable private arbitrators can also be involved. Above all, transparency in the organization will ensure the management's commitment to shareholders. Any shareholder will be encouraged to spend some time every year with the children, as a relative would. Correspondence will be common place between the children and the investors, etc. Short of a deep conspiracy, it would be hard for management to betray the shareholder's interest with such oversight.

IPO and secondary market

The price of "shares" has to be accurately estimated before any investment, they cannot be sold as a Dutch auction since it cannot appear that "donation" are being made on condition of receiving something. This can be alleviated by conducting informal surveys of potential donors. While this is less efficient than a Dutch auction, so are most early investments, and so are investment bank mediated IPOs which are still the primary source of IPOs.

It might look also look as if shares can't be traded, preventing investors from cashing out early, and therefore considerably reducing their value. However, nothing prevents the trade of the share certificates as physical objects. They would likely be taxed as collectibles. While this is a hindrance, stocks markets have been functional with higher capital gain taxes.

Legal status as a charitable organization

The nature of the charitable organization may be challenged based on the private contracts entered by the investors with the management and enforced through private arbitration. This is where legal expertise comes into play. Such an analysis will be bought from external council.

It is also perfectly reasonable to assume that some investors might be willing to overlook these limitations and donate for purely philanthropic reasons. Innovators capture only a small fraction of the wealth they create. The social benefits of this business far exceed its potential profitability.

Financial analysis

Money is better than poverty, if only for financial reasons. – Woody Allen

This is a conservative analysis of costs and revenues.

Selection

The selection part might be the most onerous. Here is a rough prospective rundown. Estimates are crude, but the errors tend to cancel each other and this should provide a good overview of the profitability of the venture.

¹⁵ <http://www.sec.gov/Archives/edgar/data/884887/000095014401001520/g66332e424b5.txt>

Operation	Cost
Designing the tests	\$50,000
Printing 100,000,000 flyers	\$500,000
Having 1,000,000 flyers returned by mail	\$1,000,000
Running 10 sorting centers for a year	\$500,000
Printing and receiving 1,000,000 advanced tests	\$1,200,000
Detailed assessment of 10,000 finalists	\$1,000,000
Psychological tests and adoption of 50 children	\$50,000
Total	\$4,300,000

From these numbers, it is immediately clear that the upfront cost can be pretty steep, but doesn't scale linearly with the number of children selected. It would be extremely beneficial to focus on 100 or even 200 children. There are economies of scale at work. This suggests that this orphanage would ideally operate branches on different seasteads. However, even given conservative cost and revenue assumption, and without economies of scale, this venture can be very profitable.

Real estate

We can assume living quarters of about 15 m² for each of the 50 children, and add 20% for common living areas. That's about 10,000 square feet.

Real estate	Yearly cost
10,000 square feet of seastead	\$500,000 / year

Labor

One of the advantages of operating on a seastead is the lower cost of labor due to the very low citizenship fee, compared to the extensive taxation of modern nation states.

Labor	Yearly cost
8 parents	\$200,000 / year
2 educators (part time)	\$150,000 / year
Legal and PR consulting	\$200,000 / year
Total	\$550,000 / year

Revenues

Daniel Seligman estimates an IQ income correlation around 50%¹⁶. Given our conservative IQ estimates, this would place the children at least around the 10 percentile of income. In the US this roughly translates to a net worth above \$250,000 and incomes above \$100,000. As an organization, the orphanage benefits from the children engaging in high risk high reward ventures since individual results are averaged out for the organization. Given

- The extremely fat tail of income and wealth
- The possibility to instill values of risk taking and financial success
- The time saved by avoiding traditional schools

It seems likely that by the age of 25, the children could achieve an average individual net worth of \$10,000,000. After that, they could contribute an individual average of about \$100,000 a year for thirty years.

Total

Assuming the children are raised from an average age of 10 to the age of 25 and a discount rate of 5%, the expected present value of the project would be about \$47,000,000, a yield of 13.8% over 16 years. This estimate may seem liberal in the net worth we are expecting, but it is quite conservative in assuming they wouldn't contribute much earlier and wouldn't contribute much more later on. This business plan intended to show that under very conservative assumption, the plan was profitable; we've established that this is very unlikely to lose any money, but the real value clearly lays in the almost unlimited upside.

Risks

In practice, randomness is fundamentally incomplete information. – Nassim Taleb

As a conclusion, a review of the major sources of uncertainty surrounding this project.

- This is a very long term investment (15 to 16 years at least) and very little cash flows are to be expected in between. Few investors would have that time horizon. While trading shares in the project would alleviate this problem by letting investors cash in on the appreciated value of the project easily, it is not necessarily convenient.
- There are many unknowns in the analysis, such as the economic value of IQ when one is focused on financial success, the distribution of orphan IQ, the response rate of the initial campaign.
- There is a risk that once adults, the former adopted children decide not to donate to the orphanage. Given the total control over their education, this seems unlikely.
- There is a significant risk of popular backlash if PR isn't handled correctly

¹⁶ <http://books.google.com/books?id=KNgEAAAAAAAJ>

These risks come, in a large part, from a lack of existing expertise in the field. Prior to starting the business, a large, funded, feasibility study should analyze the costs and potential profits in greater details than a business plan can. This study would set a clear roadmap for the selection process and define the operations of the orphanage once the adoptions are completed.

Conclusion

It is our hope that this draft gave a clear picture of the principles behind the high potential orphanage business. This business is unique, and a seastead is the natural place to develop it. It is bound to be controversial and divisive in nature, a controversy that the neutrality of a seastead might alleviate

It is, unfortunately, very hard to obtain accurate estimates of the potential profits of this endeavor. While this business has the potential to be tremendously profitable, it might be hard to fund on a sole accounting basis. However, this is a project that would allow its founder to shape the world. The children being raised would not just make money and contribute to the orphanage; they would perpetuate a set of values, thereby allowing the backers to shape the future in an important way. Such a power would clearly be part of its appeal.