



UvA-DARE (Digital Academic Repository)

An application specific informal logic for interest prohibition theory

Bergstra, J.A.; Middelburg, C.A.

Publication date

2011

Document Version

Submitted manuscript

[Link to publication](#)

Citation for published version (APA):

Bergstra, J. A., & Middelburg, C. A. (2011). *An application specific informal logic for interest prohibition theory*. ArXiv. <http://arxiv.org/abs/1104.0308>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

An Application Specific Informal Logic for Interest Prohibition Theory

J.A. Bergstra and C.A. Middelburg

Section Theory of Computation, Informatics Institute, University of Amsterdam
Science Park 904, 1098 XH Amsterdam, the Netherlands
J.A.Bergstra@uva.nl, C.A.Middelburg@uva.nl

Abstract. Interest prohibition theory concerns theoretical aspects of interest prohibition. We attempt to lay down some aspects of interest prohibition theory wrapped in a larger framework of informal logic. The reason for this is that interest prohibition theory has to deal with a variety of arguments which is so wide that a limitation to so-called correct arguments in advance is counterproductive. We suggest that an application specific informal logic must be developed for dealing with the principles of interest prohibition theory.

Keywords: informal logic, interest prohibition, Islamic finance.

1 Introduction

Interest Prohibition Theory (IPT) concerns theoretical aspects of interest prohibition. Apart from any intrinsic merits of prohibiting interest to which one may or may not subscribe, the importance of IPT is undeniable because of the impact that various implications of interest prohibition have had, and still have, on the design of systems of Islamic finance.¹ The heroic battle fought by many countries against their excessively large and interest bearing government debts is an additional reason to consider the phenomenon of interest with caution, and perhaps to look for its replacement by alternative mechanisms. Difficulties caused by the interest mechanism at an individual level are put forward in [12].

We will attempt to lay down some aspects of IPT wrapped in a larger framework of informal logic. Doing so is needed because, unlike many conventional theories that one finds in science and in the humanities, IPT needs to deal with a variety of arguments which is so wide that a limitation to so-called correct arguments in advance is counterproductive. Informal logic is claimed to be topical by nature (see [11]) and for that reason we suggest that an Application Specific Informal Logic (ASIL) must be developed for dealing with the principles of IPT.² The ASIL in question will be baptized ASIL_{IPT}.

¹ The current existence and the remarkable success of systems of Islamic Finance has been documented in many sources. We mention [4,7]. For the roots of Islam (and of Islamic IPT), we refer to [5].

² The phrase “application specific informal logic” has been designed after the well-know phrase “application specific integrated circuit”. For informal logic, see [9,10,15].

The division between IPT and its underlying ASIL requires some explanation. If an ASIL is left implicit, some general rational form of scientific thinking that underlies most contemporary scholarly work is assumed. Then many arguments about interest prohibition must be handled with utmost care, and a distant style of writing emerges: “A writes P about Q”, “A considers argument P convincing in the context of Q”, “A declares P to be a universal truth”, and so on. An ASIL may allow some moderate import of Islamic or other religious thought and still be acceptable to an average reader.

2 Principles of Interest Prohibition

IPT starts out from the observation that certain transactions have so often been condemned in the past,³ and in so many different cultures, that sustained prohibition may be justified primarily on the basis of the combined authority of these condemnations. We will now discuss a key example of such transactions.

2.1 Critically Productive Transactions

We say that a transaction between parties A and B is Lender-side Critically Productive (LCP) if A acquires goods, services or valuables G in compensation of lending valuables V to B for some limited duration. It is assumed that these valuables serve no instrumental purpose for B or any other agent other than serving as a means of exchange or as a store of value. We note that: (i) the generation of G is the productive aspect, more specifically B is productive; (ii) V may be understood as an asset which represents wealth; (iii) B or B’s sources cannot use V as a tool of some kind; (iv) the apparent circumstance that A is not involved in any substantial fashion in the generation of G constitutes the critical aspect of the transaction.

LCP transactions have often been forbidden and are still considered problematic by many people. Not only A’s receipt of G, but also B’s transferal of G should not take place. Contracts, agreements, promises or claims based on the expectation of such receipts and transferals are considered undesirable as well.

Less prominent in IPT are transactions that are Borrower-side Critically Productive (BCP). In a BCP transaction, the borrower of valuables produces assets V without sharing these with the owner of the valuables in any pre-agreed fashion.

We incorporate in $ASIL_{IPT}$ the assertion that LCP transactions are forbidden. We do not include the assertion that BCP transactions are forbidden, though IPT experts will hold that as well.

2.2 A Survey of Possible Viewpoints

We have tried to formulate the point of departure independent of the concept of money, hoping that a more general form is obtained in that way. Here is a

³ Mainly, but not exclusively in a religious setting.

number of positions that one may hold towards the LCP status of various kinds of transactions:

1. LCP status assignment is community dependent. A most significant community to consider is the Islamic Umma.
2. All transactions involving interest are LCP transactions.
3. Attributing LCP status to a (type of) transaction can be done by means of an authoritative statement issued by a number of scholars from a community.
4. If an (expected) portion of income during a transaction makes it LCP, the transaction can be saved from that status by the earner if he promises to hand the income over to those in need of support immediately after it is obtained.
5. All interest based consumer credit transactions are LCP transactions.
6. Savings account related transactions involving interest are not LCP.⁴
7. LCP transactions are only those where an unlimited multiplication of debt may occur, in particular the so-called doubling scheme: B owes A a sum s and at maturity date t , ending a period of length p , B can either return s to A or B can postpone repayment until $t + p$ but in that case acknowledging a debt of size $2 \cdot s$.
8. LCP transactions include at least the doubling scheme transactions.⁵
9. All transactions involving excessive interest are LCP. Here interest is considered excessive if its payment creates significant hardship on the lender.
10. Interests paid by a state on governmental bonds are not LCP.
11. The boundary of LCP is flexible. For that reason, the LCP prohibition is fundamentally open ended. When new financial products are developed, a decision needs to be made as to their non-LCP status. Different bodies may disagree about that judgement.
12. Micro-credits are not LCP because these are vital in conditions of poverty.
13. Many financial products known in the West, often called conventional financial products, feature transfers of (concealed) interest at closer inspection. Such products may become classified LCP in due time.
14. Sophisticated financial engineering often allows the development of a non-LCP replacement of a product originally featuring concealed interest.

3 Contemporary Interest Prohibition Theory

Nowadays only Islam pronounces LCP status of financial products with the intention of impeding their use. For that reason, contemporary IPT is approximately the same as Islam-based IPT.⁶ We will now give a survey of the key assertions that contemporary IPT holds.

⁴ In [2], a detailed specification of a savings account is given. It appears that this matter is unexpectedly complex and that many options are left when it must be decided what exactly is to be forbidden once the savings account is labeled as LCP.

⁵ This follows from revealed sources. For an informative theory of authoritative revelations, we refer to [16].

⁶ The development of logic for use within IPT has already been outlined in [1].

3.1 Assertions

In this section, we distinguish, in addition to the LCP status, the semi-LCP status: a product or transaction is semi-LCP if it is problematic on LCP grounds, but the consequences of prohibition may be too drastic so that a weaker judgement is asserted.

The assertions that contemporary IPT holds, and from which it can be further developed, include the following:

1. Financial products can be modelled as processes known from process theory in computer science.⁷
2. The use of LCP products is prohibited.
3. The use of semi-LCP products must be minimized both in number and in size.
4. The doubling debt scenario, which is nowadays outdated, is LCP.⁸
5. The extension of the class of LCP products from the doubling scheme to a comprehensive inclusion of interest related products has been put forward by Abu Bakr al-Jassas in 981 AD (see [8]). This step involves abductive reasoning.⁹
6. In conventional financial systems, it is often the case that certain financial products are considered inadmissible because of excessive interest claims. All such products are LCP.
7. Some contemporary financial products are admissible in conventional financial systems, but at the same time LCP.¹⁰
8. All products featuring interest are semi-LCP.
9. The net social effect of preventing or minimizing the use of financial products with LCP status is positive.
10. For all LCP products, a non-LCP replacement product can be developed.
11. Non-LCP replacement products are admissible in conventional financial systems.

⁷ For instance thread algebra [3] can be used for financial process description, see also [2].

⁸ Has the doubling debt scenario become outdated because it was considered LCP already long ago?

⁹ One may conjecture that this extension of the LCP classification has been triggered by an increased popularity of ancient Greek philosophy, where interest prohibition is also found. Interest prohibition may have been accepted in ancient times because of a lack of experience. Unconstrained interest prohibition resulting from a LCP classification of all products involving interests was found “mainstream” and for that reason unproblematic by al-Jassas. The exegetical strategy that revealed sources are likely to contain special cases for which adequate generalizations are to be found by means of scholarly work suggested al-Jassas to take this extension (with respect to the doubling scheme) on board, without feeling a need to consider possible disadvantages of that step. This explanation of how universal interest prohibition may have come about may be read as a form of conjectural history, a well-known style in writings on the history of money.

¹⁰ For that reason, Islamic Finance differs from conventional finance.

3.2 Open Issues

The following questions can be considered open from the point of view of IPT, though many adherents of Islamic Finance will claim that each reply is positive:

1. Are all forms of interest indications that a product is LCP?
2. Is a positive interest bearing savings account LCP?
3. Has a proof been established that such a savings account is LCP?
4. If so, is the proof constructive from established sources?
5. Is a positive interest bearing savings account LCP even if the rate inflation exceeds the interest rate?
6. Can conventional methods of econometrics and social sciences be applied to demonstrate that avoiding LCP products has socially positive consequences, at least from an Islamic perspective?
7. If classification of a product as LCP leads to harm, because it cannot be applied, is it nevertheless justified to maintain the LCP classification?
8. Can LCP classification be issued independently of a theory of money?¹¹
9. Is the following assertion valid: “if a negative answer is given to one or more of the above questions, that state of affairs will lead to useful innovations of Islamic Finance”?¹²

Different answers to these questions may give rise to different branches of IPT.

4 Tenets and Boundaries of ASIL_{IPT}

The methodological aspects for IPT that together constitute the core of an ASIL for contemporary IPT include the following:

1. Arguments for the LCP status of financial products or classes of products can have different forms.
2. LCP status judgements may change in time because consensus may change.
3. LCP status requires proof, and in addition to that it may have an economic rationale which indicates what injustice is prevented by disallowing the application of a LCP labeled product.
4. The use of analogies (see [13]) plays no role in IPT.
5. There is no application of inductive reasoning in IPT.
6. There is one significant application of abductive reasoning in IPT (see item 5 in the enumeration of assertions in Section 3).
7. Positions taken by scholars on matters of IPT are fixed once they pass away. Subsequent determination of such positions may be very difficult due to lack of information.

¹¹ Important positions on IPT have been developed before modern fiat money came into existence.

¹² As a material implication, which is the intended reading, this assertion is a valid one for those who give affirmative answers to the preceding questions. As a relevant implication, however, it is not.

8. In some cases, authoritative judgement by later scholars may overcome this lack of information – for instance by making use of abduction.
9. Determination of the position of scholars known to have been contemplating IPT is a matter of ongoing work.
10. It is conceivable in principle that scholars take or have taken authoritative and definite positions in IPT which impact the classification of future products that are entirely non-existent at the time of their work.
11. The rich design theory of non-LCP replacement products belongs to IPT.

The possible forms of arguments for the LCP status of financial products or classes of products include:

1. Proof by conclusive argument from revealed sources in the absence of opposing arguments in revealed sources.
2. Proof by strong arguments from revealed sources in the presence of contradictory arguments in revealed sources, priority of arguments having been established authoritatively by those who have seen the prophet alive, thereby producing derived sources.
3. Reasoning by conclusive argument from derived sources, performed by scholars having access to the full volume of derived sources, assigning priority to particular arguments when needed, thereby producing secondary derived sources.
4. Consensus formed by authoritative opinions of a significant number of informed scholars, who estimate the balance of a long tradition of secondary derived sources by intuitive means.

$ASIL_{IPT}$ must also determine and explain the boundaries of IPT. Themes that are relevant in this respect include:

1. The accommodation of the representation of dedicated completed versions of IPT, including both versions that were found in the past and versions that are operational at present.
2. The presentation and explanation of the current versions of mainstream IPT together with the major disputes that show their differences and that drive their further development.
3. The selection of overall rationales for interest prohibition.

Theme 3 requires an explanation. In the conclusions of his master’s thesis [14], Azeemuddin Subhani convincingly argues that such matters need thorough investigation even if one takes the revealed sources as axiomatic truths. Doing so means little without a framework of interpretation and the current framework leaves open too many questions. One of the degrees of freedom in this matter is the proper identification of the asset class of “valuables”, on which the definitions of LCP and BCP are grounded. This asset class need perhaps not include modern bank money because that money exists only in the form of debts which are necessarily either LCP (if the bank pays interest to an account holder) or BCP (if no interest is paid). Perhaps access to assets from this class was considered so exclusive that its possession imposed very special responsibilities on its owner.

Methodological questions can be posed as well. These questions are matters that an ASIL may yet have to resolve before being mature for the subject at hand:

1. In what cases may or must universal claims that products with certain properties are LCP be limited to a historically determined scope? For instance, are there authors whose work cannot possibly be considered to have been meant to be applied to something as remote as a credit card?
2. Disadvantages are claimed for non-LCP products replacing LCP products (see [2, Section 4.3] and the website [6]). Must replies to such claims be formulated?
3. If a significant departure from established scholarly judgements must be effected, what course of action might work? Which modifications of contemporary IPT can still be imagined?¹³
4. If in some time to come a significant departure from current IPT viewpoints will be effected within what is then called Islam, must it be the case that the degree of freedom that is made use of is already detectible from the current state of knowledge?

References

1. Bergstra, J.A.: Real islamic logic. [arXiv:1103.4515v1](https://arxiv.org/abs/1103.4515v1) [cs.LO] (2011)
2. Bergstra, J.A., Middelburg, C.A.: Preliminaries to an investigation of reduced product set finance. To appear in Journal of King Abdulaziz University: Islamic Economics. Preliminary version: [arXiv:1012.4291v1](https://arxiv.org/abs/1012.4291v1) [q-fin.GN] (2010)
3. Bergstra, J.A., Middelburg, C.A.: Thread algebra for strategic interleaving. *Formal Aspects of Computing* 19(4), 445–474 (2007)
4. Dar, H.A., Presley, J.R.: Islamic finance: A western perspective. *Journal of Islamic Financial Services* 1(1), 3–11 (1999)
5. Donner, F.M.: *Muhammad and the Believers: At the Origins of Islam*. Harvard University Press, Belknap Press, Cambridge, MA (2010)
6. El Diwany, T.: Islamic-finance.com. <http://www.islamic-finance.com> (from 1997 onwards)
7. El-Gamal, M.A.: An economic explication of the prohibition of *Gharar* in classical Islamic jurisprudence. *Islamic Economic Studies* 8(2), 29–58 (2001)
8. Farooq, M.O.: Stipulation of excess in understanding and misunderstanding *riba*: The al-Jassas link. *Arab Law Quarterly* 21(4), 285–316 (2007)
9. Groarke, L.: Informal logic. *Stanford Encyclopedia of Philosophy*, <http://plato.stanford.edu/entries/logic-informal> (2007)
10. Johnson, R.H.: Making sense of “informal logic”. *Informal Logic* 26(3), 231–258 (2006)
11. Kreuzbauer, G.: Topics in contemporary legal argumentation: Some remarks on the topical nature of legal argumentation in the continental law tradition. *Informal Logic* 28(1), 71–85 (2008)
12. Lewison, M.: Conflicts of interest? The ethics of usury. *Journal of Business Ethics* 22(4), 327–339 (1999)

¹³ As a thought experiment: what course of events might lead to a state of affairs where the doubling scheme is declassified as LCP? Or is that unimaginable?

13. Mas, R.: Qiy as: A study in Islamic logic. *Folia Orientalia* 34, 113–128 (1998)
14. Subhani, A.: *The Islamic Doctrine of Riba Prohibition*. Master's thesis, Institute of Islamic Studies, McGill University, Montreal (2001)
15. Waller, B.N.: Classifying and analyzing analogies. *Informal Logic* 21(3), 199–218 (2001)
16. Whittaker, J.H.: The logic of authoritative revelations. *International Journal for Philosophy of Religion* 68(1–3), 167–181 (2010)